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THE PROGNOSIS OF DIABETES IN CHILDHOOD* By PRISCILLA WHITE, M.D., BOSTON, MASS.

THE living diabetic child is one of the most outstanding medical accomplishments of the past decade. Before the discovery of insulin the mortality of diabetes in childhood was nearly 100 percent and today diabetes as a cause of death in the young has disappeared nearly to the vanishing point. The prognosis for growth and development is equally good and continued mildness and freedom from complications are assured if the disease is controlled.

The juvenile diabetic warronts special study because he has revealed new aspects of the disease. He has added new evidence for the theories of the etiology of the disease. He has yielded to the pathologist diabetes in its purest form, and to the clinician he has not only taught which complications are the result of diabetes but that their

control is within his power.

This study presents a survey of 750 juvenile patients treated at Dr. Joslen's Clinic between 1898 and October, 1931, at which time 217 were dead and 533 were living. The value of this series is increased by the relatively large numbers of long duration cases, already 76 children have survived 10 years of the disease. The course of diabetes on the long duration cases is not representative of the course of juvenile diabetes of today, but these patients do teach us what can happen to the child combating a chronic nutritional disease and how to avoid the complications of forced unnatural nutrition.

To the ctiology of diabetes the diabetic child, see believe, has made an outstanding contribution. The congenital inheritance of diabetes is evident in our scries of juvenile patients. Forty per cent of the entire series and 53 per cent of the children who have survived 10 years of the discase have hereditary or familial diabetes. The unknown cause of diabetes has stimulated investigation into the past histories of the diabetic child especially because he represents pure diabetes. The background of the adult who develops the disease is most commonly that of obesity, disease of the gall bladder or of the thyroid gland. These conditions

are exceptional in childhood and they are not found in the past histories of our juvenile patients. The common cause shared by all ages is heredity and the younger the child the greater the evidence of the hereditary taint.

Although the final proof of inheritance cannot be given for a period of years because the investigation is definitely a problem of the diabetic of today since sterility and nonviability as well as selection against diabetics in the past have lowered the possibility of hereditary cases, the family histories of the diabetic children give convineing evidence that the disease is transmitted.

Statistical requirements have been fulfilled in two methods of evaluation of the data. The first of these is based upon the comparison of the incidence of the disease in the relatives of the children compared with the expected incidence of 1 per 100 cases in the general population. The second is the more striking. It can be demonstrated that dialætes is transmitted as a simple Mendelian recessive if our diagnosis is 82 per cent efficient. That this estimate of latent and unrecognized cases is not too liberal is shown by the experimental work of Sherrill and others who have reported the great frequency of diabetic blood sugar curves in the relatives of diabetics, and because we are dealing with a young population which has not yet reached the diahetic danger zone of 50 years of age.

Certain other factars, however, must be cansidered as primary ar secandary, because heredity and environment are interrelated. These are trauma, infections, imbalance of other glands of internal secretion and overgrowth. Trauma plays na rale in the etiology of juvenile diabetes. Infections likewise are of little or no causal significance. Physical defects and infections in the past linstories of our patients have occurred with less frequency than in the average American child. Pathalagical examinations of diabetic children have fortunately been few. In the patients studied there was no evidence of organic disease of the other glands of internal secretion.

Excess of height, 2.2 inches above the Crum and Wood standard for age, has been the most common precursor of the disease in childhood oc-

^{*} Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

curring in 82 per cent of the cases for whom the data were available. The excess in height is not found consistently in all youthful age groups since it occurred in only 49 per cent of diabetic infants and 43 per cent of diabetic adolescents prior to onset. Its significance awaits the time when the pediatrician or the anthropologist can tell us whether the normal child of today is taller than the child of a generation ago.

Heredity is the one cause occurring in all age groups, infancy, childhood, adolescence, and adult life. This is very important in the control of diabetes because if we are correct the union of a diabetic with a diabetic is unwise since all the offspring will eventually have the disease. The union of a diabetic with a person who has a diabetic taint should result in equal numbers of the children developing diabetes and not developing it. When neither has diabetes, but both have a diabetic taint, then one-quarter of the children should develop the disease and three-quarters should not. If a diabetic marries a pure non-diabetic, then none of the children should have the disease.

Investigation of the carbohydrate metabolism of the juvenile diabetic is important. One of the most striking and to the casual observer the most distressing feature of juvenile diabetes is the tendency for rising fasting hyperglycemia in the successive years of the duration of the disease. This is undoubted and reported upon by all who have studied the disease in young patients and over a period of many years. It is commonly interpreted to mean that the disease is progressive in childhood,—that smaller amounts of endogenous insulin are available as time goes by. This interpretation does not take into consideration the fact that with each increment of growth more sugar is metabolized. The reservoirs for storage of glycogen, the muscles and the liver, not to mention the skin, contain some 1/28 the amount of glycogen in childhood as they do in adult life. More insulin is required for the intermediary metabolism of larger amounts of glucose. supply of endogenous insulin has not it is true kept up with the demand but there is no evidence of the progressive exhaustion of the insulin producing mechanism. That growth in body mass is one of the chief factors in the need for increasing amounts of insulin is indicated by two other facts. The adolescent diabetic, by whom we mean the patient whose diabetes started between 15 and 20 years of age, does not show this phenomenon to the same extent as the patient with onset in childhood who must grow from childhood into adolescence and from adolescence into adult life. In our group with onset in adolescence more patients had a level of the fasting blood below 200 mgs. at the end of seven years than when the disease had existed for less than 3 years. With the juvenile patients the condition was reversed-65 per cent of the patients had blood sugars below 0, 20 per

cent in the first 3 years and only 27 per cent when the diabetes had existed for 7 or more years. The chief difference between the two groups is in growth. In our diabetic pseudo dwarfs diabetes remained milder than in the patients who have grown in normal fashion.

Investigation of the fat metabolism of the juvenile patient is more fruitful than that of the adult because the child shows greater tendency toward disturbances of the fat metabolism in the greater relative incidence of coma, of xanthoma and of lipoid histiocytosis. Because of the absence of age factors he will help to solve the problem of the importance of abnormalities of fat metabolism in the etiology of degenerative processes.

In our series of 531 determinations for cholesterol on 234 children in the most recent analysis 84 per cent were below 230 which we accept as

the upper limit of normal.

The subsequent careers of patients with high and low cholesterols on repeated analysis show that of the 67 who had hypercholesterolaemia 15 per cent have developed arteriosclerosis, 6 per cent nephritis, and 4 per cent cataracts. Of the 156 who had repeated normal values of blood cholesterol 1 per cent later developed arteriosclerosis.

Extreme hypercholesterolacmia over 300 mgs. has occurred in 25 patients, 44 per cent of these

have developed degenerative changes.

Elevation of basal metabolism occurred in our series of 139 tests done on 86 patients. The amount of the average deviation was not great being +12 per cent. The greatest rise occurred at the ages of puberty, and late adolescence. Duration of diabetes had no influence upon basal metabolism. Elevation of metabolism parallelled hyperglycemia.

Although the growth and development of the juvenile diabetic of today is assured, opportunities for failure occur because we are confronted with a child who at the time of maturity has combatted a chronic disease from 25 to 95 per cent of his life and a disease in which the substances taken into the body to produce growth and the mechanism for their action is subject to interference.

The attainment of a stature which is equal to the Crum and Wood standard is the rule and the average height of the former juvenile patients who have reached 18 years is that of the average American adult stature. The weight status of our patients shows that 70 per cent are within 10 pounds of weight for height and age.

Although the assurance of growth and development have replaced the inevitability of retardation of growth and premature death diabetic pseudodwarfism exists today. Stunting from 4 to 12 inches below height for age has occurred 34 times and these cases comprise 16 per cent of the group who had onset prior to insulin and 3 per cent of

the group in whom insulin treatment from dis-

covery was possible.

Retardation of growth in the child who survived preinsulin treatment exists today because these patients were starved by their physicians in order that they might be kept alive. Retardation of growth in the child who has received insulin practically from onset of diabetes exists partly because these patients have decompensated diabetes but largely due to the fact that parents reduce the diet rather than increase the insulin in order to maintain sugar freedom. Thus, failure of growth in diabetes has one primary cause—starvation.

Sexual maturity of the diabetic child is assured. Even among our cases of long duration none of the girls who are now over 17 years of age has

failed to mature.

The choice of the partition of the diet for the diobetic young or old and its effect upon his future career is today a much debated question. The advantage of the carbohydrate equivalent of the so-called normal diet, one containing not over one-half or less than one-quarter of that amount. diets high or low in protein, and high in fat rest upon the insecure foundation which the future with its various possibilities may clarify. effect of such partitions upon the growth and development of the child, the evidence of the increased efficiency of the pancreas which results from the stimulation of diets higher in carbohydrate or from the sparing qualities of the diets lower in carbohydrate, the evidence of functional strain or damage to tissue which results when one class of foods is increased and another decreased-all must be taken into account.

The partition of our diets has been the following—from 25 to 50 per cent of the total calories are given in the form of carbohydrate, from 10 to 20 per cent are given in the form of protein and from 35 to 65 per cent are given in the form

of fat

The functions of carbohydrate do not indicote a need for great supply on the young organism. It is a readily available and economicable source of energy, a protein sparer, an antiketogen body and helps to maintain water balance. In the diabetic growth and development have occurred since insulin regardless of the ratios of carbohydrate, that is with high carbohydrate, moderate carbohydrate, or with low carbohydrate diets. In the diabetic pseudo dwarfs no constant reparation of growth in stature has occurred with any of the three dietetic methods in vogue.

The physialogical organients in favor of relatively lorge omounts of carbohydrate in the diabetic are the rate of absorption and the effect of the stimulation of carbohydrate upon the insulin producing mechanism. The rate of absorption of carbohydrate is prolonged in proportion to the amount ingested. For this reason it is argued that higher carbohydrate diets are preferable protecting the patient from hypoglycaemia.

In our experience when diets which contain from 200 to 300 grams of carbohydrate are used greater amounts of insulin are employed than when the diets contain from 100 to 200 although the increase is not proportional. Hypaglycewia from failure of absorption which is not unusual in childhood is more liable to occur when the insulin dosage is greater. Glucose, it has long been known, in periods of repeated ingestion is associated with successively lower blood sugar curves even to the level of hypoglycemia. The optimal quantity of carbohydrate to cause stimulation or the proof that this is or is not but a temporary effect is not vet established.

In our clinical experience with 100 to 200 grams of corbohydrate the disease after initial stabilization has, basing our criterion on the ratio of Carbohydrate to Insulin, becomes more severe in one-third of the cases and less severe or stationary in two-thirds, and 80 per cent of the chil-

dren have mild diabetes.

As many of the children had fasting and postprandiol and postinsulin blood sugars below 200 and 160 mgs. after five years as did the patients in whom the disease was less than 5 years' duration. Two-thirds of our routine blood sugars on children in 1931 were below 200 mgs. Fat metaholism was under even better control because 84 per cent of the most routine analyses were

below 230 mgs.

High fat diets in the normal child lead to defective absorption, excretion of calcium and retention of cholesterol. Deficiency leads to infections and rickets. In diabetes faulty utilization of fat leads to acidosis, hypercholesterolaemia, xanthona, fatty infiltration of the liver, spleen and reticulo-endothelial system, and submitimal deposition. The juvenile diabetic is often unreliable about his diet and this gives opportunities for the accidents due to faulty utilization of fat. Without insulin the higher fat diets contributed much to the management of diabetes, but with it their value has diminished.

High and low protein diets have been odvocated in diabetes. In the juvenile patient with the tendency for elevation of basal metabolism we would hesitate to prescribe an excess of protein, and because of the experience with the diabetic pseudo dwarf who resembles the protein starved child we

hesitate to give low protein diets.

With this partition of the diets 25 to 50 per cent of the calories in the form of carbohydrate, 10 to 20 per cent in the form of protein, and 35 to 60 per cent in the form of fat our children have developed normally and when the disease has been controlled have not developed complications.

Insulin treatment has been the unbroken rule in proved cases of diabetes in childhood treated at the New England Deaconess Hospital since 1923. Without it the duration of diabetes in our children was 2 years, growth in height and weight were at a standstill, and of the children who have had the disease for ten or more years that is treated at least one year without insulin, one in three of the cases studied has arteriosclerosis, one in five has cataracts, one in ten an enlarged heart, and one in thirty-five tuberculosis. With insulin the death rate from diabetes has fallen to the vanishing point. Growth in height and weight are assured and in controlled cases complications do not occur.

Insulin in its practical use is the true variable in contradistinction to the diet which is the relative constant. The actual requirement has varied from 1 to 100 units and the frequency of the in-

jection from once to four times.

The pancreas of the diabetic child shows but few irreversible changes. This is one of the chief factors which gives us the hope that eventually recovery is possible and await some future train of events. Uncontrolled diabetes in childhood is characterized morphologically by faulty distribution of glycogen in the skin, liver, muscles, and heart, and by abnormal deposition of fat in the liver, reticulo-endothelial system and blood vessels. Histo-chemical evidence of abnormal fat metabolism in uncontrolled cases is greater in the child than in the adult.

The complications of diabetes in childhood are largely diabetic coma and hypoglycemia. That the prognosis for treated coma in the young is good is evidenced by the fact that 69 of the 70 juvenile comas treated at the N. E. Deaconess Hospital since 1923 have recovered. Yet untreated coma still plays the major role in the mortality of juvenile patients who die outside of hospitals.

The incideuce of coma in the child is greater than in the adult because of the more frequent lapses of dietary control and greater susceptibility to minor systemic infections. The treatment of coma in the child differs in no way from the treatment of coma in the adult. The immediate prognosis of coma in the child is good. Nineteen per cent of the coma offenders, however, later developed complications associated with the disease.

Degenerative processes common to the adult type of diabetes may occur in children, and therefore the treatment of the disease must be directed against these sequelæ as well as toward the assurance of growth, development, and longevity. It would be tragic indeed to keep a diabetic child alive only to find that he had become crippled or blind.

Arteriosclerosis, which is now the chief enemy of the adult diabetic, has been demonstrated by clinical tests in 24 of our children during life and in six at post-mortem examination. The diagnosis was based upon the appearance of calcification of the vessels of the legs demonstrable by roentgen ray or by the retinal changes revealed by the ophthalmoscope.

Invenile arteriosclerosis as an entity among

non-diabetics is rare. Nephritis and lues, the most frequent conditions associated with premature arteriosclerosis in non-diabetics, did not appear to be contributing factors in our patients.

The feature characteristic of the living diabetic children with sclerosis is the fact that with six exceptions the onset of diabetes was prior to 1923 or prior to the general use of insulin. From this we must conclude that the probable factors which predispose to the production of the lesion in the diabetic child are the duration of the disease, the method of treatment, or its control.

That the duration of the disease is not the prime factor is evidenced by the fact that although with one exception the diagnosis of calcification was not made until after the fifth year of the disease in the living child, marked atheroma was reported by Shields Warren in one uncontrolled fatal case of juvenile diabetes even when the duration of the disease was less than one year, and three of the cases described by Naunyn and four of ours diagnosed by ophthalmoscope had had the disease for less than five years.

Hyperglycemia in varying degrees had occurred in all patients, but it is extremely difficult to evaluate its effect. A study of patients in whom the disease was of long duration shows little difference in the degree of hyperglycemia between the group who had developed arteriosclerosis and those who have failed to do so.

Chemical evidence exists that hyperlipoidemia occurred prior to the recognition of sclerosis after it had reached the stage of calcification in 75 per cent of the cases in whom analyses were made.

Although the dietary treatment of these cases has varied, it was found that of the patients for whom the data were considered reliable, clinical evidence of arteriosclerosis occurred in only three patients when the prescribed diet contained more than 110 grams of carbohydrate. Of the three patients who had evidence of sclerosis and who had received more than 110 grams of carbohydrate all had also been given excess of fat.

Excess of protein metabolites does not seem to have been a precipitating factor. There was no evidence of abnormal protein metabolism, and the protein content of the diet did not exceed 20 per cent of the total calories.

Uncontrolled decompensated diabetes was the rule in patients with arteriosclerosis. In the children whose diabetes ante-dated the discovery of insulin this could not be prevented. Disregard of diabetic routine is natural in childhood, especially when the patient becomes an adolescent, and for this reason more cases of decompensated diabetes occurred in the juvenile than in the adult series. The pathological changes in the tissues of the young diabetic in whom the disease has been uncontrolled are characterized by the faulty distribution of glycogen and fat; glycogen is absent in the normal depots, and present in tissues normally free from glycogen, and fat is demonstrable

Diagnosis

Negative

14

in tissues normally free from large amounts of fat and in some normally rich in glycogen interchange of glycogen and fat deposition may l ave been the direct or indirect cause of the degeneration which occurred in the juvenile diabetic At the present time the control of arteriosclerosis should be sought by early diagnosis and by the restoration to normal both of the nictabolism of sugar and of that of fat

Cataractous lenses not congenital in type occurred in 15 af aur diabetic children. In these patients the lenses had showers of highly refractile crystals which may or may not have been diolesterol None has been submitted to chemical

analy sis

Coma or severe ocidosis is known to have accurred in the past histories of seven of these patients, and none was a controlled case the hving coses with catorocts were markedly below standard height, and two of them are classified as pseudo-dwarfs. There is no other evidence of a deficiency disease in this group. The cataracts in two of the patients have been successfully operated upon

Peripheral neuritis, which is recognized more and more frequently in the adult diabetic, has been recognized in three of our own children

Anemia of the primary type has not accurred m aur children, although not unknown in child hood and occurring with greater frequency in our

adult patients

The presence of caratinemia, xanthama, and lanugo hair has been noted a few times in childhood cases of diabetes. With the improvement of general nutrition lanugo hair has disappeared Nanthomata have been noted three times, and in cach mstance were known to have been preceded by coma and hypercholesterolemia The xanthorntous lesions have disappeared when the fat in the diet has been reduced. Coincidently the cholesterol of the blood has fallen the selective food habits of the child carotinemia occurs frequently, and can be made to disappear when the vegetables which are rich in carotin are withdrawn from the diet.

Infections of the skin have been not infrequent, and may occur as in the adult at the time when the disease is uncontrolled. Abscesses carbuncles, and furuncles have occurred in at least 27 of our juvenile diabetics and all made a good recovery following surgical or non surgical treatment as

Susceptibility to tuberculosis depends upon the general prevalence of the disease and upon ex-We knew eight of our children have active pulmonary tuberculosis, and in six instances there was a definite history of exposure to the diseasc

The frequency of a positive tuberculin test is somewhat greater in our group than the average We have tested 75 children For all ages the number of positive reactions was 41 per cent

This was the same ratio as that which was found in the Pirquet chaic

Iwo hundred and thirty-seven routine X-ray examinations of the chests of diabetic children have been done by Dr I K Bogan, working with Di L B Morrison at the New England Deaconess Hospital

> TABLE Per Cent

9 f rachiobronchial adenitis 65 Trachobronchial-adentis with calcification ... 11 Suspicions ١ Acute

Acute infectious diseases accurring in childhood are not more severe when they occur in the course of diabetes, but they cause temporary loss of tolerance Glycogen is improperly stored and the danger of coma is imminent

The contribution of the juvenile diabetic to surgery has been to give confidence to the surgeon and to the chaician since this severest type of diabetic has withstood surgical procedures so well Seventy operations have been performed on juvemile diabetics at the New England Deaconess Hospital between 1924 and 193f and without a single fatalits

The care of the diabetic child resolves itself mainly into three factors, first, the maintenance of the normal physiological processes of the grow ing and developing organism, second, the preven tion of the accidents of diabetes, and third, the eventual production of an individual who will be

an economic and a social asset

Heredity and overgrowth are the most common precursors of the disease in childhood tions were unusual Thirty of 84 infants had never had an infection prior to onset of diabetes Although the number of children handicapped by diabetes is at present not large, we estimate there are some 10000 such children in the United States, one thousand new cases are recognized

Fasting hypergly cenna has been mare frequent in successive years of the duration of the discase, but the element of growth may be the cause rather than progression of the disease tabolism is normal when the disease is controlled Fifty-six per cent of the cases with high cholesterol values have later developed complications and in 44 per cent they were degenerative, namely cataracts, calcified vessels or xanthoma The respiratory metabolism is essentially normal except when marked gly cosuma, hy pergly cemia, or acidosis are present

The potentiality of growth in the diabetic child is gard because at the onset of diabetes his stature is in excess of the standard average Retardation of growth and failure of development were

associated with forced undernutrition. Establishment of normal growth and development followed the use of insulin and of the subsequent normal utilization of a diet adequate in calories.

The selection of the diet high in carbohydrate, moderate in carbohydrate or high in fat varies according to whether one believes that increased efficiency of the pancreas results from the stimulation of diets higher in carbohydrate or from the sparing action upon the pancreas or diets which are lower in carbohydrate. Diets with excess of calories and those high in fat are to be avoided, because overnutrition is the most common precursor of diabetes in the adult, and because a large amount of fat improperly utilized is a possible, even probable, precursor of degenerative processes.

The chief complications of diabetes in child-hood are diabetic coma and hyperglycemia. If untreated they may prove fatal. Degenerative processes usually associated with age occur in the child, for already 24 of our diabetic children are known to have peripheral sclerosis, and 15 have cataracts, but these have occurred only in patients whose diabetes was of long duration and in whom undernutrition or forced unnatural nutrition without insulin, or diabetic decompensation have played a part.

The pathology of the juvenile diabetic is characterized far more frequently than in the adult

by the absence of irreversible changes in the paucreas, giving us hope for the future of the diabetic child. Uncontrolled diabetes is associated with deposition of glycogen and fat in abnormal fashion or in tissues normally free from them.

Protection of the diabetic child against his social environment is fully as important as profection against high physical environment. First, he must be protected against discouragement by being shown that he can lead a normal life. Outstanding work of every sort has been done by adult diabetics, and the child at onset of his disease is characterized by mental precocity; this persists even if physical precocity wanes.

Second, in the adolescent period the child may decide to lead a short life and a merry one, and he must be protected against its dangers. His family must expect him to be no better and no worse than the other children. Diet breaking should not be made a moral issue. Promises which may not be followed must not be exacted, and above all neither the family nor the physician must place the child in a position where he is almost forced to cheat, steal, and lie to maintain his existence.

The goal of treatment today is no longer just the living diabetic child, but the child characterized by honesty and intelligence, physical proportion, endurance, happiness, and freedom from the complications of his disease.

Discussion: Dr. John R. Williams: Dr. White's paper is an important contribution to the subject of diabetes in children.

The general experience substantiates the conclusion that heredity and overweight are common precursors of the disease and that infections are rarely a factor. It is my experience that high blood sugars and sugar in the urine are a constant phenomena in the diabetes of childhood. It may sound like a heresy to say so, but I have not observed that either of these abnormal physiological states are very harmful.

It would seem to me that the only experience of value in judging the diabetic state is that based on cases that have lived for years. In an analysis of a large group of children that have passed through our clinic I have selected 50 patients who have had diabetes for many years and on whom we have fairly complete information. Several of these children were preinsulin cases. All of them have had diabetes more than three years and several of them for more than ten years. Practically every one of them carries a fairly constant high blood sugar and as a rule has sugar in the urine. They have all grown at the normal rate; some of them have developed excessively. To the

casual observer they are well. My explanation of the well-being of these children is that they are only diabetic part of the day; that is to say, for certain hours of the day the insulin makes them practically normal, and other hours in the day they have diabetes. An individual who passes not more than 5 to 10 grams of sugar in the urine each day has many hours when his urine will be sugar free and his blood sugar normal. Such an individual apparently is not harmed by the disease. He will rarely exhibit clinical evidence of diabetes.

I do not believe in the under-nutrition of any diabetic. As a class our diabetic children are as strong as are normal children. Our experience coincides with that of Dr. White with reference to complications; namely that coma and insulin reactions are the most common and one has to be on the alert to distinguish between diabetic coma, which may come from neglect on the part of the parent, or the coma of hypoglycemia due to insulin overdosage. I have seen no reason for believing that the pancreas recovers or that the function of the Islets of Langerhans is increased. For the past three or four years we have applied the insulin coefficient method of evaluating the patient's clinical condition. This method may not be mathematically exact to the unit but I am satisfied that it is far more accurate than any other in use and that when tests are properly carried out and correctly interpreted it is possible to say very difinitely whether or not a patient is improving or failing. I mean by the insulin coefficient the maximum amount of in sulm that a patient may make in a day. The normal child can make an almost unlimited amount of insulin but usually requires for his duly food from 100 to 150 units. A severe diabetic is one who can make not make than 20. but usually less in a day. In the fifty cases studied the insulin coefficient has ranged from 2 to 44 units. Under the most careful supervision it rarely increases One patient a boy who has been under my eare for twelve years and whom I first saw at the age of seven, now nineteen years of ago, and who has had a trained worker with him ever since, had an insulin coefficient of 27 at the onset of his dis He, of course, has had many ups and downs since, including coma. He began taking insulin at the age of 10 when his coefficient was 23 At the age of nineteen his coefficient is now 30. In the early stages lie took 20 units of insulin a day He is now taking 26 on a diet which contains 150 grams of carboliy drate and vields 230 grams of glucose. This patient is perlans the best studied one in my scries Io summarize, in 29 of the 50 cases there is a positive coefficient. In 17 the amount is so small and the difficulty in balancing it is so great that the coefficient is a negative factor At the beginning of the treatment 40 of these children had a positive coefficient nine of them a negative coefficient In 13 there has been a slight increase in the insulin co efficient, in 25 cases there has been a decrease, and in 12 there has been practically no change I regard these figures as of the highest importance in determining the prognosis of diabetes in childhood. They mean that a diabetic child may stay alive, grow and be practically well and normal with a reasonable amount of care and adjustment even though the pancreatic function does not improve The function of the pincrens changes very little if any on the positive side and may fail if the child is denied proper care Undernutrition is almost as bad as no treatment at all for the diabetic child I belive they should be well fed and given enough insulin to take care of the food. I have seen severe diabetic children grow from early ehildhood, from kindergarten through college, and marry, with but very slight handicap

The Society is indebted to Dr White for a

very valuable paper

PAINFUL SHOULDER

Its Diagnosis and Treatment

By CHARLTON WALLACE, MD, NEW YORK, N. Y

BLIORL entering upon the discussion of the various conditions pain of the shoulder or deltoid region, it might be well to refresh one's memory about some of the most salient anatomical parts Some points of the innervation should be mentioned, so that proper identification of the in dividual structures may be recognized, thus avoiding confusion in diagnosis

The cap of the shoulder is of course covered by skin, subcutaneous tissue and a prominent muscle, the deltoid The other muscles cross ing the joint which should be remembered are the supraspinitus infraspinitus, subscapularis biceps coracobrachialis, latissimus dorsi teres major and minor triceps, and pectoralis major and minor In the average developed person, felt immediately under the deltoid is the bony dome comprising the acromial end of the clavicle and the acromial process of the scapula Extending inwardly from this point is found the outer third of the clavicle and posteriorly,

*Real at the Annual Meeting of the Medical Society of the State of New York at Buffalo N Y May 25 1932

the spine of the scapula. About one meh and one quarter from the extreme tip of the aero mial end of the clavicle, is the subclavicular triangle in which the coracoid process may be felt on deep pressure. The most external bony prominence felt immediately beneath the acromial process is the greater tuberosity of the humerus and just anterior and internal to it hes the lesser tuberosity Between these tu berosities is the suleus or groove carrying the long head of the biceps. The head of the hu merus may be palpated at the posterior margin of the deltoid by adducting the arm across the chest to the mid-line of the trunk, while the elbon is in flexion The capsular ligament, the acronio elavicular ligament, the synovial lining of the joint, the subacromial subscapular infraspinatus and subcoracoid biirsae are of importance

The irritation of the articular filaments from the circumflex and suprascapular nerves supplying the joint would account for the pain there The supply of the integument over the shoulder and the back and lower part of the neck is from the three branches of the supraclavicular nerve, which comes from the third and fourth anterior cervical roots. In conjunction with this origin, the phrenic nerve arises chiefly from the fourth cervical receiving an offshoot from the third and fifth cervical, sending twigs to the pericardium and pleura, through the diaphragm to its inferior surface, to the coeliac plexis, the peritoneal ligament of the liver, the suprarenal glands, the inferior vena cava, the cystic duct and the neck of the gall bladder.

This ramification of the filaments from the supraclavicular and phrenic nerves should explain many of the pains around the shoulder, when there is no altered structural condition in the region to warrant even discomfort.

The remote visceral, thoracic conditions, which may be instrumental in causing referred pain around the shoulder are: angina pectoris, aortic atheroma, aneurism, pleurisy, pneumonia, pulmonary tuberculosis, pneumothorax, intrathoracic new growths; and the abdominal ones are: gastritis, gastric ulcer, carcinoma, catarrhal duodenitis, ulcer of the duodenum, gallstones, colacystitis, nutmeg liver, acute hepatitis, hepatic abscess, subphrenic abscess, effusions into the peritoneal cavity or intraperitoneal extravasation of blood pressing upon the diaphragm. When the foregoing lesions cause no actual pathology around the shoulder, the pains are solely from the phrenic nerve; then, no physical therapeutic measures for treatment of the shoulder are indicated. The relief of the original condition abolishes the pain.

The other better-known, purely reflex pains to the shoulder are affections of the neck such as cervical tuberculosis, fracture of the third, fourth, or fifth cervical vertebrae, simple periarthritis due to strain compressing the nerve roots and myositis of the deep muscles of the neck about the same level.

The successful treatment of Pott's disease relieves the pain. General and local ultraviolet irradiation are beneficial.

After the fractures of the cervical vertebrae need no longer the recumbency and fixation in hyperextension treatment, then superficial heat and diathermy are used.

Pain of the shoulder emanating from the base of the neck, often attributed to a neuritis, is seldom actually an inflammation of the nerve but more frequently, comes from muscular affection. One should be careful in arriving at a correct diagnosis before prescribing. Heat, deep massage and diathermy are most helpful. Myositis of the trapezius muscle due either to a tear or indurations from autointoxication, is one of the most frequent causes of reflex pain to the shoulder.

Neuritis of the suprascapular nerve usually can be diagnosed by pressure over the upper margin of the supraspinatus muscle in the triangle formed by the superior border of the scapula and the upper margin of its spine. Inflammation of the circumflex nerve can be localized by making pressure posteriorly against the humerus between the quadrilateral space formed by the teres major, minor and the long head of the triceps muscle. Patients with inflammation of the nerve sheath are generally so sensitive, that the slightest palpation upon these nerves causes excruciating agony. The treatment of acute neuritis is rest, constant heat either moist or dry, and hypodermic injections of morphine, near but not into the nerve, for the first day or two. Pyramidon, seven grain doses internally, is highly recommended as an anodyne. Heat from a large candle power lamp, Oudin current, static sparks or galvanism, should be tried and the agency giving the greatest relief is the one to use in the subacute stage.

Uncomfortable, aching or painful conditions accompanied by definite lesions immediately in the joint neighborhood are due either to local bone disease, remote infection or injury. careful history of the duration of the complaint, previous illness, a pre-existing or present focus of infection should always be sought, when there has been no trauma. is only rational to eliminate such foci, as pyorrhea, decayed or abscessed teeth, sinusitis, infected tonsils, or a definite focus of infection elsewhere, which may be a primary etiological factor of the symptom under consideration, before one should expect physical therapeutic agencies to have real curative effects. Even when the focus of infection has been eliminated, the local pathological condition causing the distress may persist for months thereafter.

Acute osteomyelitis of the head and neck of the humerus requires immediate surgical operation. Tuberculosis in the same locality is treated conservatively. Either condition should have the arm placed at an angle of 45 degrees from the trunk line. The identification of the bone lesion is made by the clinical symptoms and signs aided by x-ray findings. Proper treatment of osteomyelitis and tuberculosis of the shoulder usually relieves the pain.

Many cases of myositis, bursitis, synovitis, arthritis, periarthritis, tendonitis, and neuritis have demonstrated, that a toxic condition elsewhere was behind the lesion or pain. A diagnosis, which one of last mentioned conditions exist, although not always easy, is valuable before treatment is undertaken.

The diagnosis of a muscular inflammation can be definitely made by superficially or

deeply palpating over the area. Anointing the surface to be so examined with vaseline facilitates feeling indurations or lumps.

In acute myositis, heat and gentle massage may secure relief but in the subacute with long standing indurations, the massage of necessity must be very hard and is frequently painful to the patient. In the latter type, the treatment extends over a prolonged period. The muscles most often involved here are trapezius, supraspinatus and deltoid.

Bursitis, whether of infectious or traumatic origin, also responds readily to physical therapy. The diagnosis, when the subdeltoid bursa is the one involved, is not so difficult. The diagnosis may or may not be aided by x-ray findings. The so-called soft x-ray very often will pick up the swollen bursa even if there are no calcareous deposits therein. In the acute stage, where there is considerable distention of the bursa, one may see on inspection a swelling at the anterior margin of the deltoid just beneath the acromial process. As a rule, the examination is made with the patient's arms by the side and a comparison of the two shoulders is observed. Voluntary abduction of the arm is very painful and restricted. An important sign with us is to have the patient, with the elbow flexed, try to put the dorsum of his hand to his back. In this movement, the hand will only reach to about the level of the sacrum or the lower lumbar region. Inward rotation is greatly restricted. During the acute stage, rest of the shoulder, the arm in a sling, a tight crisscross adhesive plaster bandage forming a cap for the shoulder and licat by either the electrical pad or hot water bottle, for the first two or three days, have given relief. The abduetion method of tying the hand to the head of the bed has never been used by me. After the first few days, the bandage may be omitted and heat and diathermy instituted. The same physical therapy treatment is indicated for the subacute affection. I can recall no case of bursitis during the past fourteen years, that has not pleasantly responded to the foregoing method of treatment. We purposely are avoiding the academic discussion of whether or not this swollen bursal sac is originally a tendonitis of the supraspinatus tendon or a bursitis per se, although one leans towards the latter. In my experience, it has never been found necessary to operate for this condition.

Synovitis of the shoulder joint is seldom seen unless accompanied with arthritis. Arthritis may be either acute, subacute, or chronic. It may be due to a rheumatic or toxic condition or constant slight trauma by over-use of the arm. It has not been my experience to have seen a purulent arthritis of this joint. When such exists, naturally prompt surgical

measures are indicated. For the subacute and chronic types of arthritis, whether traumatic or infectious, the symptoms may be a constant ache, stiffness within the shoulder joint and pain on attempt at motion in any direction. The muscle spasm encourages the scapula to move with the shoulder joint. There is muscular wasting dependent entirely upon the duration of the disease. Rotation is generally more painful than abduction. The x-ray may demonstrate an osteoperosis of the upper end of the humerus. As these patients generally carry their arms by their sides over a prolonged period, they may be treated by using an abduction splint and given heat and massage for the superficial muscles and tissues and diathermy through the joint. It is also advisable to give the joint passive motion of abduction and rotation to the range of these movements, which the patient can stand. Many times it is advantageous to give these patients a general anesthetic and forcibly break up the adhesions in or around the joint It often is necessary to repeat these manipulations several times before a satisfactory range of movement has been obtained. The forementioned physical therapy measures should be applied during the intervals between and after the operations.

Tendonitis, whether due to inflammation or traumatic condition, is one of the most difficult conditions to diagnose and usually the symptom of pain is manifested when the muscle tendon is put upon a stretch or strain. However, when the tendon sheath of the long lead of the biceps is involved, it is accompanied with disability to this muscle and definite localized pain, on pressure, along its groove between the two tuberosities. Rest with the arm in a sling, heat and diathermy are indicated.

Anterior poliomyelitis during the acute stage, when the shoulder muscles are paralyzed, creates severe pain over a limited period. An airplane splint and heat should be prescribed.

When pain is eaused by an injury, physical therapy measures are of inestimable value in relieving pain of the shoulder, preventing disabilities and restoring function.

The traumatism about the shoulder may be divided into those caused by major and minor accidents.

In the major group, are the well-known fractures of the head of the humerus, surgical or anatomical neck of the humerus, the greater tuberosity, fracture through the epiphyseal line of the head, fracture of the neck of the glenoid, fracture of the aeromial process and fracture of the iunction and outer third of the clavicle. These fractures may be caused by direct or indirect violence. Given a history

of the type of injury, with immediate excruciating pain and disability, accompanied by swelling, ecchymosis and dissolution of continuity, one should immediately suspect a fracture. Since the advent of the x-ray, which definitely assists in making a diagnosis, it is preferable not to attempt eliciting crepitation; because the movements of the fragments and the resisting spasm of the muscles may do untold damage to the surrounding soft parts. First-aid splints should be applied and all handling or manipulation of the injured part should be avoided during transportation of the patient. In the forementioned fractures of the upper end of the humerus, when a correct diagnosis and the relation of the fragments one to another have been determined satisfactorily, one has the choice of treating these fractures with the Balkan frame traction splint and mobilization method; or with immobilization of the part. Some of us prefer reducing these fractures under a general or local anesthetic and applying an abduction plaster Paris spica bandage sometimes combined with traction underneath the bandage. If the pain in the shoulder persists for forty-eight or seventy-two hours after the bone has been set, it is, in all likelihood, an indication that the fragments are not in proper approximation. One should not wait for this symptom; but have an x-ray taken immediately after the setting of the fragments. Fluoroscopic observations while working on the fracture are most helpful. These fracture patients should be kept in bed until union has taken place. The weight of gravity and the drag of the arm very often interfere with proper healing. The determination when good union has taken place is an important feature, so that physical therapy treatments and the restoration of function can be started at the earliest possible time. duration of the period of the bandage, treatment of the fracture itself, is variable; because of idiosyncrasies of patients to heal rapidly or slowly. Heat, massage, passive and active motion administered immediately after the dressings are removed, aid in diminishing the pain around the joint and obviating disabilities. These treatments are essential in adult patients in order to hasten full range of comfortable movements. The older the patient, the more important are these remedial agencies.

The peculiar conformation of the bones comprising the shoulder joint and the looseness of its capsular ligament permit motion in all directions. It is a universal joint. The pectoralis major, anterior fibers of the deltoid, the coraco-brachialis and biceps muscle, when the elbow is flexed, move the arm forward; the latissimus dorsi, teres major, posterior fibers of the deltoid and the triceps, when the forearm

is extended, take the arm backward. The deltoid and supraspinatus muscles abduct or elevate the arm; the subscapularis, pectoralis major, latissimus dorsi and teres major adduct the arm. The infraspinatus and teres minor are the external rotators; the subscapularis, latissimus dorsi, teres major and pectoralis major are the internal rotators of the joint. The definite understanding of the actions of these individual muscles aid materially in diagnosing any pathology taking place within them.

True luxation of the shoulder is another major traumatic cause of excruciating pain and sudden disability of the joint. The diagnosis is based on the head not being in its normal position, felt in a strange locality and the contour of the injured shoulder, as compared with its fellow, is quite abnormal. X-rays clinch the diagnosis. The surgical treatment is reduction under a general anesthetic. When this has been accomplished, the abduction attitude of the arm is more desirable than having it adducted and close to the trunk. Abduction prevents formation of tight adhesions of and around the capsule as well as contractures of the muscles. These are quite likely to occur in patients over thirty-five years of age. position of abduction should also prevent recurring false dislocations or subluxations. current dislocation of the shoulder is quite painful and disabling and happens with some particular athletic endeavor and muscular movement. Since the Nicola operation has been devised, there is no question about the cure of recurrent dislocation of the shoulder without loss of function to the joint. Dislocations are greatly benefited by heat, massage, controlled passive and active movements, when the splints have been removed.

The minor injuries causing pain in the shoulder that are not totally disabling, are usually seen in athletes or middle-aged people, who go in for some form of exercise to which they are not accustomed. There may be a stretching of the tendon or a tear of the muscle fibers, very slight in the beginning and the pain insignificant; but the repetition of the exercise increases the pain and disables the patient for that form of muscular activity. Baseball and football players are the class of people most frequently affected. The deltoid supraspinatus, biceps tendon, latissimus dorsi, teres major, pectoralis major or subscapularis are the muscles often strained or bruised. When the pathology is in the muscular fiber, there is pain on pressure over the localized spot, as well as increased pain, when the action of this individual muscle is brought into play. the tendon or muscle attachment is involved, the ascertaining of the pain on palpation is not easy; but the aggravation of it by the physiological action of the special muscle, should aid in the diagnosis. Superficial heat, massage and diathermy are very beneficial; at the same time, the particular form of exercise causing the pain should be stopped in order to avoid irritation.

A bursitis or periarthritis may occur in the

same manner. The treatment of these has already been mentioned.

Conclusions — Physical therapy has proven its worth in the treatment of shoulder pain. Accurate diagnosis is essential before it should be instituted. The recovery of properly treated surgical shoulder cases is hastened by its use.

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Surgery, January, 1929.

Discussion - P. L. Firster, M.D., Albany, N. Y.: Dr. Wallace has presented us with an unusually complete review of this very important subject, considering the briefness of the time at his disposal. It seems to me that the great lesson to be drawn from his paper is not the acquisition of knowledge with reference to any particular operative technique or in learning what special modality is to be used in any specific instance of pain in the shoulder, but rather the realization that we have at our disposal a means of treatment for which a great many people would have reason to be grateful if we but used these means when indicated.

The orthopedic surgeon, of course, has a decided advantage. By the time a patient reaches his office, that patient is quite prepared for an operation or a stretching or some other such radical procedure. He has already run the gamut of general practitioners and, not having been relieved, he is ready for more drastic measures. The general practitioner, having physical therapy at his command, can, by judicious application, prevent a great many operations and can do an untold amount of good, saving his patients not only a good deal of time and suffering, but a good deal of money as well.

I am glad Dr. Wallace emphasized the inportance of making a proper diagnosis. It is quite obvious that physical therapy measures applied to a shoulder for relief of pain in that joint can be of no earthly avail if that pain is merely referred, the pathology actually being in some nearby organ. It is equally obvious that it is this sort of misdirected effort which has been responsible to a large extent for the disrepute in which physical therapy was held not so very many years ago. I have frequently heard Dr. Kovacs stress the point that if physical therapy treatments produced no tangible results within a period of two or three months at the outside, then it is safe to assume that either the treatments are improperly given or else there has been an error in diagnosis-the latter being the more probable.

EOSINOPHILIA IN BACTERIAL REACTION SITES

Preliminary Report

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OSINOPHILIA has come to be considered as a regularly occurring feature of allergie states. Cooket looks upon local eosinophilia in the respiratory tract in cases of infective asthma, as evidence of the presence of allergy. He feels, however, that a mechanism different from atopy is at work in the asthma that is due to bacteria. Kline, Cohen and Rudolph2 recently reviewed the literature relating to tissue eosinophilia and reported their own observations of the occurrence of eosinophilia in wheals resulting from the injection of various materials and from the effects of physical agents. They reported a great predominance of eosinophilic cells in the wheals observed (whatever their cause may have been) in allergically sensitive individuals. They noted the incidence of 10%, 8% and 17% of eosinophilia in three reaction sites which had been excised after the lapse of 22 hours from the time of injection. No control sites were examined so that an accurate comparison of their findings with those presented herewith cannot be made. Eosinophilia in wheal reactions to pollens and to other atopens is receiving the attention of British workers.³

So far as we are aware, no reports have been published on the presence or absence of eosino-philia in the wheals and late skin reaction sites produced by the injection of bacterial products. It is our purpose here to make a preliminary report of the incidence of local eosinophilia observed in a small number of such reaction sites.

Cell material for examination was obtained from reaction sites and was prepared, stained and counted as in an ordinary different leucocyte count. After experimentation the following method for obtaining the fluid contents of skin reaction sites was adopted: a small superficial incision is made into the reaction site not any

more deeply than is necessary to permit the escape of a drop of blood and lymph. Gentle suction by means of a Bier's hyperemia cup enhances the flow if necessary. The first drop appearing is smeared upon a microscopic slide and stained within a few hours. A control drop is obtained from normal skin of the patient at the same time and is examined in the same manner.

Autogenous vaccines, old tuberculin and diphtheria toxin were injected into the skin in 22 cases. The subjects were both adults and children and were selected at random from a large number of patients. The accompanying table shows the collected data and the results of examination of the smears. No attempt was made to differentiate the cells further than into the two classes of eosinophiles and non-eosinophiles.

It will be seen that positive reaction sites, both early and late, show, in most cases, the presence of eosinophilia in excess of that present in the normal sites. The positive tuberculin reaction sites, with one exception, and the Schick reaction site. examined so late as the 5th day, ex

INCIDENCE OF	Eosinophile (CELLS IN	SITES OF S	Skin I	REACTIONS	TO .	Bacteriai.	SUBSTANCES
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Patient	Diagnosis	Testing Material	Elopsed time ofter Injection		atc Positive	e c	SE OF ROSINOPHILE ELLS PRESENT ite In control site
M. McD.	Allergic eczema	Mixed autog. vaccine Extract of	24 hours		+	34%	Control lacking
c. c. w.	Asthma	trichophyton gypseum	½ hour	+		71%	0
I. H. I. H.	Allergic coryza	Mixed autog. resp. vaccine	20 min.	+		73%	0
	ditto	ditto	4 days		4	34%	0
C. C. W.	Asthma	Mixed autog.	24 hours		+	70%	26%
T. S. W.	Allergic coryza	Mixed autog. resp. vaccine	24 hours		+	60%	0
w. s.	Arthritis	Mixed autog.	24 hours		+	76%	0
R. S. F.	Asthma	Mixed autog. resp. vaccine	15 min.	+		5%	0 ,
I. H.	Allergic coryza	Mixed autog. resp. vaccine	15 min.	+		0	0
V. S.	Asthma	Mixed autog. resp. vaccine	15 min.	+		8%	1%
А. Т. J.	Colds (interval)	Mixed autog. resp. vaccine	20 min.	+		10%	4%
T. S. W.	Allergic coryza	Mixed autog. resp. vaccine	24 hours		+	0	0
M. R. H.	Asthma	Mixed autog. resp. vaccine	9 min.	4		70%	
T. S. W.	Allergic coryza	Mixed autog.	20 min.	+		29%	8% .
W. S.	Arthritis	Mixed autog.		ı		2970	0
A. C.	Ulcerative colitis	stool vaccine Autog. stool	13 min.	+		10%	0
т. н.	(symptom free) Tbc. suspect	vaccine Old tbn.	10 min.	+		0	0
R. C.	The, suspect	Schick	5 days		+	2%	0
D. C. H. H.	Tbc, suspect	Old thn.	5 days		+	3%	1%
C. S.	Tbc. suspect	Old thn.	5 days 5 days		+	2%	4%
M. M.	The. suspect	Old thu.	5 days		++++0	2% 3% 2% 3%	0
	Pulm. tbc.	Old thn.	5 days		0 +	0	0
• • • • • • • • • • • • • • • • • • • •					T-	9%	3%

hibited increased eosinophile cell contents as compared with the normal skin sites, although in less degree than in some other cases.

The absence of eosinophilia on three occasions, two in the case of T. S. W. and one with the patient A. C., offer ground for speculation and show the desirability for further research. A. C., previous to this examination had been relieved of an ulcerative colitis of three years' duration after a short course of autogenous vaccine treatment and was, perhaps, at the time of testing, in a non-allergie condition.

COMMENT

Should the findings of this small series of cases be corroborated by future investigations, eosinophilia will be recognized as being a regular feature of positive early and late reactions to intrader-mal injections of bacterial products. Insofar as eosinophilia indicates the presence of hypersensitiveness, it would appear that the early wheal and the late local reaction are but two manifestations of the same underlying condition, namely, bacterial 'hypersensitiveness.

2 Kline, B. S., Cohen, M. B., and Rudolph, J. A .:

The cellular contents of sites of other types of skin reactions and modifications of technic in examining them are being studied. It is hoped that this study may throw light on the question of the origin and properties of eosinophiles and other cells from the tissues which participate in immunologie processes.

SUMMARY AND CONCLUSIONS

A record is here presented of an investigation into the incidence of local eosinophilia at the sites of early and late skin reactions following the intradermal injection of bacterial substances.

An increase at such reaction sites in the percentage of cosinophile cells in the fluid contents over that found in normal skin, is shown to be present in most of the patients examined.

Mention is made of other directions in which the present research may be directed. It is suggested that corroboration of these findings in a large series of cases will judicate that the typical skin reactions produced by the injection of bacterial products are distinctly allergic in their nature.

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STUDIES IN THE SERUM TREATMENT OF PNEUMONIA* By JESSE G. M. BULLOWA, M.D., NEW YORK, N. Y.

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THE results of serum treatment in pneumococcus Type I pneumonia have been so satisfactory in the hospitals where it has been extensively employed that it is desirable that physicians should adopt it in hospital and in private practice. The results from its proper use are as definite as those obtained with any other therapeutic serum, and, in the treatment of pneumonia, more effective than any measure hitherto recommended.

Distribution of Types. At Harlem Hospital during the past four seasons Type I cases have occurred in about 25 per cent of all adult pneumococcus pneumonias; of each Type II and Type III; approximately 10 per cent were found. The appearance of organisms formerly included in Group IV, and now classified as separate types through the efforts of and in accordance with the elassification of Georgia Cooper of the Resarch Laboratory of the Department of Health, New

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York City, has been studied and some interesting facts are revealed. The miscellaneous or "x" group, which originally constituted the major portion of our cases, has been gradually reduced. During the past season, only slightly over 1 per cent of all the pneumococci recovered were in that group. Only 3 pneumococci which did not fit into the classification of pneumococci up to Type XXXII were found among 253 cases.

Certain types, notably Type IV and VII, seem to be quite important; in fact, in some years they are more important than is Type III. Some are apparently occurring with increasing relative frequency, as Types IX, XIV, XVIII and XXI.

Type V was formerly, in some cases, included with Type II. It was originally known as the sub-type IIa of Avery. Type VIII was formerly often included with Type III. It was necessary to separate them because they are different types and require different serums. Clinically, the diseases they cause differ from, and have a prognosis differing from pneumonias due to Type II and

111 05

Type III with which they were confused. Useful sera have been prepared for fourteen types other than Types I and II, and are available commer-

cially for Type VII and Type VIII.

Type XIV and Type VI, which seem to be becoming more common among adults, are among the most frequent invaders of children. This year Type XXII has appeared in six cases and in the future it may be an important type. What shall the future reveal in connection with laws governing the appearance and disappearance of these types? What their importance is to be, and how they are to be combatted remains a problem. Possibly we may have warning from studies such as these so that in anticipation of epidemics, specific sera can be prepared, or ferment organisms can be secured.

Multiple Infections: It is of both practical and theoretical interest that among 1,601 cases, 56 were multiple pneumococcus infections. In some cases, the invasion was simultaneous, in some consecutive. It is probable that, in some cases, one of the organisms recovered was merely carried and without responsibility for disease. This 3 per cent occurrence of multiple invasions may account for some apparent serum failures because in such cases the serum used was not specific for the organism responsible for the illness.

The fact that almost 40 per cent of cases are Type I and Type II supports the view that good practice would be to give Type I and Type II serum to all cases pending the determination of type, as almost one-half the cases might then be

favorably influenced.

Results with Type I and Type II Serum: What are the results with serum in pneumonias due to pneumococcus Type I and Type II? At Harlem Hospital, in the order of admission alternate cases are given serum. All cases in which Type I is discovered to be the invader are given Type I serum, for proof of its efficacy has already been provided. Other types are still alternately placed in the serum and non-serum groups of their respective types. On this account, since 1929 few cases of Type I, unless they are moribund or post-critical either on admission or when the Type I is discovered, are not given serum. It is interesting to observe that in the small group of 53 cases treated without serum, the mortality of bacteriemic and non-bacteriemic cases is that usually encountered by most observers in hospital practice without serum, or 30 per cent. Eight of 10 positive blood culture cases died, or 80 per cent.

The success of treatment depends upon the correctness of typing and also upon the strength of serum, the medical and surgical care, the nursing, the occurrence of synchronous infections, and other factors, some unknown.

Studying the Type I experience we find some variation in the mortality rate from year to year, but in no year did the mortality in treated cases

reach that attained in untreated cases. The reduction in mortality was especially noticeable in the bacteriemic cases; it is 45 per cent less than the usual fatality rate. For three of the four years the mortality was in the vicinity of 13 per cent, which means that only 1 patient in 8, instead of 1 in 3 or 4, died, as would have happened if the ordinary fatality rate had been maintained. The year with the high rate, 21 per cent, was also the one in which our Type II results were least favorable. During the past four years the mortality in 309 serum cases was 49, or 16 per cent. Among 96 blood invaded cases, 37 died, or 39 per cent.

It is noteworthy that the admission cases, or those receiving serum without delay to determine the type, showed a lower mortality. Though the difference in the mortality rate in the two groups is 4 per cent, this is a percentile difference of 22

per cent.

TABLE 1

Type 1-July, 1928, to March, 1932-363 cases

Cases receiving no serum, bacto- riemic and non- bactericmic	when	es of e dmission ing seri	n,	inel	receivi after del dent to yping		t	l serum reated cases	
Total Cases Deaths % 54 16 29	Total Cases lot	Deaths 21	7,0 14	Total Cases 141	Deaths 25	50	Total Cases 309	Deaths	70 16
Bacteriemic cases 10 8 80	43	16	37	53	21	39	96	37	39

It requires less serum to prevent invasion of the blood stream than to sterilize it after invasion has occurred. Until type is determined, patients are not vigorously treated. On this account, it is desirable that producers prepare and market serum of higher titre so that the initial doses may be greater than at present—15,000 units for the first dose and 30,000 to 40,000 units for subsequent doses.

In compiling these statistics, no cases have been omitted because they have come in with pulmonary edema, or because death has occurred from subsequent surgical operation, or other complication.

The reduction of the total Type I mortality to 16 per cent in a group of 309 cases in which all cases admitted are included, is a reduction of mortality of approximately 50 per cent. If only cases which had been in the hospital more than 24 hours had been included the results might have been even more striking.

The Type II cases merit study. In these cases we have strong suggestive evidence that the serum for Type II is of value if given in sufficiently large doses and promptly. There is a distinct reduction in mortality over the entire period, which happens to be more marked in cases treated on admission with Type I and Type II serum.

The very high mortality among the blood invaded patients and the relatively poor results in this group shows the importance of prompt and adequate administration of serum before the defense mechanisms are exhausted.

One hundred and sixty cases were treated in three and three-quarters years. Of 84 without serum, 36 died, or 43 per cent; 35 were bloodinvaded, and of these, 27 died, or 77 per cent. Fifty cases received serum on admission; 11 died, or 22 per cent. Twelve were blood-invaded and 8 died, or 67 per cent. Twenty-six received serum when the type was determined; 12 died, or 46 per cent. Of these, 14 were bacteriemic; 10 died, or 71 per cent. In all, 76 cases received serum; 23 died, or 30 per cent. Included in these 76 cases were 26 bacteriemias; 18 died, or 69 per cent.

TABLE 2

Type II-July, 1923, to March, 1932-160 cases

Gases receiving no serum, bacts- riemic and non- bacteriemic	continuin	n of se- mission, g serum und to	aerum Ine	recelv siter del ident to yping	ay.		serum rested cases	
Total Cases Deaths % 81 36 43	Total Cases D 50	eaths %	Total Cases 26	Deaths 12	% 46	Total Cases 76	Deaths 23	ر 30
Bacteriemic cases 35 21 77	12	8 67	14	10	71	26	18	69

Let us return to Type I. I have analyzed the results of serum treatment in Type I for 1929-30 and 1930-31 in respect to certain points.

Prior to the season of 1929-30 we gave the refined serum every eight hours in a dose comparable to that used by Cole in his studies. At this time, cases usually terminated 48 hours or more after commencement of serum. In a study of the cases treated during 1929-31, certain facts are observable. 20,000 units of serum or more was given every three or four hours. Cases were considered terminated when the temperature remained below 100°; usually at that time the pulse was less than 90. Among the non-bacteriemic cases, most cases terminated on the 1st and 2nd day; 81 out of 123. Termination of the bacteriemic cases frequently occurred on the 1st or 2nd day; 14 out of 33 who recovered. The majority-19-required three days or longer to reach normal. The deaths in the bacteriemic cases were usually on the 1st or 2nd day of treatment. It was also . observed that among cases terminating early the crisis occurred, in the majority of cases, before the 6th day, and in cases requiring two days for treatment it was before the 7th day. This is at least two days earlier than customary. It was observed, too, that the cases requiring prolonged treatment were usually cases with a bacteriemia.

Of course, such prolonged treatment in some cases required large amounts of serum, and it might be asked whether the result was worth the

expense and effort. Aniong 10 bacteriemic cases receiving more than 300,000 units, 4 recovered, though the expectation without serum would be only 2 or 3. Other studies show that most cases required up to 120,000 units, though a considerable portion required less than 60,000 units.

Early and Late Treatment: One of the most infortunate current beliefs is that unless serum is given before the 4th day it is useless to employ it. It will be readily seen that most of our cases received serum before the 6th day, but that many bacteriemic cases recovered when serum was given late in the disease, as late, indeed, as the 15th day.

Our bacterienic cases were studied in relation to the day on which serum treatment was instituted, and in relation to the occurrence of, and the number of colonies on the plates (which are taken with 1 c.c. of blood). It is interesting that we did not save patients who had more than 50 colonies if serum treatment was delayed more than five days. Patients with several hundred colonies per c.c. recovered if treatment was undertaken before the 5th day.

It cannot be too emphatically stated that the apparently mild cases treated early require much less serum. Mild cases may become severe and then may require large amounts of serum or be the occasion for a futile attempt to halt what should not have developed—an overwhelming bacteriemia.

In our service at Harlem Hospital,* cases are rated for severity in accordance with a definite scale. Ratings up to 50 are poor, from 50 to 70 fair, and above 70 good. Though most of the non-bacteriemic cases had fair to good rating, it is significant that we saved two cases who were rated as low as 20, and four rated 30. In our first years we saved no cases rated below 40. Better serum and more expert management are now available.

Serum for Other Types: For two of the more recently isolated types we have prepared serums and I am presenting the statistics (Table II). Much depends on the serums. For some of the types we are where we were with Type I and II in 1928. We have serums of insufficient strength and, in some eases, inadequately refined, giving chills and other reactions. We have too few horses on any type to select the best and discard poor producers. The serum except in the case of Type VII, which is amply potent, is usually about 14 the strength of good Type I serum. We can, however, learn from the statistics the chances for success. Though the results are apparently discouraging, the mortality is sufficiently high to spur us to renewed effort. In individual instances, when good serum has been available in ample supply and is not given too late, the results in prompt termination are comparable to the the results obtained in Type I and Type II cases.

^{*}Bullowa, J. G. M., Use of Antipneumococcic Refined Serum in Lobar Pneumonia, Jour. A. M. A., 90; pp. 1349-61, April, 1928

TABLE 3

HARLEM HOSPITAL SEVERITY RATING

HARGEST NOC. COM	
Health = 100. Each heading given equal importance; the maximum ducted for any heading is at most 20. 20 is subtracted bacteriemia.	
241	biract
1. Respiratory: Involvement: Portion of lobe	3 5
One side	10
Both lowers	15
Rate: 35 +	
45 +	10
Pleurisy: for each side	5
11. Nervous Condition: (headache, irritability, sleeplessness, de-	
lirium, apathy, comaj, depending on ex-	20
verity up to	
III. Circulatory Efficiency Rate: 110 +	5
120 +	10
Cyanosis: depending on degree up to	10
	10
IV. Gastro-intestinal: Distention: depending on severity up to	
Vomiting: depending on severity up to	10
V. Complications and Special Factors: age 50 +	5
27F 60 +	10
Obesity, depending on degree	5-10
Pregnancy, depending on the month	5-10
Pregnancy, depending on the month	5-10
Tuberculosis, depending on involvement	20
Bacteriemia	20

Results in Type VII and Type VIII: For Type VII and Type VIII, which constitute together 12 per cent of the cases, the results seem more significant and much more encouraging. In these cases the results are as satisfactory as in Type I. If one takes the non-bacteriemic cases only, the mortality in Type VII is reduced from 12 per cent to 5 per cent, and in Type VIII from 10 per cent to nothing at all. Even in the bacteriemic cases the mortality seems to be reduced. There were 10 cases without serum; 5 died, or 50 per cent. 6 cases received serum; 2 died, or 33 per cent. No one who has studied the cases and has seen the striking results can fail to be encouraged.

For some of the other types there are sera from which in some cases apparently striking results are seen, but the numbers are as yet insufficient to report. Unless funds to continue the production of serums are provided, this work must cease and many lives will be lost. The present status of Type I and Type II serum therapy is due to the great generosity of Mr. Lucius N. Littauer and of the Metropolitan Life Insurance Company. The funds for other types were provided by the same donors and the Altman Foundation. The Lederle Laboratories, Inc., have contributed serums.

I have recommended the early and liberal administration of serum Type I and Type II in all cases as they are the most frequent invaders. But the best treatment of pneumonia requires specific serums of high titre and accurate bacteriologic study. The physician must have this assistance in the treatment of pneumonia if he is not to be handicapped and lose patients he might otherwise save. He will require for his care of respiratory illnesses a set-up which may be as costly as, and an auxiliary technique as specialized as is today given by hospital executives, without question, to surgeons. For their reward they will have results in the saving of lives and in the shortening of

illness as dramatic as are any of the achievements of medicine.

Serum: Refined and Concentrated: The serum used by us is for the most part that refined and concentrated in accordance with the various methods of Felton and of Banzhaf. During 1928, 1929 and 1930, it was prepared by Felton at Harvard. after that by the Lederle Laboratories, Inc., at Pearl River, or in the Laboratory of the Department of Health, New York City, by Banzhaf.

Unfortunately, the serum unit of different manufacturers varies and some of the serums may have only half the strength of others. The units referred to are those of Felton, as originally used, and of Miss Cooper. The later unit proposed by Felton is about half the strength of his original unit

Miss Cooper has frequently verified the approximate correctness of the unitage according to her standards, and where Miss Cooper has obtained a lower value from the one on the original label, this value has been accepted in evaluating the therapeutic effect of the serums.

Parallel tests which Miss Clapp at Pearl River and Miss Cooper at the Research Laboratory have carried out indicate that concordant results may be obtained by employing similar methods and estimating the values by comparison with a common standard serum.

It is desirable that all commercial serum units For this purpose a be of the same strength. standard control serum should be used with all tests. The National Institute of Health has not vet established a minimum standard for refined serum. The present minimum standard permits serums containing only 80 units per c.c. to be marketed. Most of the serums we have employed have contained 2,000 to 3,000 units of Type I. and have been relatively free from chill and other reactions. It is desirable that minimum standards of potency, and standards for maximum frequency of unwelcome reactions in refined and concentrated serum should be promulgated by some competent authority.

Statistical summary is based on experience with individual cases. The presentation of some of these cases lends emphasis to the conclusions that have been drawn.

Case I illustrates the advantage of giving serum without waiting for the type, and also that even massive invasion of the blood stream may be overcome with an adequate dose of serum.

Case Reports: E. S., a man of 35, came in on the 4th day in the serum series receiving serum before waiting for the determination of type. He received 10,000 units of Type I and Type II refined and concentrated serum immediately, and after five hours another dose of 30,000 units. The next day his temperature and pulse were normal. On that day it was determined that his sputum

17

contained Type I organisms and that there had been in the culture from his blood, 454 and 475 colonies per c c on two plates. On the 6th day his temperature rose. On the 7th day an additional 234 000 units were given. Temperature and pulse fell to normal Later there was a moderate serum sickness which lasted for about a week The patient left the hospital perfectly well

Inadequate amounts of serum were Case II uuar athua

A W. a woman of 44, admitted on the 3rd thy on the non serum series, is in contrast with the first case. She was alcoholic. She had had a cold, the onset of pneumonia was with chill and p in in the cliest. The right middle lobe was consolidated and there was pleurisy. She was rated Next day, Pneumococcus Type I was found in mouse' peritoneum and brain, and also in the culture from the patient's lung and in the blood culture On that day there were 2 and 0 colonies on the blood culture plates The next day 38 and 35 colonies were found On this day, 37,000 units of serum were given in small divided doses, preceded by adrenalm because of a history of asthma and a positive ophthalmic test. The following day there was an overwhelming invasion 3 080 and 2 280 colonics on two plates 54 000 units had been given on that day The dosage 91 000 units in two days was entirely inadequate in view of the severity of the infection

Case III illustrates the difficulty in determin ing the type, and the occasional advantage of lung

suction for this purpose

J V, a man of 59, was admitted on the 6th day and received a preparation of Type I and Type II serum which was relatively poor in Type II 2000 and 6000 units of Type II antibody were administered at an interval of 12 hours because the temperature was only in the vicinity of 102° Apparently there was only the slightest effect on the pulse and temperature. On the 9th day, after the crisis it was determined that a lung suction performed on the 7th day contained Type II organisms. There was no growth of pneumococci in the sputiim injected into the mouse

Case IV A case of pneumoma in which Type I invaded blood and pleura with o concomittant infection with Type VIb Recovery ofter administration of Type I sernin, empyeina due to

pneumococcus Type I, and operation
J M, a male of 28, was admitted on the 4th
day as a serum case He received 16,000 units of Type I His blood culture and lung suction were positive The next day 250 000 additional units were administered On the 6th day his temperature was still elevated and his pulse 100 On that day there were agglutinins demonstrable for Type I The following day the temperature

rose and a fresh typing of the sputum was undertaken On the day following, Type VIb formerly known as Type XXVI, was ob tained from the heart of the mouse which had been injected with the sputum. A lung suction undertaken on the 9th day on the same lobe which land originally given Type I revealed Type VIb The temperature continued for two The patient developed agglutinins for Type VIII or XXVI, and finally they were lost Agglutumns for Type I disappeared from the blood reappearing on one occasion and then The temperature continued again disappearing and became more intermittent At this time it became possible to locate an interlobar exudate The pus from this exudate contained Type I On the 30th day of the illness the patient was oper ated upon by Drs Connors and Stenbuck by the Connors packing method On the 5th day his temperature was 100° His wound healed and he remained well

Summary

We are presenting our conclusions based on our experiences in the typing of 1601 cases of pneumonn observed at Harlem Hospital during the last four seasons covering three and three quarter years

We have shown approximately a 50 per cent reduction in mortality in Type I pneumocoecus pneumonias in both bacterienic and non-bacterie mic cases. There is also a shortening of the ill

ness and a saving of sicker patients

The favorable results in Type II are discussed The results of serum treatment for VII and VIII are given. In Types VII and VIII a reduction in mortality of 50 per cent in serum treated over non-serum treated cases is recorded

A plea is made for better serum and a uniform standard of potency the standard to be promul

gated by some competent authority

A plea is made for additional financial support for the experimental production of serum ap preciation is expressed to the donors who made possible the serum treatment of Type I and Type II and contributed to the present studies in other types

It is a privilege to express my deep obligation to Dr. W. linm JJ. Park D rector of Laboratories Department of Health. New York. City who has lirected the pneumonia research to Miss Georgia Cooper who has servegated the types and checked the typ ing and the setum doarse and to Miss Glare Wilear bacteriologist at the Harlem Hospital Station whose careful work executive ability and self secretice is here recorded. I reknowledge my indebtedness to the bacteriological assistants to the successive Pneuriona Service resident physicians and invess and finally to Miss Evelyn Creen and the secretic services of the present of the secretic services of the present of the Death of the Miss Development of Health the Death of the Death of the Miss Development of Teach of the Death of the D

This work wo 11 not lave been possible without the persual interest and encouragement and the generous financial's poort of Mr. Lucius N. Litta ier

THE TREATMENT OF PNEUMONIA BY PHYSIOLOGICAL SUPPORT* By EDWARD E. CORNWALL, M.D., BROOKLYN, N. Y.

HERE is a natural therapeutics which has been evolved during long ages. Living cells, tissues, organs, apparatuses and coordinated organisms possess an inherent capacity not only for normal functioning but also for restoring themselves to normality in greater or less degree when damaged, diseased or deranged. This natural therapeutics is highly developed all along the When a finger is cut the lacerated tissues immediately proceed to restore themselves and to mend the breach in the body wall. When pneumococci penetrate the mucus membrane and invade the human organism the organism immediately puts in operation mechanisms for typing the invading pneumococci, for inventing specific substances which can destroy them or neutralize their activities, and for manufacturing these substances in suitable quantities, besides doing other things which make for the overcoming of the disease. The operation of these natural therapeutic procedures requires a certain amount of time; natural therapeutics is apt to be slow; but it is always exercised in the right direction and is correct as far as it goes. It is truly regular medicine.

There is another therapeutics which human intelligence has developed. This is the therapeutics of the physician. Its development is already well advanced and promises much greater advance-

ment in the future.

The physician can apply his therapeutics in two ways: He can help nature in her curative operations, and he can seek his therapeutic objective by direct means, and even by means which disturb or contravene regular physiological processes. He can treat his patients by physiological support and he can treat them specifically.

Specific treatment promises more than physiologically supportive treatment; it may even promise to cut short the disease or to insure a cure; but it is not universally available. Physiologically supportive treatment has the constant

merit of being universally available.

In contributing to the present discussion of the treatment of pneumonia I shall confine my remarks to the treatment by physiological support. How can we help the patient to cure himself?

The general answer is, by making conditions favorable for the operation of his own intrinsic method of treatment, which we know can be successful in a large proportion of the cases.

We can favor the patient's physical rest by putting him in bed and allowing him to make only such movements as are good for him or are not detrimental, and by avoiding unnecessary and disturbing physical examinations. We can favor his mental rest by an encouraging manner and en-

couraging words, and by restricting conversation, visiting and noise. We can regulate ventilation so that he gets fresh air and is at the same time protected from chilling. We can regulate his diet in accordance with the indications presented by his pathological physiology. We can safeguard him against dangers which threaten from the alimentary tract, particularly gaseous distention, toxemias and reflex vasomotor disturbances, both by regulation of diet and by wise management of the bowels. We can see to it that he has good nursing, and also, that he is safeguarded against meddlesome nursing, such, for example, as the giving of full sponge baths when he is very sick. And we can resist the influence of wrong therapeutic traditions and teachings and our own misguided zeal which would lead us into meddlesome medi-

How can we put into practice these general directions for physiologically supportive treatment?

There are no standard, universally accepted procedures for the treatment of pneumonia outside of rest in bed and general nursing. Even in regard to hygienic and dietetic treatment there are differences of opinion; and extensive differences of opinion exist in regard to the treatment of symptoms.

My opinions on the treatment of pneumonia and the details of the treatment which I prefer may be found in the thirty-one papers on the subject which I have published during the last twenty-two years. I cannot in this short paper repeat those details, but I will discuss briefly a few points

in that treatment.

Fresh air. Fresh air should be provided. But the mistake of confusing cold drafts with ventilation should be avoided. The patient should be protected from chilling. The widely used quasi specific treatment known as the cold air treatment, which seems to have for its basis a distortion of the indication for fresh air, I look on as dangerous. It is capable of doing harm, especially when the temperature is low, and the time of defervescence is near. Writing in 1913 I called attention to the fact that such treatment continued after defervescence, when the patient lies weak and perhaps perspiring, may induce reinfection of the lungs or an attack of pleurisy.

The bowels. Twenty years ago I came to the conclusion that the traditional practice of beginning treatment regularly with an artificial clearing out of the bowels and continuing treatment with routinely induced daily bowel evacuations, was not good medicine in pneumonia. I was pleased to find support for this opposition to a well nigh universal practice in Hippocrates' Second Aphorism, which says: "Artificial evacuations of the bowels, if they consist of such matters as should be evacuated, do good and are well

Read before the Medical Association of the Greater City of New York, held at the Academy of Medicine, New York, November 21, 1932.

borne, but if not, the contrary." Reasons for this conservative management of the bowels suggest themselves as follows: Artificially induced movements of the bowels disturb the patient more than They favor inthose which occur naturally. creased fluidity of the bowel contents, and increased bacterial growth therein and absorption of toxins therefrom. They predispose to gascous They excite nervous reflexes which can seriously disturb the heart and vasomotor system, especially when the blood pressure is low, which is often the case in pnuemonia. They can even put a patient with an unstable cardiovascular system in jeopardy from the physical exertion and nervous reflexes involved. And in the case of some cathartic agents they can cause introduction into the blood stream of injurious substances.

This conservative management of the bowels does not mean that they should never be moved artificially in pneumonia; but that they should be moved only when special indications for moving them exist other than failure of regular daily evacuations. Such special indications may be tympanites which regulation of diet does not correct, or a disagreable sensation of fullness in the rectum. Also, if the patient is first seen early in the disease, and has not had a movement within twenty-four hours, and is in good condition, an enema may be given. And sometimes in the middle of the course of the disease, if no evacuations have taken place naturally, and the patient is in good condition, an enema may be given. regularly on the second day after defervescence, if natural evacuations have not taken place, an enema should be given. Enemas should be cmployed to move the bowels and not cathartics given by mouth. It is the general rule that the bowels should not be moved artificially in the presence of notable circulatory or respiratory embarrassment or near the expected time of deferves-Evacuations often take place naturally, and these do not much disturb the patient. This conservative management of the bowels requires special regulation of the diet, and also avoidance of disturbing medication, and not only disturbing cathartic medication but also other disturbing medication.

I have had twenty years experience with this policy of conservative bowel management in pneumonia and am convinced by clinical evidence that

it makes for physiological support.

Dict. The subject of diet has not received generally the attention which it deserves. Proper regulation of the diet means much for physiological support in pneumonia. Definite dietetic indications are presented by this disease and its complications. Being a disease of short duration, it is possible to take advantage of moderate undernutrition: the protein and fuel rations can be moderately diminished with consequent relief to the overworked bodily metabolism. A large water ration is indicated to facilitate metabolism and

elimination; but, on the other hand, circulatory weakness or renal insufficiency may require that the water ration be restricted. Fever calls for increased rations of alkaline salts to offset the acidic tendency of fever; and the leucocytosis and fibrinous exudation into the lungs and increased metabolism call for an extra ration of calcium. The dangers which threaten from the alimentary tract, particularly to the cardiovascular system, call for a diet which will safeguard against toxemias of intestinal origin, visceral distention and reflex nervous disturbances.

The dietetic indications in pneumonia vary with the severity of the disease and with complications. For the average case which is doing well I am accustomed to prescribe a fluid, lactovegetarian diet which supplies about forty grams of protein, two grams each of sodium chloride, sodium bicarbonate and calcium chloride in addition to those salts present in the other articles of food given, and about 270 grams, or 90 ounces, of water. The proper fuel value of the food is about 1,200 calories. The articles which enter into this diet are water, barley water, modified milk, strained fresh orange or grapefruit juice, lactose and dextrose, and the salts above mentioned.

This may be considered a full diet for the fabrile stage. It has to be modified to meet conditions and complications. In severe cases it may be necessary to reduce the quantity of milk or water. In very severe cases it may be necessary to restrict the diet temporarily to strained orange juice, dextrose or lactose, barley water, water, and the salts mentioned. The presence of tympanites calls for exclusion of milk, or the giving of it in limited quantity lactacidized. The presence of diarrhea calls for a diet mostly of barley water and salts. Notable heart weakness calls for reduction of the fluids, and, perhaps, increase of the sugar; but it is not often that the reduction of the fluid need be extreme. It is usually good practice in the more severe cases, and near the expected time of defervescence, to reduce the milk and water in the diet.

Among the articles of food often given in pneumonia which I consider objectionable, may be mentioned raw egg albumin, animal broths, and the patent foods which feature the words "peptone" and "peptonoid."

Cardiac and circulatory failure. Here urgent need for physiological support often appears. This support ean be given indirectly by rest, conservative bowel management, and regulation of the diet. It can also be given directly by administration of drugs which increase the functional performance of the heart and blood vessels.

In discussing this phase of pneumonia therapeutics one can hardly avoid some reference to the use of digitalis, because of the dominating influence which that drug exercises on medical practice. I will only say in this connection, that during the last twenty years, as near as I can

recollect, I have not prescribed digitalis in the active stage of pneumonia excepting on one occasion; holding the opinion that this drug is undesirable in pneumonia, and particularly on account of its effect on the vagus mechanism.

The drug which as a result of experience I have come to prefer above all others for use in the treatment of circulatory failure in pneumonia is strophanthin. Caffeine and strychnine I also use occasionally as adjuncts. In speaking of the use of these drugs I wish to emphasize the importance of being careful not to give them in too large doses. The judicious use of the foods, sugar, and calcium, also have an important place in the treatment of circulatory failure. After administration of caffeine and strychnine the patient should be watched for unfavorable effects; for these drugs even in small doses are occasionally not well borne. Very rarely an idiosyncrasy is observed in regard to strophanthin.

Opiates. Sleep artificially induced early in the disease may be of great value for physiological support. Pleuritic pain, distressing cough, and great restlessness which prevent sleep may properly be relieved by opiates in the early stages of the disease. Later in the course of the disease, however, and especially near the expected time of defervescence, opiates are contraindicated; for then it may be necessary for the patient to keep awake and to breathe rapidly in order to survive. The opiates should always be given in comparatively small doses. Sedative drugs other than opiates should generally be avoided, excepting

possibly alcohol in selected cases; but not every patient takes alcohol well. In the treatment of delirium physical restraint, in my opinion, is generally to be preferred to the use of opiates or other sedative drugs.

Dyspnea. Nature makes physiological adjustments for dyspnea in pneumonia by increasing the respiration rate. In severe cases stimulation of the heart by strophanthin and of the respiration by caffeine is called for. In very severe cases, with extensive pulmonary involvement, the conservative use of oxygen by inhalation may be indicated.

In concluding these few remarks on the treatment of pneumonia by physiological support I wish to emphasize the importance of self restraint in our therapeutic activities. After we have put the patient in the position and conditions favorable for the operation of his own intrinsic method of treatment, we should go about the giving of directly supporting or symptomatic treatment with caution and care. In giving such treatment our ideal should be, the least that the patient can get along with rather than the most that he can stand. A patient with pneumonia will get well if only he can be kept alive long enough. Unfortunately we can not always keep him alive long enough. But physiologically supportive treatment which is possible in the present state of knowledge can be relied on to reduce considerably the current mortality rate.

WHY A CHILD REFUSES TO EAT*

By DOUGLAS P. ARNOLD, M.D., BUFFALO, N. Y.

The subject of refusal of food is one of the most common and one of the most exasperating of all pediatric problems. It is a subject which has been approached by many different men; their ideas on the etiology and therapy are legion and seem to be limited only by the number of authors. In looking over the literature, we find that all agree that no child can be expected to be blessed with a good appetite while harboring an infection, be it syphilitic or chronic respiratory, or urinary; and so this phase will be eliminated from this short paper.

Many children have been adenectomized, tonsilectomized, yes, even circumcised, and there still remains a large army of well trimmed and untrimmed food fighters among the young children, and conscientious passive objectors—among the older ones. Why is this?

The literature on anorexia is a maze of endo-

*Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

crines; vitamines; liniar types; gastric balloons; stomach waves; distended colons; abdominal pads; metabolic rates; hydrogen-ion concentrations; bland low-residue diets; stimulating diets; raw basic feedings without meat; the preponderance of basic over acid-forming elements; and the opposite; emphasizing the giving of liver, beef and kidneys; the exclusion of milk altogether, replacing it with fruit juice, and the giving of a quart of milk a day. (All, I believe, concur in the dangers of too much milk.) Some authors mix cause and effect, for the reason that they start the study too late and after the condition has brought about marked secondary changes.

I do not wish to give the impression that I am over critical; many good points have been evolved, truths are found in most of the studies but I still contend "They do not see the woods for the trees"

trees."

No one having a pediatric practice can but realize that in our little patient we are dealing with a

^{1.} For a bibliography of previous papers by the author on the subject of pneumonia, see the Medical Times and Long Island Medical Journal of February, 1932.

personality,—usually a very dominating personality mixed with a strong element of negativism. If this were not so, we would wend our way home at nightfall much less tired and much more anniable.

From the foregoing, it must be evident that the theme of my paper is that we are dealing primarily with a psychological problem with resulting physical effects on the body economy. Do not misunderstand me, this is not a problem for the psychiatrist or behaviorist, but is distinctly a pediatric problem. In this connection I cannot refrain from advising you to read that enchanting sane article from the fluent pen of Joseph Brennennann, "The Menace of Psychiatry," American Journal of Diseases of Children, August, 1931.

The subject resolves itself into proplylaxis, and the treatment of the established case. I will confine myself today to a short discussion of the

more important phase-prophylaxis.

Of prime importance, conflict over food must be avoided from the date of birth. There is too much competition in weight-gaining during infancy and childhood, and this one fact gives the child the whip landle throughout its young life. It does not take a child long to sense that fat babies and thin mammas are the style. The fattest baby is not necessarily the best baby. Many babies are started on their food-fighting career the first weeks of their lives by overzealous complementing, supplementing, and foreing.

It may take much finesse to establish the proper attitude toward food intake. Necessary factors are good lygiene and all that term applies; in the breast fed, correct posture at the breast; in the artificially fed, attention to nipples and the temperature of the food. Give as infrequent feedings as is consistent with getting-in the twenty-four hour amount, remembering that this is a variable quantity. Allow the child possibly to feel a little hungry rather than stuffed like the "Strassburg Goose," at the end of a meal.

Children are creatures of habit, and the older they are, the more opinionated they become. This is the reason for instituting an early bottle in a breast fed infant, and for the early giving of cod liver oil, orange juice, and solids. The children should be "eased-in" to every change, and not pounced upon. They must be given time to accustom themselves to different tastes, different methods of giving, and other changes. A child must be enticed, not coaxed or forced. Meal time should be a happy quiet time. A mad cabaret with one or more of the family acting as whirling dervishes has no place at the child's meal time. Quiet conversation, interesting to the child, is

often of advantage. A nurse or mother should be educated along these lines, and made to realize the importance of these feeding details, for unless they show some intelligence in coping with the common first refusal, great harm is done and the endless fight is on.



There is much to commend the work of Dr. Clara Davis in the self selection of diet, that is, making certain that wool, plaster, and particularly paint are not among the dietary, for a child does not always eat or need what is seems to crave—nothers and grandmothers to the contrary.

Lastly, never force !- A child, like an adult, will have meals, yes, days, in which it is not hungry. One ill-advised forcing can be the inception of a food fighter or objector, or may teach the child that other weapon of defense-vomiting. This often comes about at the time of an illness, when the anxiety to present starvation acidosis, hypoglycemia, and loss of weight causes mother, nurse and doctor to err and at this time form in the child an obsession, association reflex, conditioned reflex, or call it what you will, against food. The child soon sees that it has a powerful weapon over its subjects and comes to have an exaggerated idea of its importance in the community, if not in the family. "He wields his sceptie with a despot's hand, baby, my king."

I firmly believe that if doctors, mothers and nurses were taught the importance of anorexia prophylaxis, behavior problems in feeding would be a thing of the past.

A paper on this subject should not be written without an appreciation of Dr Charles Anderson Aldrich and his little book "Cultivating the Child's Appetite."

THE MINORITY REPORTS OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE

By NATHAN B. VAN ETTEN, M.D., NEW YORK

Delivered at the National Conference of the Costs of Medical Care, New York Academy of Medicine, November 29, 1932.

I have the honor, Mr. Chairman, to comment briefly upon some divergent visions of a few members of our Committee upon the solution of the problems of "The delivery of adequate scientific medical service to all of the people, rich and poor, at a cost which can be reasonably met by them in their respective stations in life." All of the studies were pointed at this target or at sources of reflected light which might illuminate it.

The work of the Committee carried on by exceptionally able directors and staffs, is monumental and we learned much about adequacy costs, and distribution, and the details of many experiments supported by masses of statistics which were delivered so rapidly and so continuously that there was some inevitable indigestion when we suddenly changed into gentlemen of the jury who must weigh evidence and recommend cures for a faulty

social operation.

All concurred in praise of the diligence, skill and logical presentment of the findings and in most of the interpretations. All tried to harmonize themselves into unanimity with such success that upon only a few fundamentals or implications are there dissentient opinions. One believes that the report has missed the target; another that the recommendations have fallen short; and others believe that the mark has been overshot by excursions into Utopian idealism.

The objections of the minority composed of eight physicians and a clergyman, are to the recommendations in "Organization of Medical Services" and "Group Payment for Medical Services." The minority report of two leaders in the national dental organization is in general accord with the first minority, but in agreement with the majority upon "Group Payment."

The minorities desire changes in medical education, urging-in addition to the present scheme which seems to qualify sufficiently for the care of 80 per cent of the ills of mankind-emphasis upon the development of clinicians and added accent upon the importance of teaching disease They wish that mere prudential ethics may be strengthened by spiritual ethics and that only those possessing high character and high educational qualifications be admitted to the professions.

Premature specialization and overspecialization will be cured by the special societies acting within themselves, and the evolution of dentistry into whatever its destiny as a department of medicine will be determined by the concerted action of a well organized profession.

The minorities object to contract practice when-

ever it operates in restraint of opportunity for all competent and reputable physicians in the community, or results in unfair competition or furnishes inferior medical services. The same objections are made to pay clinics when operated for profit by laymen as "exploitation of the public and of the medical profession" through inferior quality of service with no lessching of the costs of medical care to the patient who must add operative charges to the normal or average fee prevailing in the community.

The minority claims overemphasis upon the virtue of group clinics and cites in opposition the large number of groups treating patients under workmen's compensation laws, in active competition one with another, "soliciting patients through paid agents." Many of these groups are under lay control-keeping down costs by employing physicians of low ability, commercializing medical practice, lowering ethical standards, demoralizing physicians into undignified advertising in factories reminiscent of the old lavatory pasters, leading physicians to compete for practice by buying cases for one-third or one-half of their fees and, in collusion with agents, prolonging treatments far beyond reasonable limits and padding their bills, as developed publicly by the Seabury investigation this year, and not denied.

The minority objects to the influence of this Committee being used in the promotion of new forms of political bureaucracy, feeling that the unsatisfactory operation of the forms of compulsory sickness insurance now carried on in fortyfour states under workmen's compensation laws has degenerated into racketeering in our large cities and should be corrected by legislative action which should lead to real revision of these operations and carry them into the administrative hands of those who represent the higher medical honor and higher medical intelligence of the community.

Here the hospital or medical center may furnish the place and the skilled staff service, all of which should be amply paid for.

No arguments demonstrate a quality of service, in countries where compulsory health insurance prevails, which is superior to the admittedly inadequate and badly distributed service now operating in the United States. Quoting from Simons and Sinai: "Contrary to all predictions, the most startling fact about the vital statistics of insurance countries is the steady and fairly rapid rate of increase in the number of days the average person is sick annually and the continuously increasing duration of such sickness. Various studies in the United States seem to show that the average recorded sickness per individual is from

seven to nine days per year. It is nearly twice that amount among the insured population of Great Britain and Germany, and has practically doubled in both countries since the installation of insurance."

The minority report states:

"It ought to be remembered that compulsory insurance will necessarily be subject to political control and that such control will inevitably destroy professional morale and ideals in medicine. Since a qualified and untrammelled medical profession is the only agency through which scientific medicine can be applied for the benefit of the people, it follows that any plan which destroys professional morale will bring disaster to the public."

Quoting again from Simons and Sinai:

"While the statement might be disputed by insurance societies, a comparative study of many insurance systems seems to justify the conclusion that the evils of insurance decrease in proportion to the degree that responsibilities, with accompanying powers and duties, are intrusted to the medical professions."

This statement is both a challenge to the medical profession and a warning to those who, without proper consideration of that profession are willing to recommend the adoption of various new

plans for the care of the sick.

The minority feels that our Government has strained paternalism far beyond moral justification in the extension of veterans' hospitals and in the hospitalization of veterans with non-service disability and has spent the people's money with inexeusable recklessness. This sorry exhibition should make us all shy of Gevernment invasion into control of any phase of medical practice, except, of course, in the field of public health and in the institutional care of those unemployable wards of the State—the tuberculous, the insane, the feeble-minded, or the hopelessly crippled.

The minority objects to the large medical cen-

ter as projected by the majority on the ground of exclusion of many physicians, of oppressive competition, of big business technique erecting machinery which eliminates personality and destroys personal relations by factory forms. Mere bigness is often a liability. The city of New York is so big that real community interest and civic pride are crushed and the citizen taxpayers are too numb to protest against a self-perpetuating political machine which rides them.

The minority recognizes the practicability of centering medical service in small places where there are only one or two hospitals and where all of the physicians of the community are permitted to use all of the facilities of the hospitals in a true community spirit, the institution being supported by taxation or by gifts. My personal opinion is that if all hospitals were open to all reputable physicians (not merely the laboratory facilities but beds as well) many of the problems of public service would be solved. I had always believed this to be administratively impossible until it was positively demonstrated to run smoothly in a very large hospital. Places where there are no hospitals and few physicians, dentists or nurses, must be served in other ways with the entire health service of the country concentrated upon ways of distributing urban surpluses into neglected fields.

The minority favors continued study of group practice: co-ordination of the medical, dental, pharmacentical, lospital, and nursing professions; the study of the application of the insurance principle to the accumulation of reserves, and to the assurance of solvency of institutions.

The "challenge of the future" in the majority report is a vigorous, stimulating statement that the work is not only not finished but only just begun, and that continuous widespread efforts must be carried on through all medical, educational, and all other agencies whose interest leads them earnestly to desire the prevention of disease and the general health of our people.

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THE QUALITY OF MEDICAL CARE

The final report of the Committee on the Costs of Medical Care might well have rested upon a résumé of the studies in which are assembled masses of data which will be invaluable to students of public and private medical service in future efforts to advance the health status of the people of the United States.

The factual accumulation is ample justification for the existence of the committee. The medical profession-the efficiency engineers-the social experts and the facultics will each interpret the findings differently and will be inspired to attempt experiments which will carry the colors of

their traditional thinking.

Socialized medicine, mass medicine, contract medicine, commercialized medicine and governmental medicine are vividly painted in the majority report as solutions for difficulties of medical care to all of us who have annual incoincs below twelve hundred dollars.

Idealistic programs are indicated which seem to promise quantity of service rather than quality of service; and while also claiming to protect the personal relationships between physician and patient, carry no conviction to the practising physician whose practical experience with our present large hospital groups tells him that new privileges are not for him.

It is natural that there is no promise to lessen the national health bill, and there cannot be if adequate service is delivered based upon our present knowledge of the eost of delivering it.

The bill promises to be larger without improving the income position of the physician. The arguments for voluntary insurance schemes, immediately followed by elaborate statements that all voluntary insurance is futile and invariably leads to required insurance after the European manner, is disheartening to those whose experience with provident insurance leads them to think that insurance budgeting for future catastrophe or the decadence of age promises security and is capable of extensive application.

The proposal of per capita contract schemes for serving large groups of individuals under the aegis of all sorts of direction, with no guaranty of the quality of medical care or the character of personnel, also seems to lead to inferior service to the sick and to inevitable governmental control.

Proposals for better community service originating in and earried on by county medical societies receive scant attention in the majority report, the authors of which seem to be satisfied that their opinion is of a superior fabric to that which binds together the one hundred thousand members of the American Medical Association who live with these problems and are daily trying to improve

the quality of medical care.

After the first chapter, the majority report staggers through one hundred and seven pages of idealistic and materialistic suggestions of programs with frequent genuflection and finally prostrate obeisance to compulsory health insurance. In the last chapter some clearer headed writer almost entirely divests himself of nebulae and issues a "challenge of the future" which is a splendid call to the best that is in our medical ambition.

The minority report seems to be based on the practical experience of its authors who cannot be diverted from the realities of their investment in the practice of humanity into speculative fields which might imperil the quality of their service. The minority is neither satisfied with things as they are, nor smugly complacent in thinking that things cannot be improved. They see the evolution of medical service as a slow process, but believe that it will meet changing social currents warmly and sympathetically.

The minority believes that experiments with new forms of service should originate in the county medical units and be tried there; and that all physicians should be enlisted under one ideal which should be the delivery of the best service of scientific medicine possible, in all its forms, to all of the people.

LOOKING BACKWARD

This Journal Twenty-five Years Ago

Ideals of Peace:-This Journal of January, 1908, contains the following editorial on the appeal of Jane Addams for the abolition of war:-

"She says that we are even now discovering moral substitutes for the war virtues in the struggle toward a higher social order. The newer heroism manifests itself at the present moment in a universal determination to abolish poverty and disease, a manifestation so widespread that it may justly be called international.

"In illustration of this new determination, it is shown that one immediately thinks of the inter-

national effort to rid the face of the earth of tuberculosis, in which Germany, America, Italy, France and England are engaged with such en-This movement has its international thusiasm. congresses, its discoverers and veterans, also its decorations and rewards for bravery. cipline is severe; it requires self-control, endurance, self-sacrifice and constant watchfulness. Its leaders devote much time to careful study and demonstration, they reclaim acres of bad houses, and make over the food and water supplies of large cities.'

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Treatment of Infantile Paralysis.—A review is made by H. Finck of 140 cases of infantile paralysis which he has treated by irritation therapy since 1924, including the severe epidemic of that year. His success was brilliant: no paralysis appeared in any of the cases which reccived an injection early in the course of the symptoms. The temperature, high in most

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A New Method of Blood Examination for Diagnosis of Cancer.—Despite the many fruitless methods of examination, it may be assumed, says Hans J. Fuchs, writing in the Münchener medizinische Wochenschrift of October 21, 1932, that cancer is accompanied by considerable changes in the nature of the blood. Serologic methods have been confronted by the difficulty that in the preparation of antigens one can hardly ever be absolutely sure that portions of normal tissue have not also been present in the extract. Fuchs' own method, the "Ca R" (cancer reaction), first



MEDICAL PROGRESS



Auriculoventricular Dissociation Course of Acute Articular Rheumatism.cording to A. Clerc, S. Vialard, and Balaceanu, it has been possible to find in the literature some 50 cases of acute articular rheumatism in which dissociation was auriculoventricular These authors have noted it in 3 per cent of their own 63 cases. As a rule, the dissociation appears after the fever and the arthropathy have reached their maximum, and accordingly in cases that are relatively severe, though cases have been observed in which the alteration of rhythm preceded by days or even weeks the appearance of articular symptoms. Once established, the dissociation is rather frequently incomplete, either in that the block of auricular contraction occurs regularly (at every second beat, for example) or that it appears at variable intervals, resulting in a certain irregularity in the ventricular contractions and in the radial pulse which reflects them. Complete dissociation has, however, been recorded by a number of writers, and was observed in 2 of the authors' 3 cases. The classic expression of the affection as bradycardia has not always been present. The frequent instability of the anomalous rhythm is a striking feature. In the majority of cases the anomaly is transitory, disappearing after a few hours, not to return, or alternating with normal periods or with other abnormal rhythms that may coexist with it. Except in rare cases with sudden fatal termination, the dissociation tends toward spontaneous cure, after days, weeks, or occasionally, months. Diagnosis is made by the electrocardiogram, which not only reveals anomalies that give neither subjective nor circulatory signs, but also makes it possible to follow the course day by day. Prolongation of the P-R space need give no uneasiness as the possible prelude to a physiopathologic transformation, for in the great majority of cases it is transitory. Only 5 cases are found in the literature in which a syncopal attack was followed by death. With reference to the mechanism of production of this dissociation, it seems probable that the fibers of the bundle of His must be implicated. In the few cases in which such hearts have been examined microscopically, specific Aschoff bodies have been found present in the His bundle. salicylates being contraindicated, they remain the treatment of choice, and should be administered intensively. Further study is desirable, over a long period in order to prove whether or not a permanent future dissociation is liable to appear. Bulletin de l'Académie de Médeci ne, October 25. 1932.

When Should Operation Be Done in Acute Primary Pneumococcus Peritonitis? - This question, says A. Ciminata, writing in the Riforma medica of September 24, 1932, constitutes the focal point in the entire chapter of acute diffuse peritonitis. The difference of opinion with reference to intervention in this type of peritonitis is concerned not with any debate as to the necessity of operation, but only as to the stage at which it should be carried out. This question is inseparable from the element of diagnosis, the difficulty of which constitutes the major obstacle confronting the surgeon. Three stages are recognizable in pneumococcus peritonitis. In the first there is no pus, but an intense congestion of the ileum and cecum, in which the appendix participates, although it shows no changes of a special nature. Cultures made at this time from the peritoneal cavity may not reveal the presence of the pneumococcus, supporting the hypothesis of a toxic congestion caused by inflammation of the ilcocecal tract without the pneumococcus having yet reached the peritoneal cavity. Blood cultures, if positive (and they are often negative) are likely to be so only in the initial stage. In the second stage a purulent exudate has already formed, which is diffused throughout the abdominal cavity, the intestinal loops literally wallowing in pus. In the third stage the intestinal mass is covered with a fibrinous film and large collections of pus lie between this and the abdominal wall. The pus has a special character, being creamy, yellow and odorless, in addition to its fibrinous content, whereas that of appendicitis is fetid, contains no fibrinous masses and is of a rather dark color. Ciminata outlines 8 cases, the first 2 of which were operated on in the first stage, the next 2 in the intermediate stage, and the other 4 in the third All the first 4 died after operation, no amelioration in the peritoneal symptoms having been noted. On the contrary, all the last 4 patients, in whom the pus had formed collections and was confined by formation of fibrinous films. which appeared to be a defense on the part of the peritoneum, wrapping up the mass of intestines like a bundle, promptly improved after operation, and terminated in complete recovery. From this we may conclude that operation is not indicated in the first or second stage, but that the results of surgical intervention in the third stage are highly gratifying. This conviction is in accord with the opinion of the majority of authors, who hold that early operation precipitates the worst ills of the disease, making the course of the affection more grave.

Resection of the Superior Hypogastric Plexus to Overcome Functional Disturbances in the Female Pelvis .-- A report is made by Ure Max Meier of his results in 8 cases in which he carried out Cotte's operation for dysmenorrhea and pelvic neuralgia. The procedure is very simple in its technique, and involves as little danger as any laparotomy can. The abdomen is opened, the intestine pushed aside, the posterior leaf of the peritoneum incised over the 5th humbar vertebra, and the entire structure of nerves, cellular tissue and lamellae between the two common iliac arteries bluntly mobilized, and removed over a length of 11/2 to 3 cm. Care is taken to avoid injuring the left iliac vein, which passes under this level, and also the superior hemorrhoidal artery and vein, if the mesosigmoid is inserted very close to the median line. No macroscopic lesion was found in any case, and for this reason the resection of the superior hypogastric plexus was alone performed. All the patients were married women with several or many children, and most were between the ages of 30 and 36. The immediate postoperative course was normal, with the exception of one case in which a thrombophlebitis appeared. As regards end-results, one case of pure dysmenorrhea and 2 of pelvic neuralgia were completely cured; a 4th case was locally cured but showed little general improvement owing to a psychoneurosis; 2 cases were greatly improved, and I slightly so; while I showed no improvement whatever. Histologic examination in 9 cases (5 of this group, and 4 more recent ones) showed everywhere fresh bleeding and local edema, and perineural sclerosis of greater or less degree, which bore no strict relation to either the data of the history or to the result of the operation. In 1 case there was a striking increase of intraneural connective tissue with sclerosis, by which the nerve bundles had become split up. Inflammatory cell infiltrates were found in 2 cases, one of these being the case in which no improvement was accomplished. It is Meier's belief that cases with inflammation present should first be treated with diathermy, and Cotte's operation used only as a last resort. He regards the procedure as indicated definitely in pure essential uterine dysmenorrhea, with no pains in the intermenstruum; but he thinks it should be used only with great caution in the group of chronic or paroxysmal cases without gross anatomic defect, in which psychic conditions may play a large part .- Schweizerische medizinische Wochenschrift, October 22, 1932.

Treatment of Infantile Paralysis.—A review is made by H. Finck of 140 cases of infantile paralysis which he has treated by irritation therapy since 1924, including the severe epidemic of that year. His success was brilliant: no paralysis appeared in any of the cases which received an injection early in the course of the symptoms. The temperature, high in most

cases, fell after 24 hours and the severity of the symptoms abated. It made no difference whether the treatment was omnadin, aolan, vatren-easein or simply sterilized milk: the important thing apparently was that the injection be performed early. In cases in which the treatment was not given until a little later period of the disease, the good results were iess prompt or were entirely wanting. In such cases injections had to be made repeatedly, and it was 2 or 3 days before the temperature dropped, and then only gradually. of the 18 children injected on the second day did any paralysis occur, and only one of these children received more than one injection. the 4 injected on the third day, 3 were cured, and I remained slightly paralyzed. these 4 received more than one injection. Of 3 treated on the fourth day, only I was cured. One child injected first on the seventh day is now a cripple in both legs. In this case the parents refused to allow further treatment after 2 injections, regarding it as uscless. However, a comparison with untreated cases gives the impression that even in cases not treated until late the poor results were reduced to a minimum if the injections were continued. Prophylactic injections had no effect whatever. The fact that in a number of cases there were recurrences while brothers and sisters in the same family again escaped infection suggests a eertain predisposition. To the possible objection that if treatment must be given so early to prevent paralysis, there is no sure proof that the eases were really infantile paralysis and not plain uncomplicated grip, Finck replies that in the great majority of cases cerebral symptoms were present, and that, even without these, the diagnosis was justified by the severe clinical picture, with high fever and sudden onset, generally without any definite symptoms beyond headache or sensitivity of the upper dorsal vertebrae, and by the absence of any other epidemic and the paralysis appearing in many other children at the same time and place, and with the same symptomatology. -Münchener medizinische Wochenschrift. November 11, 1932.

A New Method of Blood Examination for Diagnosis of Cancer.—Despite the many fruit-less methods of examination, it may be assumed, says Hans J. Fuchs, writing in the Münchener medizinische Wochenschrift of October 21, 1932, that cancer is accompanied by considerable changes in the nature of the blood. Serologic methods have been confronted by the difficulty that in the preparation of antigens one can hardly ever be absolutely sure that portions of normal tissue have not also been present in the extract. Fuchs' own method, the "Ca R" (cancer reaction), first

published in 1926, follows a different route, in that (1) it makes use of no serologic technique but uses exact chemical analysis, and (2) the standardized reaction substances with which the serums to be examined are incubated have their origin not in the tissue but in the blood. This fact shows clearly, Fuchs thinks, that in the blood of cancer patients there circulates a substance which bears a specific relation to the tumor. There are 2 ways of isolating it: (1) The fibrin formed in connection with spontaneous coagulation reveals it in demonstrable quantities. (2) It is also possible by suitable methods of precipitation to obtain from the serum itself a protein fraction containing it. Prolonged investigations have shown that these substances possess the character of true antigens or antibodies, the former being specific products of the tumor, and the latter in their turn being specific against these antigens. Chemical analysis discloses that between the antigen and its specific antibody reactions occur which have heretofore been demonstrable only by complicated serologic methods. The exact differentiation of the serum under examination became possible when it could be demonstrated that a cancer, a lues, and a tuberculosis serum leave unchanged a cancer, a lues, and a tuberculosis fibrin, respectively, while changing all other kinds of fibrin. The cancer reaction is strongly specific, and possesses the property of revealing the cancer in a very early stage, although it gives no hint of its site or type. From the strength of the reaction, which can be recognized by the difference in rest nitrogen, it is possible to determine the relation between the power of the tumor and the degree of resistance offered by the organism.

Treatment of Pott's Fracture,-David Goldblatt bases his paper on an analysis of fifty consecutive unselected personal cases, defining this as one in which there is a fracture of the lower end of the fibula associated with a tear of the internal lateral ligament or an avulsion of the tip of or of the entire internal malleolus with or without a lateral or posterior dislocation of the foot. The fracture is essentially one of adult life, for the trauma producing it at this time of life would cause an epiphyseal separation of the lower end of the tibia in a child. Displaced fractures in this region require meticulous reduction and alignment to restore the action of the joint and prevent dysfunction that may follow poorly or irregularly healed cartilage as a result of incorrect coaptation. Where maintenance of reduction is difficult one should suspect a fracture of the tibial malleolus or a tearing away of the posterior lip of this bone. This may call for skeletal traction. In the case of a non-dis-

placed fracture, or after reduction of a displaced one, retention is obtained by a moulded plaster-of-Paris splint, consisting of a posterior and internal lateral part running from just below the knee and including the foot. This is greatly to be preferred to a circular encasement in that it permits visual and tactile inspection of the fracture site and promotes early passive activity. Physical therapy is an integral part of the treatment and should be concomitant with, rather than subsequent to, immobilization. A joint is as strong as the component muscles that mobilize it, and early restoration of muscle and tendon activity means lessened incapacity of the joint. Function may be consistent with deformity in a shaft fracture but decidedly not in a joint fracture. treatment of a Pott's fracture, the author concludes, is by no means a closed chapter, and poor results may follow even when it is entrusted to hands specially trained to deal with it.—Annals of Surgery, December, 1932, xcvi,

Pericardial Effusion.—Paul D. Camp and Paul D. White have studied the clinical and pathological data on the 126 cases of pericardial effusion containing over 100 c.c. of pericardial fluid found at post-mortem examination at the Massachuseits General Hospital over a period of ten years (1921 to 1930, inclusive). This number occurring among 95,542 cases admitted to the hospital and among 1,729 necropsies. They also included similar data from the Massachusetts Eye and Ear Infirmary, in a series of 71,334 admissions and 109 necropsies. 2 cases showing 100 c.c. or more of pericardial fluid, and also clinical data on 15 cases in which the pericardial paracentesis established the diagnosis of pericardial effusion. The post-mortem cases were divided into three groups, those with 100 to 200 c.c. of pericardial fluid, cases with 250 to 500 c.c. and those with 500 c.c. and The predominant etiological factor in the cases with pericarditis was infection of some type; uremia was a rare cause. In cases without pericarditis the predominant etiological factor was chronic passive congestion or infection elsewhere in the body. Pain was present in 24 of the 126 cases of the post-mortem series at the Massachusetts General Hospital, dyspnea in 68, orthopnea in 37; distended cervical veins were noted in 5, pericardial friction rub in 8, distant heart sounds in 29, and the pulsus paradoxus in 1 case. In the Roentgen examination of 49 cases a correct diagnosis was made once and questioned in 3 other cases. In the 126 cases a correct clinical diagnosis was made only six times; of these 4 had pericarditis with an effusion of 100 to 250 c.c., while 2 had an effusion of over 500 c.c. The clinical group of 15 cases in which a pericardial paracentesis established the diagnosis was instructive since it was made up of patients who presented the clinical signs of effusion to a much greater degree than did the post mortem cases From one of this group 650 cc of fluid were obtained by paracentesis immediately post morteni, while during life paracentesis had yielded much smaller amounts. Since this pa tient presented signs and symptoms similar to the others in this group, and even larger amounts were obtained in others, it was believed that every one of these cases had over 500 cc of pericardial fluid From the data collected it may be concluded that in the ab sence of acute fibrinous pericarditis, the diagnosis of pericardial fluid is likely to be missed unless the effusion amounts to over 500 cc To establish a diagnosis of pericardial effusion all symptoms must be carefully looked for and analyzed and Roentgen ray studies employed -American Journal of the Medical Sciences, December, 1932, classes, 6

The Hematopoietic Response in Pernicious Anemia Following the Intramuscular Injection of Gastric Juice-Castle and his coworkers (1931) demonstrated that the feeding of beef digested in normal gastric juice to patients with pernicious anemia caused a reticulocyte response, while gastric juice without beef was ineffective. As a result of these researches, it seemed to the authors of this paper (Roger S Morris, Leon Schiff, George Burger, and lames E Sherman) that possibly the normal stomach secreted the substance which Castle had shown to be present, and that while without effect when administered orally, it might cause a response if given parenterally several attempts they succeeded in preparing a concentrated normal human gastric juice. This they first tested in rabbits and then give to patients with permicious anemia. The intramuscular injection of the equivalent of 450 c c of gastric juice to a patient with 2 100 000 red cells led to a reticulosis of 176 per cent in 36 Twelve days after the injection the red count and percentage of hemoglobin began to increase, within the next twelve days the count increased by 1,500 000 cells and the hemoglobin by 20 per cent The count then remained stationary until further treatment was instituted. A second patient, in whom the red count could not be raised beyond a certain level with intensive treatment with liver extract responded to the injection of human gastric juice the red count increasing from 4,100,000 to 5,100 000 and the hemoglobin from 76 to 88 per cent within fourteen days These results proved the presence in normal gastrie juice of a powerful bone marrow stimulant which produced not only a marked and rapid reticulocyte increase but also rapid maturation

of the red cells The authors found that this anti-anemic substance of gastric juice was thermolabile, dialysable, and exhaustible is probably a hormone for which they propose the name addisin, after Thomas Addison, who first described pernicious anemia. They have given 62 intramuscular injections of this substance, in amounts of from 5 to 25 cc rather severe reactions followed the injection of human gastric juice, acetone extracted swine tuice was used instead. This has produced practically no febrile reaction and the pain has been much less and of shorter duration seems highly probable that the temporary lack of addisin in the gastric juice is the cause of pernicious anemia -American Journal of the Medical Sciences, December, 1932, clxxxix, 6

Bacteria on Fruit - J T Smeall, writing in the British Medical Journal, November 19, 1932, n, 3750, notes a failure, in connection with the slogan "Eat more fruit," to draw the attention of the public to the fact that raw fruit is rife with microorganisms. In a recent report of the Medical Research Council there occurs the statement, "Bacteria, moulds and yeast are common on the surface of fruit," but there is no hint as to the nature of these bacteria. In an investigation as to the type of these organ isms, Smeall examined dates, grapes and cher Sixteen examinations of Tunis dates showed B subtilis and allied organisms 16 times streptococci 16 times, yeast 8, B coli 7 and staphylococci 7 times. In 20 examinations of grapes B subtilis and allied organisms were isolated 20 times, streptococci 19, staphylococci 6 times and moulds once Ten examinations of cherries gave quite similar results. The types of streptococci most frequently found were S faccalis, S mitis and S salivarius. It may be accepted as a fact that all raw fruits exposed for sale are vehicles of bacteria. Fortunately the vast majority of germs attached to the surface of fruit are quite harmless However, 1t seems not unreasonable to suppose that at least some of the minor intestinal disturbances that are common in the fruit-eating season may be due to the bacteria content of the fruit Germs present on the surface do not penetrate through the unbroken skin to the edible pulp Typhoid bacilli may be carried on the surface of fruit, and Bindseil found that their life expectancy was longer on the outside than on the cut surface of fruits, this is thought to be due to the acid content of the pulp Some writers hold that the only method which will kill all pathogenic bacteria and at the same time proto zoan cysts and helminth eggs is the dipping of fruits in boiling water for ten seconds Smeall says it is sufficient to minimize the risk of infection that fruit be washed in running water or several changes of water



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AUTOPSY—HOSPITAL HELD NOT RESPONSIBLE FOR AUTOPSY PERFORMED BY MEDICAL EXAMINER

By LORENZ J. BROSNAN, ESQ.
Counsel, Medical Society of the State of New York.

An interesting case in which a claim was made by the relatives of a deceased person against a hospital, based upon an alleged unlawful autopsy, was recently the subject of judicial decision by one of the Judges of our New York Supreme Court. The facts, briefly, were as follows:

A youth, about seventeen years of age, was brought into one of the larger metropolitan hospitals for care and treatment. The boy was examined thoroughly on entrance, and the history obtained revealed a weakness in the cardiac region which had extended over a period of four years and a persistent condition of diarrhea for three years, with a loss of weight of thirty-three pounds during the four-year period. The diagnosis on admission was ulcerative entero colitis of tuberculous origin, complicated by thrombosis of the longitudinal sinus.

The patient was put in one of the wards where he was seen and treated daily over a period of approximately two weeks by several staff physicians. During this time the patient at intervals suffered from hallucinations, one of which was to the effect that he had been poisoned. He would also, from time to time, lapse into a comatose condition. The course of his condition at the hospital was very puzzling. Repeated pathological tests were made including blood, stool and spinal fluid, and numerous X-rays were taken. The reports were inclusive as to the cause of his condition. His pulse and temperature fluctuated in an unusual manner throughout. In spite of all efforts to treat the patient's maladies, about two weeks after his admission into the hospital the patient died. The doctor in charge of the case was unable to state definitely the cause of death. This physician, mindful of the repetition by the boy of statements as to poisoning, thereupon advised his superior who, in turn, notified the office of the medical examiner of the City of New York. Pursuant to this notice of suspicious death, one of the assistant medical examiners went to the defendant hospital and there performed an autopsy upon the body. The autopsy was a negative one, revealing no untoward circumstances and in general confirming the diagnosis which had been made at the hospital before the boy's death.

About a year after the boy's death, his father instituted an action against the hospital to recover \$15,000 damages. The complaint charged that the plaintiff's son was brought to the hospital as a

patient for treatment and that he there died. No negligence was charged in connection with the treatment of the boy while he was alive, but the complaint charged that after the death the hospital authorities asked for a consent to an autopsy which was expressly refused, and that in the face of said refusal the medical examiner was requested by the hospital authorities to perform an autopsy upon the boy's body. It was also alleged that the body was thereby mutilated, cut and disfigured in violation of the duty of the hospital to deliver to the parents their son's body in the same condition as it was at the time of his death. It was claimed that the said acts were a wilful outrage of the plaintiff's rights and sensibilities, and that the shock of the sight of his son's mutilated body caused him to suffer great mental anguish. It was further claimed that the deceased was of the Orthodox Jewish Faith, and that said Faith required burial of the deceased's body intact, and that the plaintiff's religious feelings had been greatly outraged by said alleged acts on the part of the defendant hospital.

The answer interposed on behalf of the hospital set up as a special defense that the autopsy had been performed by one of the assistant medical examiners of the City of New York pursuant to his duties as prescribed by law.

On the trial of the action the father testified that he had been asked by a doctor on the staff of the hospital, after the demise of his son, whether he would consent to an autopsy to determine the cause of death. The father testified that he had refused, giving as his reason that he was of the Jewish Faith, and that the tenets of his religion did not approve of dissection of the body after The assistant medical examiner who performed the autopsy was called as a witness for the plaintiff and testified that pursuant to instructions he had gone to the defendant hospital, and after examining the charts, history and bedside notes decided that in his opinion this was a case wherein an autopsy should be performed. Said assistant medical examiner predicated his opinion on the fact that this boy had been suffering from chronic diarrhea and had had hallucinations as to being poisoned, together with the fact that none of the doctors who had treated him were able to determine definitely the cause of death. When interrogated regarding the diarrhea, the doctor stated that the history of that condition raised in his

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mind the possibility that probably the boy had had a chronic toxic condition extending over a long period of time. The doctor further gave as his opinion that, in the light of all the circumstances, this was a case where an autopsy should have been performed, and that he did so perform it in his capacity as an assistant medical examiner of the City of New York, thereby negativing the neces-

sity of consent from the parent. No other witnesses were called by the plaintiff, and when he had rested his case a motion was made by counsel for the defendant to dismiss the complaint on the ground that the plaintiff had failed to establish his cause of action, i.e., unlawful autopsy on the part of the defendant hospital. In granting this motion, the Trial Judge stated

his view of the case as follows:

This action is brought by the plaintiff in his own right as the next of kin of his deceased son, X. 'The son died in the hospital on January 30, 1926.

It appears that the hospital authorities requested permission to perform an autopsy on the body of X, and

permission was refused.

"It is well settled, that in the absence of a contrary testamentary disposition, the right of the possession of the body of one who has died belongs to the surviving husband or wife or next of kin for the purpose of preservation and burial; and that this right is infringed upon by anyone who unlawfully mutilates such a body without the consent of the person entitled to the possession of it. For a violation of this right, damages may be recovered for the injury to the feelings and the mental suffering resulting from the unlawful act. In all of the cases, however, in which such a right of action has been upheld, the one held liable has either been the one who committed that unlawful act or one who caused or procured the autopsy to be made.
"The undisputed evidence here is that the office of the

medical examiner in Brooklyn sent word to or called the main office in the Borough of Manhattan and pursuant to that call an assistant medical examiner, Dr. A, went to the hospital, where he, and he alone, took charge of

the body.

"The question of autopsies, and when they may be performed, is covered by definite statute embodied in sec-Those provisions have been added to by the laws of 1915 which abolished in this city the offices of coroner theretofore existing.

"In substance, section 1570-A of the charter provides

"When in the City of New York any person shall die in any suspicious or unusual manner, notice shall be given to the office of the chief medical examiner and immediately upon receipt of such notification, the chief

medical examiner or a deputy or assistant medical examiner shall go to the dead body and take charge of it.' "And then provides for a full investigation into the

essentlal facts.

"Section 1571-A of the charter provides that if the cause of death is established beyond a reasonable doubt, a medical examiner in charge shall so report to his office.

"In this case the hospital records indicated that the cause of death was unknown; attendant upon which, were the further facts evidenced by the hospital record in evidence as Plaintiff's Exhibit 1 that this patient had suffered from diarrhea for a period of about three years; and while in the hospital had hallucinations that he had been poisoned; taken together, Dr. A, the assistant medical examiner testified that those might be evidence of poisoning and that because of it he and he alone ordered an autopsy and took charge of it.

"Section 1571-A of the charter further provides that if, in the opinion of such medical examiner, an autopsy is necessary, the same shall be performed by the medical examiner; and further makes provisions for a detailed description of the findings as written during the progress of such autopsy, and the conclusions drawn therefrom are all required to be filed in his office. This latter was done, and this report is in evidence as Plaintiff's Exhibit 2.

"The plaintiff is of the Orthodox Jewish Faith. Whatever may be the religious belief of a citizen of this State, for a violation of that faith by a public authority in the performance of his duty, there is and can be no right of action.

"A member of the Mormon Church may believe that he is entitled to a plurality of wives, but the United States Supreme Court has held that in the face of the bigamy statute, though he may continue to believe this, he cannot have the wives. We have to be sincere and must give way in the material to the sociological and scientific progress, and especially so when such progress is in the interest of the public health and safety,

Autopsics serve the dual purpose of ascertaining the facts of this death, as a basis for preventive action, and likewise the ascertainment of facts in the scarch for crime

where the possibility of crime is present,

"Naturally, the cases on this subject are few. In this case the claim for damages is based on the allegation that after the boy's death the father's tender feelings, which I deeply respect and sincerely sympathize with, were violated by the defendant hospital; but it is too plain for argument that the act here complained of was in no sense the act of the defendant hospital; it was the act of a public officer, namely, the assistant medical examiner, done in the performance of his duty.'

The result reached is not only in accordance with sound public policy but in accordance with the principles of law applicable to cases of this character. The decision is interesting because of the dearth of authority upon the point involved.

INCONTINENCE OF URINE FOLLOWING OPERATION

A married woman about 37 years of age who had been receiving treatments for several months in the out-patient department of a large hospital was referred to a certain member of the surgical staff of said hospital for operative treatment.

The provisional diagnosis was that of second degree laceration of the pelvic floor, cystocele, rectocele and retroversion of the uterus. said surgeon and two of his assistants examined

the patient thoroughly and made a preoperative diagnosis of cystocele, rectocele, laceration of the pelvic floor, hypertrophied lacerated infected cervix and visceroptosis. An operation to correct the said conditions was undertaken. The patient was brought into the operating room under a gas ether anesthesia. The doctor began the operation by grasping the cervix with tenacula, drawing the uterus down to a point allowing its direct inspection, incision of tisues by circular strokes through the vagina and adjacent tissues close to its cervical attachment to liberate the lower uterine segment and to free the vagina at its uterine contact thus developing a cuff for subsequent plastic work. The doctor separated the bladder and the anterior vaginal wall by a knife and dull dissection. A vertical incision by scissors was made of all vaginal tissues from the free surface of the cuff upward toward the entrance of the urethra. The doctor by dull dissection from the cut edge outward liberated the bladder; he removed a triangular area base downward from each side of this anterior vaginal incision, identified the tissues about the bladder sphincter and introduced a Kelly-stitch for the purpose of splinting the tissues about the relaxed sphincter. The cut edges of the anterior vaginal wall were approximately and these were sutured edge to edge with No. 2 chromic gut, two sutures being passed into the anterior uterine wall to eliminate dead space and further to develop bladder support. The doctor then proceeded to a stage of the operation which consisted of conical enucleation of chronically infected and hyperplastic tissue of the cervix and infolding of the vaginal cuff by the method of Sturmdorff. He next exposed the posterior vaginal wall and rectocele by a Blair Bell retractor. He introduced within the rectum a gauze vaseline pack to define the rectocele; applied a clamp to the posterior vaginal wall at a high point of the rectocele; removed the rectal pack and incised into the recto-vaginal space, which recto-vaginal space was then defined by finger dissection downward toward the perineal scar contact of the rectum and vagina; a triangular portion of the posterior vaginal wall over the recto-vaginal space was incised and removed. This removed area included patulous and thinned out vaginal tissue and scar. This removal allowed direct inspection of the rectum which was prolapsed and attentuated. This organ was then elevated by introducing a No. 2 chromic gut suture above the clamp on the pinnacle of the rectocele, carrying suture downward to the most prominent area of the redundant rectum, across the bowel in fractional stitches through this dilated protruding area, then upward and through the posterior vaginal wall near the point of original entrance and traction on this suture elevated and puckered the herniated rectum thus doing away with one element of the rectocele. The triangular opening in the posterior vaginal wall was then closed by approximating its cut edges followed by suture union of the separated levator muscles, then by approximation of the overlying fascia and finally by closure of the perineal skin by subcutaneous stitches.

The doctor saw the patient, as was his custom, for only a few days after the operation, she having been referred to him as a charity patient for operation only. The patient remained at the hos-

pital for nearly three weeks and was discharged in satisfactory condition, her progress subsequent to the operation having been good with no bad results developing prior to her discharge.

The patient returned to the follow-up clinic at the hospital at which time she was examined by other members of the hospital staff. About a month after her discharge examination at the said clinic showed that she was cured of her preoperative complaints, except that a condition of incontinence of urine was present. About a month after said examination a subsequent cystoscopic examination showed a mild bilateral kidney infection with a mild trigonitis and cystitis which was believed to be the cause of patient's incon-She received clinic treatment for her condition and when last seen at the hospital, at a date about six months subsequent to the operation, she was still complaining of incontinence and at that time it was suggested that she should enter the hospital as a ward patient and receive observation and surgical repair.

The patient did enter the hospital for observation, and a cystoscopic examination performed at that time by doctors associated with the hospital staff enabled the said doctors to diagnose that the cause of her incontinence was a urethro-vaginal fistula. An operation was suggested but the patient refused the operation and left the hospital.

Thereafter an action was instituted against the surgeon, charging him with malpractice in the performance of the operation upon the plaintiff, and claiming that as a result of his negligence in said operation the patient suffered from a persistent and constant leakage of urine, the result of a urethrovaginal fistula. The plaintiff's bill of particulars also claimed that the vesicle sphincter muscle was partly or completely destroyed by reason of defendant's negligence. Said injuries were claimed to be of a permanent and progressive nature.

At the time the case was reached for trial the defendant was severely ill and an application was made to postpone the trial of the case until the defendant could appear in court and testify in his own behalf. Said application was granted to the extent that a short adjournment was allowed. When the case again came up on the calendar for trial the defendant doctor's condition had not sufficiently improved that he could appear in court and testify, and another application was made to adjourn the trial of the case. The plaintiff's attorney insisted on proceeding to trial and the Judge was not willing to grant a second adjournment. The doctor's testimony was therefore taken by deposition at his bedside, and immediately after the taking of said deposition the case proceeded to trial. The issues in the case were submitted by the court to the jury and a verdict of no cause of action was rendered by them, thereby exonerating the doctor from all charges of negligence in the performance of the operation.



NOTES NEWS



THE COUNCIL MEETING

A meeting of the Council of the Medical Society of the State of New Ynrk was held in the rooms of the Society, 2 East 103rd Street, New York, on the afternoon of Thursday, December 8, 1932. in accordance with the By-laws of the State Society, Chapter IV, sections 1 and 2, which read:-

"The Council shall meet at the annual meeting of the House of Delegates, It shall meet twice a year, the time and place to be

selected by the President."

It has been the custom of the Council to hold its special meeting at the time and place of the regular monthly meeting of the Executive Committee in December. The Council is composed of 31 members as provided in Article IV of the Constitution, which reads:-

"The Council shall be composed of

(a) Officers of the Society

(b) Chairmen of the Standing Committees

(c) The Editor-in-Chief

(d) The retiring President for a term of one year after his term of office expires."

There is now one vacancy owing to the death of Dr. John A. Card, Speaker of the House of Delegates. Twenty-six members attended the last meeting, as follows:-

President, Dr. Chas. Gordon Heyd President-elect, Dr. Frederick H. Flaherty Past-President, Dr. W. D. Johnson First Vice-President, Dr. A. S. Chittenden Assistant Secretary, Dr. Peter Irving Treasurer, Dr. Frederic E. Sondern Vice-Speaker, Dr. George W. Cottis Trustee, Dr. A. W. Booth

Dr. N. R. Van Etten "

Dr. Grant C. Madill " Dr. Harry R. Trick

Dr. James F. Rooney

Chairmen of Standing Committees:-

Dr. Arthur J. Bedell

Dr. Samuel J. Kopetzky

Dr. Thomas P. Farmer

Dr. Harry Aranow

Dr. Charles H. Goodrich

Dr. James E. Sadlier

Presidents of District Branches:-

Dr. Louis A. Van Kleeck

Dr. Herbert L. Odell

Dr. Frank Vander Bogert

Dr. Edward R. Evans

Dr. James M. Flynn

Dr. Raymond B. Morris

Dr. Charles D. Kline

Editor-in-Chief: Dr. Orrin S. Wightman.

Several important questions were discussed by the Council at length. Decision in each instance awaits further study. One of these questions was the revision of the rules concerning malpractice defense. This matter has been previously discussed and the rules tentatively formulated, but further and careful study in several minor details will be necessary before final decision.

The report of the National Committee on the Costs of Medical Care was discussed. The Couneil decided that it did not possess the knowledge requested for action, since no copies of the report were available for general distribution. It was voted to appoint a special Committee to study the report and to suggest a line of action for the consideration of the State Society. The Committee named consists of-

Dr. A. W. Booth, Elmira, Chairman

Dr. James F. Rooney, Albany

Dr. N. B. Van Etten, Bronx

Dr. George W. Cottis, Jamestown

Dr. S. J. Kopetzky, New York Dr. C. H. Goodrich, Brooklyn

Dr. E. E. Haley, Buffalo

The Council adopted a resolution thanking the New York Herald Tribune for its editorial of December 4, in favor of the present individual method of giving medical service, in contrast with an insurance system. (This editorial was reproduced on page 1438 of this Journal of December 15, 1932.)

The meeting of the Council was of great value in securing information and expressions of opinions from medical leaders from all parts of the State.

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The patient did enter the hospital for observation, and a cystoscopic examination performed at that time by doctors associated with the hospital staff enabled the said doctors to diagnose that the cause of her incontinence was a urethro-vaginal fistula. An operation was suggested but the patient refused the operation and left the hospital.

Thereafter an action was instituted against the surgeon, charging him with malpractice in the performance of the operation upon the plaintiff, and claiming that as a result of his negligence in said operation the patient suffered from a persistent and constant leakage of urine, the result of a urethrovaginal fistula. The plaintiff's bill of particulars also claimed that the vesicle sphincter muscle was partly or completely destroyed by reason of defendant's negligence. Said injuries were claimed to be of a permanent and progressive nature.

At the time the case was reached for trial the defendant was severely ill and an application was made to postpone the trial of the case until the defendant could appear in court and testify in his own behalf. Said application was granted to the extent that a short adjournment was allowed. When the case again came up on the calendar for trial the defendant doctor's condition had not sufficiently improved that he could appear in court and testify, and another application was made to adjourn the trial of the case. The plaintiff's attorney insisted on proceeding to trial and the Judge was not willing to grant a second adjournment. The doctor's testimony was therefore taken by deposition at his bedside, and immediately after the taking of said deposition the case proceeded to trial. The issues in the case were submitted by the court to the jury and a verdict of no cause of action was rendered by them, thereby exonerating the doctor from all charges of negligence in the performance of the operation.

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COMMITTEE ON PUBLIC RELATIONS

A meeting of the Committee on Public Relations of the Medical Society of the State of New York was held on December 9, 1932, in the Hotel Roosevelt with the following members present: Dr. J. E. Sadlier, Chairman; Dr. W. H. Ross, Secretary; Drs. Hambrook, Johnson, and Cunningham; and Dr. T. P. Farmer, Chairman of the Committee on Public Health and Medical Education, Dr. J. S. Lawrence, Executive Officer, and Dr. Frank Overton, Executive Editor.

The morning session was devoted principally to a discussion of the report of the Committee on the Cost of Medical Care, and particularly the recommendations of a majority of the committee as contrasted with those of minority, all of whom are listed in the group of physicians in private practice. The discussion developed the fact that the report had not yet been distributed except a few advance copies, and that no member of the Committee on Public Relations had been able to obtain a copy of the report. The Committee therefore decided to make no comment until its members had had the opportunity to read the report and to give it careful consideration.

The afternoon session was devoted to a regional conference of the Chairman of the Public Relations Committees of the County Societies in the Metropolitan area. Reports were received from representatives of nine societies, as follows:

New York	Kings	Richmond	
Suffolk	Nassau	Rockland	
Bronx	Queens	Westchester	

NEW YORK COUNTY

Dr. Chas, Gordon Heyd, President of the Medical Society of the State of New York, but speaking also for the New York County Society, which contains almost one-third of the membership of the State Society, discussed medical economics, and the conservative yet progressive attitude of the medical profession toward new problems. Physicians have new methods of medical practice and medical administration thrust upon them every day, but their attitude of "investigation before judgment" is that of the truly scientific mind. This attitude will apply particularly to the medical profession in its consideration of the reports of the Committee on the Costs of Medical Care and the Commission on Medical Education.

SUFFOLK COUNTY

Dr. William H. Ross told of the public relations of the medical profession in his home county of Suffolk to other health agencies. The Suffolk County Medical Society is represented on every health agency and organization in the county, and is dominant in every health movement. There are five general hospitals in Suffolk County sup-

ported by public contributions. Each is well equipped for distributing a complete medical service, and is in fact a medical center. Each is an open hospital and each has an organized staff, to which almost the entire profession of the county belongs. The quality of the service in each is controlled by a medical board.

The anti-tuberculosis program in Suffolk County was initiated by the medical profession twenty years ago and ever since has been under its active leadership. The voluntary Tuberculosis and Public Health Association has had a practicing physician at its head ever since its organization eighteen years ago. There have always been several physicians on its Board of Directors. The activities of this organization have always supplemented the activities of the Medical Society.

A County Health Department was established five years ago in this county under the leadership of the County Medical Society. The county has now many health services which it did not have. Public health nursing has been increased five fold. The county has a sanitary engineer, a county laboratory, a veterinary division, an orthopedic division, venereal disease control, a supervising nurse, and an organization of the fifty-six public health, school, Red Cross, and social service nurses with monthly meetings and records of all the work filed with the Health Department.

The county has personnel for milk production inspection, boarding home inspection, wayside eating place inspection, swimming pool and camp inspection, supervision of the practice of midwives, and supervision of maternity homes. The Health Department pays the physicians of the county for treating their own indigent cases of venereal disease.

Diagnostic clinics conducted by members of the local profession are held for tuberculosis, post uatal care, orthopedics, and cancer control. No treatment is given in any of the clinics. All cases are referred to the family physician.

The medical profession cooperates actively in the administration of public welfare. All professional work for the indigent is done by the family physician upon authorization by the County Public Welfare Commissioner. All this work is paid for according to a standard fee list set up by the County Medical Society and the Commissioner of Public Welfare, at average fees prevailing in private practice in the county. All hospitals are paid a per diem fee of \$3.50. Doctors are paid whether the patient is cared for at home, in the office, or in the hospital. The Economic Committee of the County Society acts as a board of arbitration in all disputed matters between physicians and the Commissioner of Public Welfare.

The cost of public health in Suffolk County is \$1.06 per capita. It includes the maintenance of the Tuberculosis Sanatorium for one hundred patients, the taking of more than 1,200 diagnostic

x-rays among families which cannot pay for the service, and the holding of 50 diagnostic tuber-culosis clinics aside from other clinics. The voluntary association supplements the program of medical profesion in this county to the extent of six cents per capita. This would make the total outlay \$1.12 per capita independent of State aid. The entire cost for health services in Suffolk County is \$170,000 for 160,000 people, plus \$9,600 contributed by the voluntary Tuberculosis and Public Health Association.

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The Committee is paid by the Chamber of Commerce to make a survey of the health service given by industrial plants, of which there are a great number in the county.

RICHMOND COUNTY

Dr. H. A. Cochrane, Chairman of the Public Relations Committee of the Richmond County Society (Staten Island) reported that the county is almost rural, and is in a transitional stage of development, being isolated from both New York City and New Jersey; and the people lack cohesion. The County Society has 99 members, but it is trying to place a representative in every welfare and public health organization.

ROCKLAND COUNTY

Dr. R. F. Sengstacken, of Rockland County, reported that his county is small, but that its Medical Society has 56 members, for nearly every

doctor in the county belongs to it. Eleven of the doctors are on the paid staffs of public institutions, and forty-five are in private practice.

The Society has taken an active interest in public relations during the past two years, and has succeeded in placing a member on the Board of

every welfare organization.

The County Society is planning to make a careful study of the report of the Committee on the Costs of Medical Care, and to devote a meeting to its discussion.

WESTCHESTER COUNTY

Dr. C. C. Guion, Chairman of the Westchester County Public Relations Committee, gave an outline of the report of the Committee which it had made to the County Society describing the development of the hospital in New Rochelle as the medical center of the City, which contains about 50,000 people. (See the following article.)

PUBLIC RELATIONS COMMITTEE OF WESTCHESTER COUNTY

The Public Relations Committee of the Westchester County Medical Society begs to submit the following report of its activities during the year ending November 15, 1932.

When this committee started its activities a year ago, it took up the work of its predecessor and carried it on along the three lines that had already been proposed, namely:-

- 1. To develop the hospital as a medical center.
- 2. To prevent the abuse of the dispensary.
- 3. To provide service for those unable to pay full fees.
- (1) The committee has tried to develop in each community where it is possible, the idea that the hospital is the Medical Center in that community. In New Rochelle, a suburban city of 54,000 inhabitants, northeast of New York, where the chairman resides, we have repeatedly brought this thought to the medical men at staff meetings and society meetings. We have urged the doctors to broadcast to the public that in any emergency where a physician is needed, and where the services of the family physician cannot be secured, if the hospital is advised by telephone, the hospital will endeavor to secure a physician for the case. We have arranged with the hospital to supply the physician at any time with any special form of treatment he may find necessary, whether it be a hospital bed for a decompensated heart, an oxygen tent for a pneumonia patient, glucose solutions for intravenous use, or hypodermoclysis, etc., etc. No matter at what time of day or night the necessity arises, physicians are able to secure any emergency treatment desired, thus making it possible for them to treat their patients at home, with

the result that in many cases the patient is retained under the care of the family physician, or is spared unnecessary expense of hospitalization. We believe that eventually a registry for nurses will be established in the hospital. By these measures we believe that the people will realize that in any emergency, whether they need a doctor, a nurse, or some special form of treatment, the hospital stands ready and willing to serve them.

(2) The committee has endeavored to develop such measures as are possible to protect the doctor in his work, by preventing the abuse of the dispensary. This is only possible by the use of a social service worker investigating such cases as the admitting clerk feels should be investigated. We are all aware of the abuse of the dispensary, and know the financial loss to both physician and hospital that this abuse entails. In but a few of the hospitals in the county is a social service worker employed, but in New Rochelle the hospital governors gladly granted us this service, and the department has been gradually developing in efficiency. Our clinic in New Rochelle, due to the character of our population, is not as large as it is in other localities, but, nevertheless, we have approximately 1,500 visits a month, of which 300 to 400 represent new cases. It is, of course, an impossibility for one worker to make a thorough investigation the financial condition of all these new cases; and accordingly she investigates only such cases as the admitting nurse refers to her. But, when the social worker reports that in one month recently she investigated 83 cases and considered only 35 as eligible for clinic care, one can realize the importance of this work. Please realize also that no case is ever refused treatment for any

emergency, but, if investigation shows that the patient is able to pay for medical care, that person is simply told not to return. Also understand that in these times any doubtful case is always given the benefit of the doubt. There is no desire to refuse treatment to any worthy individual, but the hospital is not warranted in spending the money of its contributors on those who are able to pay for their care, and the physicians should likewise not be compelled to serve those who are not entitled to receive this service.

(3) The committee has endeavored to provide for the care of those who, because of their financial condition are unable to pay the usual fee of a doctor for the service required, yet are jueligible for dispensary treatment. This has been accomplished by an arrangement with the various departments of the clinic whereby the doctors attending their clinics agree to treat such cases, after investigation by the social service worker, at a fee which is within the means of the patient.

It is true that thus far the work of this committee has scarcely caused a ripple on the troubled sca that at present faces the medical man, the hospital, and those unable to pay the usual medical fees. But we believe that what we have done represents a few steps in the right direction; and we urge the committee that succeeds us to carry ou this work and extend it along the lines that have already proved successful. We believe that much can be done to protect the doctor, develop a better feeling for the hospital in its individual locality, and render efficient medical care for those in restricted financial condition.

We suggest to our new President that in the future this committee consist of representatives of the medical boards of the several hospitals, as, thereby, each medical board would become posted with the work of the committee and be able to suggest to the governors of its own hospital such changes as the committee may deem advisable.

C. C. GUION, Chairman.

PUBLIC HEALTH LABORATORIES ASSOCIATION

The following is a condensed report on the use of laboratory facilities by practising physicians of New York State, made by a special committee of investigation appointed by the New York State Association of Public Health Laboratories at its annual meeting on May 23, 1932.

Various considerations had suggested the possibility that in cases of communicable disease either more prompt and accurate reports by laboratories, or more alert and intelligent use of available facilities by practising physicians, might strengthen the public health work of the State. Such considerations as the following had suggested the advisability of exploring this problem: (1) The surprisingly large number of positive Wassermann reactions encountered in institutions where the test is made routinely on all pa-(2) The relatively high percentage of cases of tuberculosis reported as 'far advanced' and 'moderately advanced' when the case is first reported. (3) Outbreaks of diarrhea and food poisoning without the nature and source of infection being discovered. (4) The frequency with which a long interval occurs between the initial symptoms of a disease and the conclusive diagnosis, identification of carrier, or the discovery of the source of infection.

The Importance of the Problem, and the Probable Causes for Its Existence.—From the investigations of the Committee it appears that there is practically no difference of opinion as to the existence of a condition relating to the use of laboratory facilities which leaves room for improvement. It is further evident that conditions vary widely in different localities. In some districts nearly all of the physicians make intelligent use of the laboratory facilities, the laboratory is prompt and accurate in its reports, and there is

au excellent spirit of cooperation between the laboratory and the practising physicians. In other localities as many as 60% of the physicians apparently make little or no use of the available The consensus of opinion may be facilities. roughly summarized as follows: About 50% make full use of available laboratory facilities, about 30% to 40% make moderate use, and 10% to 20% make little or no use. There scems to be practical unanimity also in the belief that if a better informed and more alert use of the available laboratory facilities could be achieved, either by education of the physician or by improving the quality of the laboratory service and the attitude of the laboratory men, one link in the chain of public health protection would be strengthened.

The Committee believes that practising physicians in the State fall into three categories: (1) Those who are familiar with laboratory proccdures and use available laboratory facilities promptly and intelligently. (2) A group of physicians who are more or less unfamiliar with laboratory examinations and their interpretation. These men often hesitate to make inquiries because of disinclination to display their ignorance. Many of them are anxious to learn more about the correlation of clinical medicine and labora-tory examinations. It appears that by properly devised measures of education this group might be helped a good deal. (3) A group of physicians who have no real interest in finding out more about a patient's condition or securing more

adequate checks on treatment. There is probably little that can be done to improve the work of these men and to create within them a public health attitude in their work.

It is the feeling of the Committee that the attitude of the laboratory man is in some instances partly responsible for the failure of the physician to make full use of laboratory facilities. If the laboratory man can create in the minds of physicians using his laboratory a feeling of confidence and an appreciation of the fact that the laboratory man wishes to aid the physician, without bringing out conspicuously his unfamiliarity with laboratory procedures, a mutually helpful relationship will exist. The attitude that the laboratory is always right has at times unquestionably alienated practising physicians and prevented them from being co-workers in the pullic health work of the State. It is realized that the achievement of a satisfactory relationship between the laboratory and the physician depends to a considerable extent upon the personality of the laboratory man.

Closely related to the attitude of the laboratory man in promoting effective use of laboratory facilities, is the quality of service rendered by the laboratory. Prompt and accurate reports and an unfailing attitude of courtesy are necessary in order to develop and maintain a satisfactory relationship between the laboratory and the practising physician.

RECOMMENDATIONS

The Committee recommends the following measures as designed to bring about improvement in public health laboratory service in the State:

- 1. Distribution from the local laboratories of brief accounts of laboratory procedures, each dealing with a single disease or a single procedure. It is proposed that these leaflets be prepared under the supervision of the Council of the Association and sold to local laboratories at a very low cost. They could be distributed from the local laboratories in any way the laboratory director considered advisable.
- 2. Unceasing efforts on the part of the laboratory director to send out prompt and accurate reports and to deal with physicians in a spirit of courtesy and cooperation.
- 3. Directors of laboratories should take the initiative in seeking opportunities to speak briefly before County Societies on some phase of laboratory diagnosis or correlation of laboratory work with clinical work. The Committee believes that such addresses should be short and frequent.

Furthermore, it is the belief of the Committee that attendance at County Society meetings by laboratory directors is important in order to

spread by casual contact at such meetings information regarding laboratory procedures.

4. It is considered important that speakers capable of discussing laboratory procedures and their interpretation be invited to speak before County Societies on topics having some relation to the use of laboratory procedures in medical and surgical diagnosis and public health work.

5. The Council of the New York State Association of Public Health Laboratories should encourage the presentation of papers at the Annual Meeting of the State Society, dealing with laboratory diagnosis and the effective use of the labora-

tory in public health work.

6. It is recommended that the Council of the Association cause to be published in a suitable medium short reports of instances in which the practising physician demonstrated intelligent and alert use of laboratory facilities, thereby making early diagnosis of a communicable disease and checking its spread. It is also recommended that instances illustrating failure on the part of the practising physician to use available facilities and thereby delaying diagnosis and the institution of measures to prevent spread of communicable disease, should be published in a suitable medium. In both cases, however, the reports should be made without mentioning names or localities.

It is suggested that laboratory directors who become familiar with conspicuous examples of intelligent use, or the reverse, of the laboratory by practising physicians, briefly report the facts in writing to the Council of the Association.

7. When it appears that a physician has shown himself unmindful of the regulations of the Sanitary Code regarding the submission of specimens from suspected cases of communicable disease to an approved laboratory, the laboratory director may with entire propriety remind the physician of his legal obligations under the Sanitary Code. He may also point out to him his precarious position in the event of a malpractice suit arising from a situation in which the physician has failed to comply with the regulations of the Sanitary Code.

8. The Committee considers it advisable to have from time to time as subjects for round table discussions at the annual and semi-annual meetings of the Association, topics related to the problem under consideration in this report.

9. As occasion arises, it is considered advisable to have laboratory directors add illuminating comments to the brief statements commonly comprising laboratory reports to practising physicians. When to do this and how to do it should be left largely to the discretion of the laboratory director.

Dr. V. W. BERGSTROM, Dr. A. W. WRIGHT, Dr. G. M. MACKENZIE.

MEDICAL CARE OF THE INDIGENT IN NASSAU COUNTY

The executive secretary of the Medical Society of the County of Nassau has distributed the following form of agreement which has been made by the Committee on Economics of the Medical Society of the County of Nassau with the Welfare Department of the County. This agreement is practically the same as that in force in the adjoining County of Suffolk.—Editor's Note.

Recognizing the seriousness of the problems and distress with which this county is faced, and desiring to insure the best possible medical care for those residents of the county who are unable to provide for themselves, the Medical Society of the County of Nassau and the welfare officers of the county mutually agree to the following general principles:

- 1. The medical care of the individual otherwise able to maintain himself is traditionally the responsibility of the medical profession, and the medical profession has no desire to be relieved of this responsibility. To that end the Medical Society agrees that the welfare departments should not be called upon to pay the ordinary medical bills of individuals who are not already listed as receiving aid from welfare organizations for the necessities of life other than medical care. It is recognized that exceptions might be made in cases requiring unusual procedures or prolonged treatment.
- 2. It is mutually agreed that in spite of the burdens of the present emergency, we cannot afford to cheapen the quality of personal service given the sick, and there should be no attempt at shirking responsibility by either the physicians or the welfare groups. Specifically, welfare officers will authorize treatment as far as is practicable by the traditional family physician, and the physician in turn shall render the best service possible, at the same time recognizing the financial difficulties involved in meeting unduly high bills.

3. To the end that these general ideals might be realized, the following suggestions are hereby adopted for the cooperation between the physician

and the public welfare officer:

 No physician shall render medical service to an indigent patient known to be a charge of the welfare department without previously receiving written authority from the proper welfare official, except in emergencies or when because of the hour such welfare officer cannot be reached or the necessary approval secured.

2. In the event of emergent treatment or in the event that treatment is rendered a patient found to be indigent and the responsibility of the welfare officer after the treatment is instituted, the physicians must notify the public welfare officer and request authorization within 48 hours of the first treatment for which pay is desired.

3. Authorization for medical care will not be given for a period of more than 4 weeks; at the end of which time the physician must secure a renewal of his authorization from the welfare officer. An exception to this ruling is made in the

case of the county welfare department which requests that special arrangement be made if treatment is to extend a period of one week. A statement covering professional services rendered to date must be submitted on the first of each month regardless of whether the treatment is to extend over into another month. It will not be possible to audit bills in which a change is made for services rendered during more than one calendar month.

- 4. To secure payment of his fees the physician must observe the following routine:
- a. A bill on the physician's own bill form must be sent to the welfare official as soon as the physician has finished treatment or at the end of each month if treatment is to be continued.
- b. Upon receipt of a bill for professional services which have been authorized, the welfare department which will make out a claim on the prescribed form, and return it to the physician who shall complete the information required, sign the claim before a notary public and return it to the welfare department.
- c. Information required to complete a claim shall include diagnosis or condition of patient, duration of treatment and nature of services rendered.
 - 5. Fees in general shall be as follows:

This fee shall include the prenatal examination, routine after care at the time of delivery and the customary post mortem calls, Unusual pre-natal care may be rendered when necessary provided authorization is received.

- Other fees for special services must be agreed upon between the physician and the welfare officer in each particular case.
- 7. A consultant shall not be called without authorization; a separate authorization shall be secured for each consultation.
- 8. In the event of a disagreement between the physician and the welfare officer over the amount of the bill, both disputants agree to place the matter before the committee composed of representatives of the medical society and representatives of the welfare departments other than the one concerned in the dispute. Both disputants agree to abide by the decision of such committee.

SARATOGA COUNTY

The annual meeting of the Saratoga County Medical Society was called to order at 3.45 p.m., October 27, 1932, in the Auditorium of the Metropolitan Life Insurance Company Sanatorium at Mt. McGregor, N. Y., William H. Ordway, M.D., presiding.

Drs. King, McElroy and Magovern, a committee to nominate officers, made the following nomina-

President, Dr. E. J. Callahan, Schuylerville. Vice-President, Dr. F. J. Sherman, Ballston

Secretary, Dr. H. L. Loop, Saratoga Springs. Treasurer, Dr. W. J. Maby, Mechanicville.

Censors, Dr. T. J. Goodfellow, Chairman, Saratoga Springs; Drs. M. J. McGovern, Saratoga Springs, and M. J. Cornthwaite, Ballston Spa.

Delegate to State Society, Dr. G. Scott Towne,

Saratoga Springs.

Alternate, Dr. J. R. McElroy, Jonesville.

These officers were elected unanimously.

A fee schedule for professional calls was discussed.

It was moved by Dr. King and seconded by Dr. McElroy, that a committee of three be appointed by the chair, to act as a membership committee for the purpose of securing new members and interviewing delinquent members. This was carried.

Dr. Callahan read the Kings County Medical Society Bulletin. Dr. Callahan moved that the President appoint a Committee on Publicity with Dr. Loop as chairman, to consider ways and means of publishing a bulletin of the Saratoga County Medical Society, at regular intervals, as a means of making known to the members of the Society information and news regarding medical legislation, Public Health matters, Welfare, etc. This was seconded by Dr. Maby and carried.

A motion was made by Dr. King and seconded by the President that a committee of three be ap-

pointed to attend to publicity on cancer.

The President read a letter from Dr. William P. Brown, who expressed the request that the Saratoga County Medical Society go on record as in favor of the tuberculin test on all school children, the consent of whose parents was obtained, this test to be followed in the positive cases by x-ray and other examinations.

Dr. Walton explained the operation of these tests in other counties, and made remarks about its value. Remarks were made by Dr. Oginsky, saying that the Society should find out about the dangers to the children from these tests. President said the danger would not have to be considered, because it was practically nil, and that the procedure would open up avenues leading to the discovery of infection in the parents, and that the danger resulting from not having these tests was more to be feared than having them.

Dr. G. Scott Towne moved that the Society go on record as favoring this procedure. It was seconded and carried.

Dr. J. S. Walton, District State Health Officer, explained the theory of the County Health De-

partment.

Dr. A. T. Davis, Health Commissioner of Suffolk County, described the operation of the Health Department of Suffolk County and the active support which it is receiving from the practicing physicians.

The following resolution, offered by Dr.

McElroy, was adopted:

Whereas: There have been several counties of the State operating under the present permissive Law, and a compulsory law of similar import has been receiving widespread attention and favorable consideration by many who are active in health work; and

Whereas: While we as physicians and members of the Medical Society of Saratoga County always have been, are, and will be, ready to approve of and adopt the best in medical progress, we are also citizens and taxpayers, mindful of the increased and sometimes burdensome taxation often following the administration of new activities, especially when governed by executives unacquainted with the habits, needs and desires of the residents in the localities over which they have control; and

Whereas: As active practitioners in the field. of both preventive and curative medicine, already giving freely of our time and talents for charitable purposes in its many guises, we are fully alive to the added burdens we might be called upon to bear under certain types of legislative enactment; therefore be it

Resolved: That the Medical Society of the County of Saratoga will and hereby does approve of a County Department of Health for this county, when, and only when, it contains the following basic provisions:

A. That such County Department of Health shall be the controlling authority over all public

health activities of the county.

B. That the Medical Society shall be recognized as the organization most necessary for the suc-

cessful fulfillment of any health program.

C. That the Executive of such County Department shall be a resident of New York State, licensed to practice in New York State, and with not less than ten years experience in the active practice of general medicine, preferably in the county in which they seek apointment.

D. That all existing Health Districts shall be represented by physicians acting as deputies to

the chief executive.

E. That whenever possible diagnostic clinics and all preventive and curative treatments shall be conducted by the physicians of the county.

A motion was made by Dr. King that the work

of the Commuttee on Resolutions on the deaths of Dr P M Bolton, Dr G F Comstock and Dr G F Fish be completed and spread on the mutures of the meeting This was seconded and carried

Dr Maby talked concerning the committeemen doing their work, etc., and suggested that the members who were appointed on committees and who could not serve so advise the President

A motion was made by Dr. Callahan that Dr. E. MacD. Stanton of Schenectady, and Dr. E. K.

Cravener of Schenectady, be sent a letter of thanks from the Society by the Secretary, for their fruitful endeavors in behalf of one of our members in his suit for mal-practice

After a social dinner a very interesting and enlightening address on "The Diagnosis and Treatment of Hypertension and Nephritis" was given by Dr Benjamin I Ashe of New York City This was very well attended there being present many physicians from all the neighboring counties.

ORANGE COUNTY

The 126th annual meeting of the Orange County Medical Society was held on December 13, 1932, in Mitchell Inn, Middletown, N Y, with fifty members present Officers for 1933 were elected as follows:

President, Dr. M. R. Bradner, Wai wick

Vice President, Dr. H. J. Shelley, Middletown Secretary-Freasurer, Dr. E. C. Waterbury, Newburgh

Censors, Dr W W Davis, Chester, Dr J A Noll, Port Jervis, Dr T D McMenamin, Highland Falls, Dr S W Mills, Middletown

Delegates to the State Society for 1933-1934,

Dr J B Hulett, Middletown

Alternates, Drs B McD Krug, Goshen, and

M E Osterhout, Cornwall

Four new members were elected, Drs James W Walton, Middletown, P H Faivre, Middletown, Harold T Werner, Cornwall, and T. R Proper Newhurgh

Dr Samuel W Mills, gave his address as re-

tiring president

The principal feature of the evening was the reception and discussion of a report on hospital charges for indigent cases which was submitted by a committee of which Dr W J Hicks, of Middletown, was churman This report, which was approved by the Society, was as follows

"I That in medical cases and non-operative surgical cases the charge for medical services shall be one dollar and a hilf per hospital day, irrespective of the number of daily visits

'2 That the charges for operative surgical

cases be fifty per cent of the prevailing charge for private patients, this charge to include aftertreatment while the patient is in the hospital

"3 That the surgeon's fee shall include that of

his assistant

"4 That the charge for anaesthesia shall be five dollars in cases under one hour of operation and seven and one half dollars in cases over one hour

"5 That a surgical fee of one hundred dollars shall be the maximum for any major operation, including the assistant's fee and aftertreatment

"6 That the charge for medical and surgical attention at an uncomplicated confinement case shall be twenty-five dollars and for an instrument

case thirty-five dollars

"7 We recommend that this schedule be worked out in greater detail during the next year and that conferences be arranged with the Economics committees of adjoining counties with a view to evolving a schedule of charges which will be uniform for the counties of Orange, Sullivan, Ulster, and Rockland"

The proposed schedule of rates does not affect home treatment in welfare cases. Of this the report notes "In most of the towns, however, the work is being done by the physicians of the locality on a fee basis in cooperation with the local welfare officers with varying degrees of satisfaction"

The committee favors that in welfare cases hospitals render a bill including both the hospital's ind the physician's charges

W J Hicks, Chairman

TIOGA COUNTY

The December meeting of the Tioga County Medical Society took place Tuesday evening, December 13, 1932 at the Green Lantern Inn, Owego N V with 25 members and gnests present The meeting was called to order at 8 00 P M following a steak dinner which was enjoyed by all, including our retiring president, Dr W A Moulton, who is recuperating from a recent choleocystectomy

The treasurer reported a balance of \$36.15

Drs A Knight of Waverly, and Harvey Klacr of Owego, were elected to membership

The subject of governmental paternalism and competition in including through the activities of Veterans' Hospitals was discussed. On motion the committee on Medical Economics was empowered to send letters to the names on the list suggested by the Committee of the State Society, in accordance with the advice of the State Committee on Medical Economics.

SARATOGA COUNTY

The annual meeting of the Saratoga County Medical Society was called to order at 3.45 p.m., October 27, 1932, in the Auditorium of the Metropolitan Life Insurance Company Sanatorium at Mt. McGregor, N. Y., William H. Ordway, M.D., presiding.

Drs. King, McElroy and Magovern, a committee to nominate officers, made the following nomina-

President, Dr. E. J. Callahan, Schuylerville. Vice-President, Dr. F. J. Sherman, Ballston

Secretary, Dr. H. L. Loop, Saratoga Springs. Treasurer, Dr. W. J. Maby, Mechanicville.

Censors, Dr. T. J. Goodfellow, Chairman, Saratoga Springs; Drs. M. J. McGovern, Saratoga Springs, and M. J. Cornthwaite, Ballston Spa.

Delegate to State Society, Dr. G. Scott Towne,

Saratoga Springs.

Alternate, Dr. J. R. McElroy, Jonesville.

These officers were elected unanimously.

A fee schedule for professional calls was dis-

It was moved by Dr. King and seconded by Dr. McElroy, that a committee of three be appointed by the chair, to act as a membership committee for the purpose of securing new members and interviewing delinquent members. This was carried.

Dr. Callahan read the Kings County Medical Society Bulletin. Dr. Callahan moved that the President appoint a Committee on Publicity with Dr. Loop as chairman, to consider ways and means of publishing a bulletin of the Saratoga County Medical Society, at regular intervals, as a means of making known to the members of the Society information and news regarding medical legislation, Public Health matters, Welfare, etc. This was seconded by Dr. Maby and carried.

A motion was made by Dr. King and seconded by the President that a committee of three be ap-

pointed to attend to publicity on cancer.

The President read a letter from Dr. William P. Brown, who expressed the request that the Saratoga County Medical Society go on record as in favor of the tuberculin test on all school children, the consent of whose parents was obtained, this test to be followed in the positive cases by x-ray and other examinations.

Dr. Walton explained the operation of these tests in other counties, and made remarks about its value. Remarks were made by Dr. Oginsky, saying that the Society should find out about the dangers to the children from these tests. President said the danger would not have to be considered, because it was practically nil, and that the procedure would open up avenues leading to the discovery of infection in the parents, and that the danger resulting from not having these tests was more to he feared than having them.

Dr. G. Scott Towne moved that the Society go on record as favoring this procedure. It was seconded and carried.

Dr. J. S. Walton. District State Health Officer, explained the theory of the County Health De-

partment.

Dr. A. T. Davis, Health Commissioner of Suffolk County, described the operation of the Health Department of Suffolk County and the active support which it is receiving from the practicing physicians.

The following resolution, offered by Dr.

McElroy, was adopted:

Whereas: There have been several counties of the State operating under the present permissive Law, and a compulsory law of similar import has been receiving widespread attention and favorable consideration by many who are active in health work; and

Whereas: While we as physicians and members of the Medical Society of Saratoga County always have been, are, and will be, ready to approve of and adopt the best in medical progress, we are also citizens and taxpayers, mindful of the increased and sometimes burdensome taxation often following the administration of new activities, especially when governed by executives unacquainted with the habits, needs and desires of the residents in the localities over which they have control; and

Whereas: As active practitioners in the field. of both preventive and curative medicine, already giving freely of our time and talents for charitable purposes in its many guises, we are fully alive to the added burdens we might be called upon to bear under certain types of legislative enactment; therefore be it

Resolved: That the Medical Society of the County of Saratoga will and hereby does approve of a County Department of Health for this county, when, and only when, it contains the following basic provisions:

A. That such County Department of Health shall be the controlling authority over all public

health activities of the county.

B. That the Medical Society shall be recognized as the organization most necessary for the successful fulfillment of any health program.

C. That the Executive of such County Department shall be a resident of New York State, licensed to practice in New York State, and with not less than ten years experience in the active practice of general medicine, preferably in the county in which they seek apointment.

D. That all existing Health Districts shall be represented by physicians acting as deputies to

the chief executive.

E. That whenever possible diagnostic clinics and all preventive and curative treatments shall be conducted by the physicians of the county.

A motion was made by Dr. King that the work

WESTCHESTER COUNTY

The annual meeting of the Medical Society of the County of Westchester was held at Bloomingdale Hospital, White Plains, on the evening of November 15, 1932, with more than 125 members present. The following officers for the year 1932-33 were duly elected:

President, Dr. Andrew A. Eggston, Mount Vernon.

Vice-President, Dr. Mortinier W. Raynor, White Plains.

Second Vice-President, Dr. Theodore West, Portchester.

Secretary, Dr. Arthur F. Heyl, New Rochelle. Treasurer, Dr. Harry Klapper, White Plains.

Censors (two years), Dr. Louis B. Waldron, Yonkers; Dr. J. F. Black, White Plains; Dr. E. H. Huntington, Ossining.

Delegates (two years), Dr. E. W. Weber, White Plains; Dr. R. B. Hammond, White Plains: Dr. Arthur F. Heyl, New Rochelle.

Alternate Delegates (two years) Dr. F. E. Vaughan, Mount Kisco; Dr. Fred Brillinger, Peekskill; Dr. C. J. F. Parsons, Dobbs Ferry.

The following applicants were elected to full

membership:

Drs. Irving II. Beckwith, William G. Childress, J. Russell Foshay, Granville F. Knight, William E. Morris, M. W. Norton, and James Polsenski.

The chairmen of the various committees read and presented their reports which were distinctly informative of the various activities accomplished during the past year.

The report of the Public Relations Committee was given by its eliairman, Dr. C. C. Guion. (This report is printed on page 36 of this Jour-

nal.—Editor's note.)

Dr. W. W. Mott, Chairman of the Economics Committee, made his report and offered the following resolution, which was adopted:-

"The Medical Society of the County of Westchester, representing over five hundred (500) physicians practicing in Westchester County, State of New York, wishes to register an empliatic protest against the growing tendency of the Veterans Administration Hospitals to compete with the hundreds of approved hospitals now in existence and with the work of the individual practitioners of medicine. As a matter of economy, the enormous expense involved in building and maintaining government hospitals is one of the many menaces to our economic security, especially when it is a fact that with proper organization every Veteran who is entitled to medical care at the expense of the government could be treated with the same efficiency and skill by the independent practitioners in his home community, and in the many approved hospitals that could at all times furnish adequate accommodations. We further demand the clinination of the growing expenditure of the Federal Government, already in excess of \$450,000,000, per annum for benefits of Veterans of the Spanish and World Wars who suffered no disability in fact through 'War Service.' "

The retiring President, Dr. Louis V. Waldron, and the incoming President, gave addresses, outlining the past and future work of the Society.

Dr. Charles A. Elsberg of New York gave a most worthwhile paper on "Some Facts Concerning Tumors of the Brain and Spinal Cord," illustrated with lantern slides. The paper was dis-cussed by Dr. Joseph E. J. King, Dr. Edwin G. Ramsdell, Dr. Mortimer W. Raynor and Dr. George W. Henry.

Following adjournment, an execllent collation was served.

ARTHUR F. HEYL, M.D., Secretary.

RENSSELAER COUNTY

The annual dinner meeting of the Rensselaer County Medical Society was held in the Troy Health Center, on the evening of December 13. The principal business was the election of officers for the year 1933. The following were chosen:-

President: Dr. Warren W. St. John, Troy. Vice-President: Dr. Walter H. McShane, Troy. Secretary: Dr. Clement J. Handron, Troy. Treasurer: Dr. John F. Russell, Troy.

Censors: Dr. C. W. Hamm, and Dr. T. F.

Judge.

Delegates to State Society: Dr. A. J. Hambrook and Dr. John H. Reid.

Alternates to State Society: Dr. J. J. Quinlan and Dr. F. W. Caird.

A new office, that of President-Emeritus, was created and Dr. O. F. Kinlock, who has been practicing for 53 years, was elected to fill it.

The Society reconvened on the following evcning at the Hendrick Hudson for its annual bauquet. The after-dinner program was scientific in character, as follows:

"The Surgical Consideration of Jaundice," by Dr. Chas. Gordon Heyd, President of the Medical Society of the State of New York.

"Arthritis" by Dr. Ralph Pemberton, of the School of Medicine of the University of Pennsylvania.

W. B. D. VAN AUKEN, Secretary.

Officers for 1933 were elected as follows: President, F. A. Carpenter, Waverly. Vice-President, A. C. Hartnagle, Berkshire. Secretary-Treasurer, I. N. Peterson, Owego.

Delegate, G. S. Carpenter, Waverly. Alternate, W. A. Moulton, Candor.

Censors, W. A. Moulton, Candor; E. S. Beck,

Owego: F. H. Spencer, Waverly.

Dr. F. A. Carpenter read the committees appointed for 1933 and asked their cooperation and prompt attention to the matters referred to them.

Dr. G. S. Carpenter introduced discussion of a Post-Graduate course of lectures for 1933. On motion the Committee on Medical Education was empowered to select and arrange for such a course to be held in 1933.

The secretary read a communication from the

State Committee on Public Relations which defined the aims and objects for 1933.

Dr. W. H. Ross, secretary of the State Committee on Public Relations, was introduced and spoke in an interesting and enlightening manner on the work of the Committee on Public Relations and the part of the county societies in the changing aspects of medical practice.

Dr. Harry Fish of Sayre, Pa., assisted by B. F. Cary of the Tioga County General Hospital, gave an interesting discussion of "The Diagnostic Value of the X-Ray." He stressed its value as an adjunct to diagnostic measures after the histery and physical examination of the patient was completed. A representative number of rontgenograms were presented.

The meeting was adjourned at 10:30 P.M.

IVAN N. PETERSON, Secretary.

HERKIMER COUNTY

A meeting of the Herkimer County Medical Society was held in Herkimer on October 11, 1932. The notices of the meeting carried the announcement that a popular meeting and dinner would be held on the afternoon and early evening of the same day in order to popularize the movement for the control of venereal diseases. The popular meeting was addressed by men prominent in public health work.

Dr. James W. Graves, Health Officer of Herkimer, presided, and explained the objects of the meeting.

Dr. George S. Eveleth, the Health Officer of Little Falls, explained the State Law relating to the control of the diseases.

Dr. Alfred Pfeiffer of the State Department of Health, outlined the educational program of the State Department of Health, and the influence of playgrounds and recreational facilities in the control of venereal diseases.

Dr. J. N. Vander Veer, Liaison Officer of the State Medical Society, outlined a plan for the participation of the County in the control of venereal diseases.

Dr. Halsey J. Ball, District State Health Offi-

cer, outlined the measures which would be practical in Herkimer County.

The speakers also spoke on the same topics before the Exchange Club, a business club of the City of Herkimer.

The Herkimer County Medical Society met in the evening and transacted routine business.

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Dr. O. H. Love, the newly elected President, appointed the standing committees for 1933.

The Society discussed the report of the Committee on the Costs of Medical Care and supported the minority report.

Because of physical disabilities which have forced him to retire from practice after thirty years as an active member of the Society, Dr. George H. Smith of Little Falls was made an honorary member of the Society.

Fred C. Sabin, Reporter.

SULLIVAN COUNTY

A special meeting of the Sullivan County Medical Society was held at the Elks' Club, Monticello, on the evening of November 24, with 28 county physicians present-a large attendance. Dr. J. M. Rosenthal, president of the Society, presided.

Dr. William H. Ross, of Brentwood, L. I., expresident of the New York State Medical Society. spoke on what the public expects of the doctor today in preventive medicine, and described the health department of Suffolk County.

Dr. Frank G. Laidlaw, of Middletown, deputy

state health commissioner, discussed Dr. Ross' paper at length.

Dr. Irving J. Sands, of Brooklyn, visiting neurologist at the Neurological Institute and associate in neurology at Columbia University, spoke on "Cerebral Vascular Disorders." The paper was of vital interest because of the prevalence of these disorders. His talk was accompanied by lantern slides, and was followed by a long discussion.

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HARRY GOLEMBE, Chairman, Publicity Committee.

TESTS OF LIFE

Whether a person is alive or dead at a certain time may be of great legal importance. Discussing the tests of life the New York Herald Tribune of December 12 says editorially:

"Perhaps no single observation in the history of biology has had so much effect on human thinking as the prehistoric identification of life with its most visible sign, the breath. Here began the Greek doctrine of the psyche; that imagined immaterial something which went in or out with breath and whose departure was assumed to mean life's end. To this, plus the fact that individuals may cease to breathe for a time and yet recover, may be traced most of human thoughts about spirits, immaterial beings and the soul. The Egyptians had a different idea, accepting as life's essential seat and center the beating heart and other organs of the trunk-ideas which still survive in such faded metaphors as 'heartsick' or the phrase that one 'has no stomach' for a task. It is curious, however, that the oldest Egyptian biological document which survives, the Edwin Smith papyrus, recognizes the controlling influence of the brain rather than the heart, but this seems to have been a bit of surgical knowledge which never spread to the philosophers

"Modern science is not much better off in defining life than were these ancients who hesitated between heart, brain and breath as being its essence. No one dies all at once, Breathing stops for a but only piece-meal. time, or the circulation of the blood. Probably the first organ, then, to succumb permanently is the brain. Others, including the heart muscle, may live for hours, or even days, in the sense that the protoplasmic cells of these organs still live and could grow if removed. To say precisely at what instant a person dies seems to be impossible, however much the law courts may demand to know. So it is impossible to say for certain whether a person in the midst of dying is already dead or still alive."

RURAL PHYSICIANS

The following editorial in the New York Sun of December 21, 1932, closes with a novel reason why rural towns fail to advertise for a doctor:

"What can be done to lure doctors out of the cities into the small towns, suburbs and villages? If the seriousness of this problem can be measured by the number of persons who view it with alarm, then it appears to be the hardest nut the medical profession must crack. Dean Rappleye, of Columbia University's School of Medicine, is the latest to deplore the urban preferences of physicians. In his annual report he shakes his head over the crowding of the profession into sections where a surplus of doctors already exists; too many of the nation's 156,000 doctors practice in large cities. He attributes the concentration to the

desire for easier incomes, better educational opportunities and more attractive social life than suburban or rural sections can offer.

"But what can be done about it? What agency has the right to assume the duty of telling doctors where they shall practice? Suppose there are hundreds of towns that need another doctor, how can that fact be made known? Maybe there is a luerative practice in any one of a score of upstate villages if only some enterprising physician will go after it. But a town cannot very well advertise its need for doctors. It would not look well for the chamber of commerce of Blunkityville to announce that the town can keep five more doctors busy; on the contrary, the tendency is to tell the world that a town is so healthful that only the doctor goes hungry.

SCIENCE IN THE NEWS

The New York Times of November ninth called editorial attention to the intrinsic value of news of a scientific value as compared with the mere epheneral interest in the sensational columns. The Times probably includes medical news when it says:

"Science in the weekday edition of the New York Times for the year 1928 averaged daily a column length of 32.42 inches, or about one and a half of our regular columns. This is the report of a survey made at the University of Kansas.

"Before we hasten to draw invidious compari-

sons between one and a half columns a day for the progress of science, and scores of columns for politics or sports or "crime news." it would he well to take into account what might be called the relative specific gravity or nutritive value or alcoholic content of the different classes of news. It is perfectly plain that a column of scientific news makes many more times the demand upon the reader's assimilative powers than a column of Congressional oratory or gangster warfare.
"A column and a bat of delive scientific above."

"A column and a half of daily scientific chronicle, provided it is authentic and undiluted,

should contain a lot of popular education."



BOOKS RECEIVED



- Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.
- DISEASES OF THE SPINAL CORD. By WILLIAMS B. CABWALADER, M.D. Octavo of 204 pages, illustrated. Baltimore, The Williams & Wilkins Company, 1932. Cloth, \$5.00.
- THE COLON, RECTUM AND ANUS. By FRED W. RANKIN, M.D., J. ARNOLD BARGEN, M.D. and Louis A. Buie, M.D. Octavo of 846 pages, illustrated. Philadelphia, W. B. Saunders Company, 1932. Cloth, \$9.50.
- ERDMANN'S CLINICS. Excerpts Selected from the Clinics of John F. Erdmann. By John F. Erdmann, M.D. Octavo of 315 pages, illustrated. Philadelphia, W. B. Saunders Company, 1932. Cloth, \$4.50.
- SURGICAL CLINICS OF NORTH AMERICA. Vol. 12, No. 5, October, 1932. (Chicago Number). Published every other month by the W. B. Saunders Company, Philadelphia and London, Per Clinic Year (6 issues). Cloth, \$16.00; paper, \$12.00.
- THE DIFFERENTIAL DIAGNOSIS OF ENDOCRINE DISORDERS. BY ALLAN WINTER ROWE, M.D. Octavo of 220 pages. Baltimore, The Williams & Wilkins Company, 1932. Cloth, \$4.00.
- University Student Health Services. By Don M. Griswold, M.D. and Hazel I. Spicer. Octavo of 114 pages. Chicago, The University of Chicago Press, [c. 1932]. Paper, 90c. (Publications of the Committee on the Costs of Medical Care: No. 19.)
- A COMMUNITY MEDICAL SERVICE ORGANIZED UNDER INDUSTRIAL AUSPICES IN ROANOKE RAPIDS, NORTH CAROLINA. By I. S. FALK, Ph.D., Don M. GRISWOLD, M.D., and HAZEL I. SPICER. Octavo of 105 pages. Chicago, The University of Chicago Press, [c. 1932]. Paper, 90c. (Publications of the Committee on the Costs of Medical Care: No. 20,)
- A LABORATORY MANUAL OF PHYSIOLOGICAL CHEMISTRY. By D. WRIGHT WILSON, M.S. Ph.D. Second Edition. Octavo of 284 pages. Baltimore, Williams & Wilkins Company, 1932. Cloth, \$2.50.
- CHILDREN'S TONSILS IN OR OUT. By ALBERT D. KAISER,
 M.D. Octavo of 307 pages, illustrated. Philadelphia,
 J. B. Lippincott Company, [c. 1932]. Cloth, \$5.00.
- CHILD CARE TODAY. By BÉLA SCHICK, M.D. and WILLIAM ROSENSON, M.D. 12mo of 320 pages. New York, Greenberg: Publisher, [c. 1932]. Cloth, \$2.50.
- PARENTS AND SEX EDUCATION. By BENJAMIN C. GRUEN-BERG, M.D. Third Edition. 12mo of 112 pages. New York, The Viking Press, 1932. Cloth, \$1.00.
- Our Children. A Handbook for Parents. By Dorothy Canfield Fisher and Sidonie Matsner Gruenberg. (Editors). Octavo of 348 pages. New York, The Viking Press, 1932. Cloth, \$2.75.

- An Introduction to Analytical Psychotherapy. By T. A. Ross, M.D. Octavo of 203 pages. New York, Longmans, Green & Company, 1932. Cloth, \$3.50.
- Anatomy of the Brain and Spinal Cord. By William W. Looney, M.D. Second Edition. Octavo of 370 pages, illustrated. Philadelphia, F. A. Davis Company, 1932. Cloth, \$4.50.
- Synorsis of Gynecology. By H. S. Crossen, M.D. 12mo of 227 pages, illustrated. St. Louis, Mo., The C. V. Mosby Company, 1932. Cloth, \$2.75.
- Injuries of the Eye. By Harry Vanderbilt Würdemann, M.D. Second Edition. Octavo of 900 pages, illustrated. St. Louis, Mo., The C. V. Mosby Company, 1932. Cloth, \$13.50.
- CLINICAL GYNECOLOGY. By C. JEFF MILLER, M.D. Octavo of 560 pages, illustrated. St. Louis, Mo., The C. V. Mosby Company, 1932. Cloth, \$10.00.
- ORAL SPIROCHETES. By DAVID T. SMITH, M.D. Octavo of 243 pages, illustrated. Baltimore, The Williams & Wilkins Company, 1932. Cloth, \$4.50.
- A Guide to Human Parasitology for Medical Practitioners. By D. B. Blacklock, M.D. and T. Southwell, D.Sc., Ph.D. Octavo of 271 pages, illustrated. Baltimore, Williams & Wilkins Company, 1932, Cloth, \$4.00.
- An Introduction to Dermatology. By Norman Walker, M.D. Ninth Edition. Octavo of 382 pages, illustrated. Baltimore, Williams & Wilkins Company, (William Wood & Company), 1932. Cloth, \$7.00.
- COLONIC IRRIGATION, By W. KERR RUSSELL, M.D. Octavo of 191 pages, illustrated. Baltimore, Williams & Wilkins Company, (William Wood & Company), 1932. Cloth, \$3.00.
- A MANUAL OF EMBRYOLOGY. By J. ERNEST FRAZER, F.R.C.S., Eng. Octavo of 486 pages, illustrated. Baltimore, Williams & Wilkins Company, (William Wood & Company), 1932. Cloth, \$8.00.
- THE EARLY DIAGNOSIS OF THE ACUTE ABBOMEN. By ZACHARY COPE, M.D. Sixth Edition. Octavo of 248 pages, illustrated. New York, Oxford University Press, 1932. Cloth, \$3.25. (Oxford Medical Publications.)
- STREPTOCOCCI IN RELATION TO MAN IN HEALTH AND DISEASE. By ANNA W. WILLIAMS, M.D. Octavo of 260 pages, illustrated. Baltimore, Williams & Wilkins Company, 1932. Cloth, \$5.00.
- Poliomyelitis. A survey made possible by a grant from the International Committee for the Study of Infantile Paralysis. Octavo of 562 pages, illustrated. Baltimore, Williams & Wilkins Company 1932. Cloth, \$6.00.



BOOK REVIEWS



AN Introduction to Dermatology. By Richard L. Sutton, M.D., and Richard L. Sutton, Jr., M.D. Octavo of 565 pages, illustrated. St. Louis, Mo., C. V. Mosby Company, 1932, Cloth, \$5.00.

This volume is an abridgement of an excellent reference book on diseases of the skin, in which R. L. Sutton, Jr., not only deletes with unusual care material from Sutton's eighth edition of "Diseases of the Skin," which he does not consider essential for text-book purposes, but also includes résumés or makes mention of recently published articles on pituitary extract injection in alopecia, bismuth therapy in the treatment of lupus erythematosus, baeteriophagia, crude tar treatment of

The book is well written, concise, and sufficiently illustrated to make it an invaluable text-book for the ARTHUR M. PERSKY. student.

PRACTICAL TREATMENT OF SKIN DISEASES. By EBUARD AHLSWEDE, M.D. Octavo of 770 pages, illustrated. New York, Paul B. Hocher, Inc., 1932. Cloth, \$12.00.

This text is a departure from the usual one on Dermatology in that it is devoted to therapeuties. One would not use it for the purpose of finding a word picture of a skin disease, or being able to make a differential diagnosis between two similar diseases, but, after having made the diagnosis he would use this book for detailed, and accurate, description of the application of his thera-peutic measures. This fact applies particularly to the physical procedures.

There is also a large part of the text devoted to the drugs used in dermatological therapy, and many prescriptions containing them, but one notices the great pre-dominance of drugs used mainly in Europe. There are, liowever, many prescriptions containing drugs very com-monly used in this country.

The reviewer believes that this book will be of greatest value to the practitioner who has not had special derma-tological training, and is, therefore, unfamiliar with the

The arrangement of the text is very good, and the author has shown great care in the selection of his material. The publishers have also contributed considerably in the production of a book in which the desired information may be readily found.

Much of the therapy that is distinctly European is of value to the dermatologist of this country as well as to the general practitioner. E. ALMORE GAUVAIN.

Individuality of the Blood in Biology and in Clinical and Forensic Medicine. By Leone Lattes. Octavo of 413 pages, illustrated. New York, Oxford University Press, 1932. Cloth, \$7.50.

This book, which was first published in Italian in 1923, which was then translated into German and enlarged by Schiff in 1926, and which was revised and published in French in 1929, has been brought up to date and is now published for the first time in the English language, Data on the heredity of the Landsteiner blood groups totalling extensive hibliography is given at the end of the book,

ALEXANDER S. WIENER.

PHYSICAL THERAPEUTIC TECHNIC. By FRANK BUTLER GRANGER, M.D. Second edition, revised by WILLIAM D. McFee, M.D. Octavo of 430 pages, illustrated. Philadelphia, W. B. Saunders Company, 1932. Cloth,

The book is good, replete with information which is of value to all medical men. In the preface, the author claims, "it is not to be a book for the specialist in Physical Therapy," but even they will enjoy reading its well written matter, and may oftentimes avail of it as a ready reference book. To the Physician who dispenses Physi-cal Therapy a little but not en irely it is almost a necessity with its easily found and well informing facts. To the other specialties and to the general practioners who do not use or know little of Physical Therapy it should be indispensable to have at their finger tips a volume which is so abreast of the advances in this particular branch of Medicine.

There are many diverging opinions upon some of the matter contained. Any frequent user of the Physical Therapy modalities may disagree entirely with some of the statements made by the author and its revisor. In some particular instances, the reviewer finds poor re-sults attained by some of the methods advised and good sants attained by methods condemned. Technique is largely a matter of guide-posts, one man's teelinique may be another man's folly. Every Surgeon is not capable in all branches of Surgery, neither is every man capable in all types of Clinical Physical Therapy. Condemnations of Surgery and Surgery an tion of technique should not be done unless results are not fortheoming.

John J. Hauff.

Manic-Depressive Psychosis. An Investigation of the Most Recent Advances. The Proceedings of the Association New York, December 29th and 30th, 1930. Editorial Board, William A. White, M.D. and others. Octavo of 851 pages, illustrated. Baltimore, The Williams & Wilkins Company, 1931. Cloth, \$10.00, (Association for Research in Nervous and Mental Disease. Vol. XI of a Series of Research Publications)

Essentially a compilation of authoritative data by numerous invastinger calcing to the city of manic depressive depresive depressive depressive depressive depressive depressive depres particular subject. This book is no exception.

Each previous book has been enhanced in value by a thorough summary of the literature. In the historical review of the manie depressive reactions we find Smith Ely Jelliffe at his best.

Some conception of the scope and all around attractiveness of this work can be best gained by a listing of the subjects discussed.—Historical, Constitutional (organicbody build), Affective psychoses in children, Etiology (Psychogenic factors) Mechanisms, Symptomatology, Psychology, Prognosis, Biology, Statistical, Treatment, Ethnology (Manie depressive reactions in Negroes).

The section of Symptomatology is complete, including chapters, to mention a few, on the blood-cerebro-spinal fluid, acid base equilibrium of the blood, effect of emotion of gastric secretion, basal metabolism, gastrointestinal motor function in manic depressive psychoses, behaviour chart, statistical delusional study.

A collaborative attempt is rarely complete. However, all of the essentials, pertinent to this subject, are so presented that this book should be well received,

HAROLD R. MERWARTH.



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(Continued on page 50-adv. xiv)



A NEW, NON-STAINING G. U. ANTISEPTIC FOR ORAL ADMINISTRATION

AMBAZIN

Diphenyl-disazo-ethoxyaminophenol-aminobenzoie Sodium plus Hydroxyquinoline sulfate

- 1. Non-Staining.
- 2. Excreted the natural color of urine.
- 3. High bactericidal and bacteriostatic action.
- 4. Nontoxie, non-irritating to urinary tract.
- 5. Well tolerated by the gastro-intestinal tract.
- Unusually low incidence of secondary complications with tendency to shorten the course of treatment.
- 7. Prompt climination.
- 8. Economical price to patient.

The Cost of a Two Weeks' Prescription (42 capsules, each 0.2 grams) is approximately \$1.50

AMBAZIN is indicated in:

GONORRHEA PROSTATITIS CYSTITIS
PYELITIS PYELO-NEPHRITIS
MIXED AND NON-SPECIFIC INFECTIONS
and as a Pre and Post operative antiseptic

DOSE: ONE CAPSULE THREE TIMES DAILY

Let us send you a full size package of AMBAZIN together with a reprint of the published work,

THE LABORATORIES OF

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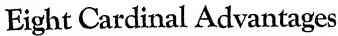
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Break the vicious circle

Insufficiency of the essential minerals—sodium paracism addison in a deline in the second of the second of the second of the essential minerals—sodium paracism addison in the second of the second of

sodium, potassium, calcium, iron and manga-

In c... chexia, w. conditions, Fe... dispensable minera. conjunction with phos. strychnine.

Dose: 1 teaspoonful t. i.

Fellows Medical Manufacturing Company, 26 Christopher Street, New York, N. Y.

FELLOWS

TIA

IT SUPPLIES THE ESSENTIAL MINERALS

4 New Concentrated Vitamin Products



Vitamin A alone

Name SmacoCaritol Product No. 505

Description: Catitol is a 0 3% solution of carotene in bland oil, providing a safe, palatable and convenient concentration of vitamin A for therapeutic use

Taste: Intire absence of all fishy taste makes it accept able to your patients

Color: Deep sed, due to carotene.

Potenty Ten drops contain one thousand International Units of vitamin A

Dosage: Three to five drops daily for infants and young children Five to ten drops daily for adults

Package: 15c c dropper top, protectively-colored botiles, in special cattons to shield it from the light

Cost. Because of its high po rency and the small doses required, it is an inexpen sive source of vitamin A, in spite of the fact that it is the only product contain ing vitamin A alone

Indications: For conditions caused by vitamin A defi ciency and cured or pre vented by adequate vitamin A or carorene dosage

Vitamin D alone

Name: Smaco Concentrated Vitamin D Product No 515

Description: This product is Natural Vitamin D, being a highly potent extract of the antimelitic principle of cod liver oil

Taste Palatable and free from objectionable taste

Color: Nearly colotless.

Potency. Ten drops are equal in vitamin D potency to threeteaspoons of standard potent cod liver oil

Dosage: Average prophylac tic dose, ten drops daily Average curative dose, fif teen to thirty drops daily, depending on severity of case.

Package Sc.e and Soc.e pro tectively colored bottles

Cost: Approximately the same as that current for equivalent vitamin D dos ages of plain cod livet oil.

Indications. For the preven tion or cure of rickets and spasmophilia, and where-ever vitamin D therapy is required, such as tetany and osteomalacia

together

Name: Smaco Vitamins Aand D Product No 525.

Description: Smaco Cantol and Smaco Concentrated Vitamin D are combined in this product, providing both vitamins A and D in concentrated form for therapeutic use

Taste: Palatable and free from objectionable taste

Color: Red, due to carotene.

Potency Ten drops are equivalent to one thousand International Units of vita min A plus the vitamin D potency of three teaspoons of standard potent cod liver oil

Dosage: Ten drops or more daily, depending upon in dividual requirements

Parkage. Sc c and 50c.c pro tectively-colored bottles

Cost: Approximately the same as current prices for equal dosages of other vitamin concentrates

Indications: Wherever vitamins A and D are required together in palatable form and small dosage

Vitamins A and D Smaco Cod Liver Oil fortified

Name: *Smaco Cod Liver Oil (with Carotene and Con centrated Vitamin D) Prod uct No 510

Description: A high gradecod liver oil fornfied with vitamin A of vegetable origin (carotene) and natural vitamin D described in the second column.

Taste: Although carotene is not a flavoring agent, nevertheless the addition of carotene noticeably im proves the flavor

Color: Deep red, due to carotene it contains

Potency. One teaspoon is equivalent in vitamin D potency to three teaspoons of standard potent cod liver oil plus 1,000 Inter-national Units of vitamin A per teaspoon in addition to the original vitamin A potency of the oil

Dosage: One teaspoon daily for average individual needing vitamins A and D

Parkage: Tour ounce protectively-colored bottles packaged in special cartons to shield from light

Cost. Approximately one half as much as the equivalent amounts of vitamins A and D when purchased as plain cod liver oil 1

Indications Whereveramote palatable, concentrated cod liver oil is indicated (Only one-third as much is re quired as plain cod liver oil)

* This product is the Smaco Cod Liver Oil with Carotene announced in September, further improved by the addition of the new Columbia Zucker natural vitamin D

New Vitamin Therapy Possible

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Up to this time it has not been possible to prescribe visinin A alone, as in cases where vision D is not required or is already supplied by sunshine, ultra violet light, viosetool, etc. Smaco Cattof make possible the administration of Primary Vitamia A in drop doses, thus permitting the physician to regulate the dosage to meet individual tequirements

Smaco Vitamin D is natural vitamin D It is not an irradiated oil and not a cod liver oil concentrate, but tathet a highly porent extract of the antifactitic principle of cod livet oil. It is produced for therapeutic use by methods (Zucker Process) developed in the department of Pathology of the College of Physicians and Surgeons of Columbia University

It now becomes possible with these new at now pecomes possible with these new Smace concentrated vitamin products to prescribe vitamin A alone, vitamin D alone, or vitamins A and D togethet, in drop dosages and palatable form, thus permitting the physician to prescribe any desired popercy of these securios. desired potency of these vitamins and any desired combination

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Smaco Cod Liver Oil, fortified with primary vitemin A and natotal vetamen D, is available for those physicians who prefer to prescribe cod liver oil This Smaco product has two outstanding adyan rages, namely -the cost is approximately one balf as much as the same vitamin content of plain cod liver oil, and only one third the dosage is required

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BUDGETED MEDICAL SERVICE IN NEBRASKA

The following plan for group medical service at a fixed rate per year is described in the Nobraska State Medical Journal for October; but it has not yet developed beyond the stage of theory:

"Budgeted medical service was considered in Omaha last month, but was rejected by the Omaha-Douglas County Medical Society.

"The proposal is that the medical society, hospitals and nurses offer the services of all general practitioners, specialists, surgeons and others for any medical or surgical service whatever for a flat price of 3 per cent of the family income.

"According to the proposal, this 'budgeted medical service' would be limited to families whose income is \$2,700 a year or less. It would not be offered to those of higher salaries or income.

"The 'health policies' so offered to families would be cancellable only because of deceit or fraud. The size of the family would make no difference in the fee.

"Unemployed would be carried for three months as delinquent.

"Any person who was sick and was a member of the society's health budget plan would choose his own doctor, nurse and hospital.

"The medical side of the matter would be controlled by an executive committee chosen by the

medical society.

"The financial end would be handled by the originator of the plan, who believes 10,000 members can be solicited for the plan in two years.

"Each physician or surgeon would be required to list a regular schedule of fees for patients in the \$2,700-and-under class.

"Each month's receipts under the plan would be pooled and the total of all physicians', nurses' and hospitals' bills chargeable to the plan likewise would be pooled.

"If the bills in any one month totaled \$15,000 and the income for the month was \$10,000 payment would be made to the individual doctor on the basis of two-thirds of his bill. The next month would start with a clean slate.

"One must admit that the plan is unique, whatever drawbacks might develop in its application to actual conditions."

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stores and department stores dispensing surgical garments. The program includes lectures and discussions on practical technique of surgical fitting, elementary anatomy and physiology, illustrated by charts, motion pictures and living models, with demonstrations on actual patients, under the supervision of Ariel Nichols Le May, Educational Director, and Dr. Rhoda Grace Hendrick, Medical Director, assisted by a corps of instructors.

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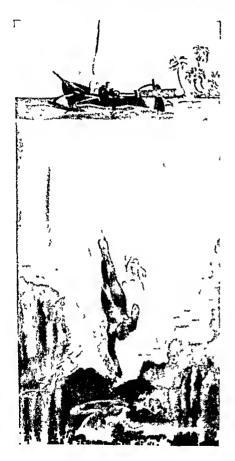
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Any surgical fitter (or physician) is eligible without cost. Enrollment is not restricted to those handling Camp Supports. Prompt application is requested so that adequate arrangements may be made. Merely write nearest Camp office.

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MAN in his ingenuity makes imitations of natural products—the pearl for example—but here as elsewhere there is a quality about the natural product which defies artificial duplication.

Similarly in the therapeutic field, chemists have made many synthetic imitations of the natural product—for instance, salicylates, But physicians continue to prescribe Merrell's Natural Salicylates, because they desire the maximum in therapeutic effect with the minimum disturbance.

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NATURAL SALICYLATES WITH AN ALKALI

Following the trend of current medical opinion, the House of Merrell has developed another form of salicylate medication—Alycin. Alycin combines natural salicylates with a balanced alkaline formula. Authorities emphasize the advantages of this combined form of treatment in colds, influenza, rheumatism, arthritis and similar conditions.

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The association of a balanced alkali with the salicylates in Alycin, combats the tendency to acidosis, favors recovery, and helps prevent complications.

A level teaspoonful of Alycin presents a mixture of 10 grains combined natural salicylates in an alkaline base, 20 grains.

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THE FOUNDATION UPON WHICH THEY

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PUBLICATION RULES IN COLORADO

The November number of Colorado Medicine contains the following announcements regarding its publication of articles:

"Hereafter eight published pages (approximately 4,800 words without cuts) will be the positive limit of length for original articles unless the author wishes to reimburse the journal for the cost of preparing additional

"Under previous rulings and custom, authors paid half the cost of all cuts published with their articles, the journal paying the remainder, except that the journal carried the full cost of cuts used with papers by the invited guests of the Annual Session. This is now changed as follows: An author will not be charged for the first five dollars worth of cuts used with his articles; he will be charged 50 per cent of the next ten dollars worth of cuts, and will be charged the full amount of all cost of cuts above fifteen dollars.

"Hereafter all books received by Colorado Medicine for review will be retained in the jurisdiction of the editorial department under the direction of the Scientific Editor until reviews of them have been received, at which time they will be turned over to the Library of the Medical Society of the City and County of Denver for custody. The Scientific Editor will assign all such books to reviewers.

"Hereafter all discussion of Annual Session papers will be published in abstract. Discussers will be provided with a transcript of their remarks so that they may themselves abstract them if they so prefer, subject to final abstracting and editing by the Scientific Editor."

BARBERS' CERTIFICATES IN KENTUCKY

The September issue of the Kentucky Medical Journal calls attention editorially to a new law in Kentucky requiring every barber and "beautician" to have a certificate from a physician that the operator is free from communicable disease. The striking feature of the article is that it calls attention to the fact that a doctor who gives the certificate lays himself liable to a suit for personal damages instituted by any person who may be infected by the operator. The editorial is as follows:

"Under the new law requiring registration of barbers and beauticians, a certificate from a registered physician is required that the applicant is free from contagious and communicable diseases. In this requirement is found probably ninety per cent of the value of this law. The

(Continued on page 57-adv. xxi)

Fills the need for a dependable antacid mineral water

VICHY CÉLESTINS

This long renowned naturally alkaline mineral water assists in neutralizing excess acid and in regularizing functions of the digestive tract.

Bottled at the Spring in Vichy, France, under Government supervision, it meets the great need of the physician for constancy of composition.

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(Continued from page 56-adv. xx)

manner in which these examinations are made will determine the value of the certificates ımder it.

"Each applicant should be given a general physical examination and should be especially examined for skin diseases, including those of the scalp. No certificates should be issued without procuring a negative Wassermann. Examinations for gonorrhea should include microscopic smears. Of course, every physician will realize his responsibility under this law. Our attorneys advise us that there is no question but that a physician, in giving a certificate of freedom from contagious and communicable diseases to an applicant that he has not carefully examined, would be liable in personal damages, by any person infected by such a barber or beautician.

"This matter of certification is not only of importance in the barbers' and beauticians' law.

but is of general importance. A certificate of freedom from disease should never be given to anybody without the careful examination that will enable the responsible physician to really be as sure of his facts as modern science makes possible."

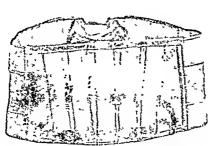
MEDICAL ECONOMICS IN WYOMING

The Wyoming section of the July number of Colorado Medicine contains an editorial suggestion for consolidating the several State Boards of professional examinations in the interest of economy. The writer says:

"Today we are all poor. There are no rich people left. There used to be a few in Wyoming, but not so today. Wyoming as a state is rich in natural resources, but ready cash is as 'scarce as hen's teeth'.

"Several thousands of dollars can be saved by consolidating all the examining boards in the state and at the same time just as good results can be secured. The Medical, Dental, Nursing, Pharmacy, Chiropractic, Optical, Law, Engineers, Mortuary, etc., boards could be consolidated as one examining board and save several thousand dollars a year. A secret committee from the different State Societies could prepare the questions, and the examining board could hold two examinations each year and do all the work now done by nine or ten boards.

"Cost of government must come down to meet (Continued on page 58-adv. xxii)



Devised by Dr. A. Bassler, New York City

The original uplifting abdominal belt with the incurved steels for Ptosis Cases, devised by Dr. Anthony Bassler, is made by

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Besides plenty of phosphorus and calcium in organic form, Maltcao contains twenty-six times as much iron in organic combination as is contained in spinach.

Maltcao is not to be confused with ordinary chocolate food drinks. Its added organic salts place this Merckens quality product in a class by itself.

Particularly in the winter season Maltcao is suggested as a drink for the entire family, as a desirable change from tea and coffee. Mixed with milk or water, it has a delicious chocolate taste that pleases the palate of young and old.

8 oz. sample can to physicians on request

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(Continued from page 57-adv. xxi)

the times, and the man who tells you prosperity is just around the corner is nowhere to be found. Hard work, and lots of it, is ahead for several years and we might just as well face the music. In August. 1931, we advocated an open cut in the fees charged for surgical services, in place of cutting them behind each other's backs. Today conditions have changed.

"Men whose investments in stocks and bonds used to bring in their owners good dividends, receive little or nothing and many of the stocks are not worth ten cents on the dollar. Look at the depreciation in all property and losses in valuation and then try to find any reason for nine or ten examining boards. Let the medical profession take the lead in offering such a consolidation and show our willingness to meet the conditions of today.

"Each State Society could select and recommend for appointment to the governor three men in Cheyenne or near Cheyenne to serve on this Consolidated Board so that traveling expenses could be cut out and the job just as well done, perhaps better than under the old system. This would result in non-partisan boards and would

eliminate party politics."

JOURNAL OF OKLAHOMA

The editor of the Journal of the Oklahoma State Medical Association makes the following appeal to the members in the October issue of the Journal:

"And read from cover to cover. You will note that many advertisers change their copy monthly and have something worthwhile in the way of a message for the physician.

"We have a suspicion that a certain per cent of our members do not read their Medical Journals, unless they happen to be especially interested in some one or more particular articles. This is a mistake, for our writers nearly always make an attempt to so frame their articles that they will appeal to the general practitioner; and this is the correct attitude for the mass of Oklahoma physicians do general work and are not specialists.

"In the back end of the Journal is a directory, containing the list of officers, delegates to the American Medical Association and members of various committees. Notwithstanding this we constantly receive letters wanting information which that page carries monthly. This is rather proof positive to us that some of our members do not read their

Journal,

"It may interest our readers to know that articles published in the Journal of the Oklahoma State Medical Association are rather widely abstracted. One of the most scientific

(Continued on page 59-adv. xxiii)

Seventeenth Annual Clinical Session

AMERICAN COLLEGE of PHYSICIANS

MONTREAL, CANADA - FEBRUARY 6-10, 1933

A POSTGRADUATE WEEK IN INTERNAL MEDICINE AND ASSOCIATED SPECIALTIES (Pediatrics, Neurology, Psychiatry, Tubereulosis, etc.), covering a wide range of subjects presented by outstanding men in medicine from Canada, from the United States and from abroad. Half of the program will be devoted to clinics, laboratory demonstrations, ward-walks and exhibits.

Invitation to attend is extended to all qualified physicians. Non-members of the College will pay a nominal registration fee.

REDUCED RAILROAD FARES—one and a half the one-way fare for the round trip. A "certificate of identification" must be secured from the Executive Secretary of the College to entitle physicians and dependent members of their families to these reduced rates.

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E. R. LOVELAND, Executive Secretary 133-135 S. 36th Street, Philadelphia, Pennsylvania

(Continued from page 58—adv. xxii)
publications in the United States finds the articles meritorious enough to abstract several
each year.

"Our abstracts are very carefully selected and some of them are unusually worth while. The members who fail to read the Journal will overlook something worth while to himself."

WOMEN'S CLUBS AND HEALTH IN ILLINOIS

The Illinois Medical Journal for September prints the following after of the Federation of Women's Clubs made to the Education Committee of the Illinois State Medical Society to cooperate with the niedical profession in public health work:

"As State Chairman of Public Health, Child Hygiene, and Mental Hygiene of the Illinois Federation of Women's Clubs, I should like to place before you my proposed working program.

"As you may know, I have a District Chairman in each of the Congressional districts of the State. It is my plan to have each District Chairman, or her representative, seek a conference with a designated member of each County Medical Society.

"I should like to be able to give each of my chairmen the name of a pivotal representative of the Medical Society in each county, to whom she may go for consultation and guidance in health projects best suited to the needs of the community. In such projects I earnestly hope for medical leadership.

"I am asking each chairman to ascertain for me what, in her opinion, seems to be the health need of the various counties in her district. In the meantime you might wish to secure similar information from the County Medical groups, and these data can then be correlated.

"I feel that the physicians will benefit by thus inaugurating the health work in their communities, and the club women will profit by the expert counsel they will receive.

"Hoping that we will have this work well under way in the early fall, I am

"Very cordially yours,
"(Signed) LENA K. SADLER."

DR. EMMA T. MILLER, TEXAS

The November issue of the Texas State Journal of Medicine notes the death of Dr. Emma T. Miller, of San Antonio, aged 67 years, whose life was so original as to be worthy of notice. Doctor Miller spent the first seventeen years of her medical practice as a medical missionary among the women and children of Tabriz, Persia.

(Continued on page 60-adv. xxiv)

"STORM"



The New "Type N" STORM Supporter

One of three distinct types and there are many variations of each. "S T O R M" belts are being worn in every civilized land. For Ptosis, Hernia, Obesity, Pregnancy, Relaxed Sacroiliac Articula-

tions. High and Low operations, etc.

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A statistical study of a series of over 9000 cases showed a morbidity reduction of over 50% when Mercurochrome was used for routine preparation.

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Baltimore, Md.

(Continued from page 59-adv. xxiv)

She was compelled to leave Persia on the outbreak of the Turkish-Balkan War in 1908, and then took up private practice in San Antonio, Texas.

The outstanding traits of Doctor Miller were

told in her obituary as follows:

"She acquired a fluent command of both the Syriac and Turkish languages, and at the time of her death had acquired a considerable library of books in the Syriac language which she had

read with pleasure.

"Doctor Miller's avocation was mathematics, for which she had marked ability, and to which she devoted what little leisure time she had. She was a member of the National Institute of Inventors. Among the inventions credited to her are a one-piece baseball cover, formed of an entirely new geometrical figure; a washing machine; a machine for picking and ginning cotton; machines for capping and stringing beans, gooseberries and cherries; a machine for skinning animals, and various rotary and combustion machines.

"Her death brought to a close a life of unusual

service and self-sacrifice."

EXECUTIVE SECRETARIES FOR COUNTY SOCIETIES IN PENNSYLVANIA

The Pennsylvania Medical Journal for December describes a plan for promoting the employment of full-time lay secretaries by County Medical Societies, as follows:

"At the May, 1932, meeting of the State Society Committee on Public Relations, Secretary Donaldson in discussing Chairman Alexander's report introduced the suggestion that component societies with one hundred or more members might with profit consider carefully the employment for the next two or three years at least of a full-time executive secretary, a layman. This proposal was discussed at various councilor district meetings held throughout the summer and fall. It was also freely discussed in the report of the Committee on Public Relations published in the September Journal. Adoption of the plan was advocated by President Charles Falkowsky, Jr., in his inaugural address published in the October Journal. The report of the Public Relations Committee above referred to was again published in the handbook distributed at the annual session of our State Society, as was also the resolution adopted by the Lycoming County Medical Society, which heartily endorsed the suggestion that a number of comty medical societies combine for the employment of an executive secretary.

"It was decided that the subject of the engagement of multiple executive secretaries by groups of component societies be brought specifically to

(Continued on page 62—adv. xxvi)

1

GASTRIC FABLES . . .

A Tale of Eating One's Way to Sleep



The doctor meant well when he advised his "nervous" patient to take a biscuit and a glass of milk before retiring. He felt sure the patient would find the rest and sleep she eraved by diverting the flow of blood from the brain.

But he didn't reckon with the vagaries of the stomach. There was no sleep—but a sleepless tossing around in bed because the stomach rebelled against the untimely hour at which it was put to work. It put its energies into action with a vengeance and hyperactivity with hypersecretion was the painful result.

CAL-BIS-MA came to the rescue. A teaspoonful in half a glass of water neutralized the excess acid and soon convinced the stomach that there is no use bucking fate in the guise of medical science. The patient got her sleep and rest.



Cal-Bis-Ma is a combination of calcium and magnesium carbonates, sodium hicarbonate, bismuth and colloidal kaolin, blended into a palatable powder. It neutralizes excess gastrie acidity quickly, efficiently and with lasting effect.... We will gladly explain the therapeutic merits of Cal-Bis-Ma and send a professional trial package for the asking..... Send for it.

IN GASTRIC HYPERACIDITY - CAL-BIS-MA

WILLIAM R. WARNER & CO., Inc., 113 WEST 18th STREET, NEW YORK CITY

Please mention the JOURNAL when uniting to advertisers

(Continued from page 60-adv. xxiv)

the attention of members of the State Society, exclusive of Allegheny and Philadelphia Counties, by means of a return or double post card. In keeping with the wise policy of leading our members to think more in terms of their councilor district, the return post cards with questionnaire were addressed to the respective district councilors."

The post card sent to the district councilors reads as follows:

"Post Card"

"The members of our State Medical Society who read the reports in the September Pennsylvania Medical Journal, or who will read the Minutes of the 1932 session in the November Journal, or who have been reading the A. M. A. Journal recently, must realize that the economics of medical practice and the relations of the medical profession to changing social conditions in the nation transcent in significance all other subjects collateral to the actual prevention and relief of sick-The Allegheny and Philadelphia County Medical Societies testify that their public relations have been improved by the employment of laymen as executive secretaries. The employment of such by groups of other county medical societies throughout the State has been highly recommended by medical society officers who have studied the problem. The subject of the employment of multiple executive secretaries is to be discussed at our Secretaries' Conference on December 6, which county society editors and chairmen of public relations committees will attend. In order that the Trustee and Councilor for your District may speak with authority at that time. your prompt use of the attached post card is earnestly requested."

(Reverse Side)

"I believe that the value of medical service to the people of Pennsylvania may best be maintained on the basis of personal and confidential relationships, which are possible only between the patient and the private practitioner of medicine; therefore, I do (do not) support the proposal that the County Medical Society, of which I am a member, join with an appropriate group of neighboring county medical societies to employ a layman as executive secretary to the group; therefore,

"I will (will not) in conjunction with a sufficient number of members of that group contribute \$5 annually for 1933-4-5 toward the employment of such secretary who is to be coached by representatives of State and county societies, and devote his full time to improving relations between the medical profession and the public in my district.

"Name "Address

ANNUAL REGISTRATION IN PENNSYLVANIA

The December issue of the Pennsylvania Medical Journal calls attention to the Annual Registration of physicians in the following editorial:

"The Department of Public Instruction has duly sent out a registration form for 1933. You attention is called to the necessity of taking care of this annual feature. It is just possible some of the physicians may have thrown the registration form sent to them in the wastebasket, with the misunderstanding it was advertising matter. We advise our membership not to delay, because the card specifically states that registration must take place on or before January 1 of each year. Print name in full, office address, street, and number the city and town must be given, also the state, as there are certain registrants not living in the State of Pennsylvania. It is also necessary to give your 1932 medical registration number. Do not send cash but remit by check or money order for the registration fee of \$1, made payable to the State Board of Medical Education and Licensure, to Harrisburg, Pa.

"The form also requests those practitioners who have retired from the practice of medicine to notify the State Board of Medical Education and

Licensure."

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offers an eight months' course in

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Laryngology under the direction of Professor Duncan Macpherson. Otology under the direction of Professor Warren C. McFarland. The course includes: anatomy and physiology of the nose, throat and ear; embryology, histology, pathology and bacteriology of the nose, throat and ear (given by laboratory staff); dissection of the head and neck; nose, throat and the matriculate performs under supervision a number of the more common nose and throat operations in the out-patient department. For further information, address

THE DIRECTOR

302 EAST 20th STREET, NEW YORK CITY

BOOK REVIEWS IN THE INDIANA STATE JOURNAL.

The attitude of the Journal of the Indiana State Medical Association toward book reviews, as shown in the following editorial in its November issue, is very different from that of those Journals in which the only book reviews are those of books published by houses which advertise in those Journals:

"A new book is written and the publisher sends a copy to a medical journal for review. If the reviewer is too severe the publishers will cease sending books so that particular journal and its library will suffer: if the reviewer is too easy and writes in glowing terms the publisher will send other new books in great number and will quote the review in order that sales may be made. Those who read the reviews may be misled in the Very recently as we latter case. were looking through a journal (not this one) a title caught our attention. The review was read and it was favorable enough to cause us to purchase the book. Actually the book was worthless. It was poorly written and illustrated, not well arranged, of doubtful authenticity, and was simply a rehashing of other much better treatises. We found ourselves stung to the tune of several dollars. In the past few years we have reviewed several books for this Journal and others. We have taken the position that the only honorable thing to do is to give a eandid opinion after a rather careful study of the book. Many of the reviews have been unfavorable and we have somtimes been inclined to think that we have been too drastie. The recent episode mentioned above has cured us of that feeling. We shall make reviews as heretofore, exeept that we shall not feel a bit bad when we call a rotten book rotten."

Diuresis is recommended in many forms of Heart Disease as an adjunct to other appropriate treatment.

Joland Water

may be relied upon to induce diuresis without any untoward effects.



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FULL-TIME SECRETARY FOR KANSAS

The President of the Kansas Medical Society, writing in the October issue of the Journal, regarding the wisdom of employing a full-time secretary says:

"For the past several months, the president's office has received much literature bearing on the merits of the whole-time secretary and citing the experience of States which have adopted same.

"I find two opposing views within the State Society: honest views coming from some of our most sincere minds whose desires and ambitions are totally wrapped up in the best accomplishments for the Society. Your president has tried to make an honest study of this important question. In employing a full-time secretary we might make a great step in advance, or failure and dissension might follow. I have watched with much interest the Sedgwick County Medical Society; they feel they have succeeded. Yet others call attention to the large number of physicians who remain out of the society in Sedgwick County.

"I wonder if we are ready for this advanced innovation. I have read much literature on the subject; the preponderance was in favor of the full-time secretary. Yet, I am quite unfamiliar with its workings. How little, then, must the average practitioner know who has made no study of the question.

"Are we really ready for the employment of a whole-time secretary? Is the proper type of secretary easily secured? Will this cut down our numbers to hurt? Will it increase our budget to any marked degree?

"Is a medical journalist to be retained? Is a physician to be retained as secretary? I have always favored a layman as lobbyist for the legislature; he can be less modest and at the same time sincere.

"To my friends who are sineerely supporting this measure, I wish to state I am not opposed to it I am truly asking myself these questions."

CLASSIFIED ADVERTISEMENTS

Classified ads are payable in advance. To avoid delay in publishing, remit with order. Price for 40 words or less, 1 insertion, \$1.50; three cents each for additional words.

WANTED—Position by woman physician. College graduate with fifteen years' office and office and conege graduate with fifteen years' office and clinical experience in gynecology, skin diseases and varicose veins. Would like a part-time position in a clinic or hospital or office. New York license and member of Medical Society. Address, Doctor, 143 East 30th St., New York City. City.

X-Ray Equipment. Wappler King Model, D. C. Coolidge Tube, Bucky Table, Tube Stand. Fluoroscope. Price \$400.00. A. C. 100 dollars more. Dental X-Ray Machine. Teeter Gas Machine, Anderson, 600 Fulton St., Brooklyn. Nevins 8-3027.

FOR THE TREATMENT OF CHRONIC ARTHRITIS

Many clinicians hold to the theory that arthritis is due to a streptoeoecic infection. Subcutaneous injections of streptococcus vaccines, both autogenous and stock, have been used for many years with indifferent results in the treatment of arthritis.

A strain of Streptococcus viridans that has been under cultivation, for nine years or more, is of low virulence and safe for intravenous injection, is now available and is in growing use in the treatment of chronic arthritis. This new biological is a product of the Lilly Laboratories. The basis upon which its use is advocated rests upon the work of Drs. Clawson and Wetherby, of Minneapolis, Minnesota, and the results they obtain in administering a streptococcus vaceine, intravenously, in over five hundred patients.

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PNEUMONIA

The most recent statistics dealing with pneumonia indicates its successful control in a large number of cases. In 707 cases of pneumonia in which Type I Antipneumococcie Serum was used, the death rate was 18.5% as

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PAIN!

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THE RELATION OF EXOPHTHALMOS TO NASAL SINUS DISEASE* By RAYMOND W. HAWKINS, M.D., ROCHESTER, N. Y.

FEW signs in medical practice cause more alarm to the patient and more concern to the physician than exophthalmos. Four general types of nasal sinus pathology are capable of producing this condition. Firstly, acute or chronic infection in the sinuses; secondly, cavernous sinus thrombosis of nasal origin; thirdly, benign tumors and fourthly, malignant disease.

Exact figures as to its incidence are difficult to obtain since exophthalmos occurs in such a variety of conditions and is a sign rather than a disease entity. The clinical observation of most of us, however, is that true nasal sinus exophthal-

mos is a rather unusual experience.

Davis states that in twenty years of practice Logan Turner saw fifty-nine cases of orbital edema and orbital abscess. The author himself observed thirty-eight cases of proptosis of which twenty-eight were from disease in the sinuses, and five were due to cavernous sinus thrombosis. In Fuchs clinic Melter gives the incidence of exophthalmos as one case in 9,000 clinic admissions. The Heidelburg Clinic reports that from 1913 to 1920, there were 274 cases of orbital complications out of 6,494 or 3%.

It is generally accepted that the commonest cause of inflammation of the orbit is suppuration of the ethmoids in children and the frontals in adults. A consideration of the anatomy of the region makes this readily understandable. More than two-thirds of the wall of the orbit is made up of thin bone which is also the wall of a sinus. Within these thin walls the sinus cells show great variation. An anterior ethmoid cell may push laterally to form part of the roof of the orbit. Onode has described thirty-eight different formations in the relation of the posterior ethmoids and sphenoid.

The bony partition itself is perforated by many small openings, each one traversed by vessels and nerves. Through these small perforating veins the venous system of the mucous membrane of the sinus communicates with that of the orbit. Some more or less constant channels occur—ethmoid veins emptying into the superior ophthal-

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mic vein. This rich anastamosis furnishes an extremely fertile soil for the spread of infection into the orbit.

Four general types of pathological condition require discussion as producing exophthalmos.

Firstly—Infections in the nasal sinuses. Acute empyema of the frontal sinus or one of the eth-moid cells is the most common cause. The path-way of the infection into the orbit may be by direct extension through one of the minute formamina, by thrombophilebitis of the small veins, through dehiscences in the bony wall, or by trauma or necrosis of the common wall.

When infection enters the orbit, the first reaction of course is edema. In this stage vigorous intranasal treatment is effective. With the formation of pus, one has to deal with a figure eight abscess, which will require thorough drainage of both cavities. If the orbital periosteum is not perforated, it should be carefully preserved. Pus from the frontal sinus enters the orbit through the thin bony floor just to the inner side of the orbital notch, causing maximum swelling in the inner third of the supra-orbital ridge, and pushing the orbital contents forward, down, and out. Pus from the anterior ethmoid cells presents near the posterior end of the lacrimal sac, displacing the eye forward and down. Suppuration in the posterior group pushes the eye forward.

Chronic orbital abscess may occur with exophthalmos of several months or even years duration. Coakley reports such an abscess from a chronically infected frontal sinus in a patient of 73 who had proptosis for three months. Johnson cites two cases, one of four months, and one of three years duration where drainage of a frontal abscess gave prompt relief.

When the maxillary sinus is involved the orbit is usually invaded through an area of bone necrosis, although edema without sequestrum formation or metastasis through venous channels does

occur.

Terrien, in (the French journal) La Progres Medical in 1930 describes osteoperiostitis which he believes to be syphilitic in origin, and which affects the region between the greater and lesser wing of the sphenoid bone, causing what he terms

the syndrome of the sphenoid sinus. Exophthalmos occurs from venous stosis. There is sensory motor and special sense disturbance, viz., anesthesia of the cornea, ophthalmoplegia, and impaired vision. He cites a case of severe trauma causing hemorrhage into the sphenoid cavity with much the same symptoms.

Second of the group of causes of exophthalmos is cavernous sinus thrombosis. This condition is the most acutely serious of those encountered. Faulkner divides the portals of entry of the venous infection into four anatomical divisions—anterior, from the lips or face, internal, from the sinuses or trauma to them, interior, from the tonsils, teeth and superior maxilla, and posterior from infections in the ear. In 140 cases collected by Dorland Smith only 9% originated from the sinuses.

Benign tumors, the third group, include mucocele and osteoma. Mucocele is defined as a closed distension of a sinus cavity from accumulated mucous. It occurs usually in the frontal or anterior ethmoid cells, may be found at any age, and is due to some type of obstruction to the The exophthalmos produced is often marked, and the whole condition is characterized by an extraordinary chronicity and freedom from inflammatory reaction. Osteomata are very rare, but three cases with unilateral exophthalmos are reported by Benedict. There was transitory swelling of the lids for several years before exophthalmos developed. All three had failing vision and symptoms were present for from five to eighteen years.

Exophthalmos from malignant disease is usually a late manifestation. The most common site of origin is the ethmoid labyrinth. About twice as many cases of sarcoma as of carcinoma are reported. The exophthalmos is progressive, and in unfavorable cases is extreme.

Diagnosis of the cause of the proptosis is usually simple, but in some cases may be extremely difficult.

In exophthalmos from infections in the sinuses, there is present typically purulent sinus disease, with symptoms of acute orbital infection. The onset is sudden, with fever, prostration and pain in the eyeball radiating into the orbit. Protrusion of the globe develops rapidly, with limitation of motion of varying degrees, up to immobility. Diplopia and reduction of visual acuity are noted. Local signs of inflammation are edema of the lids, often intense, and chemosis in severe cases. Pus may not be seen in the nose, but the common diagnostic procedures will demonstrate its presence. In chronic abscess, of course, the picture is much less alarming.

Early cavernous sinus thrombosis from the accessory sinuses may give local orbital symptoms suggesting orbital cellulitis. The disease progresses more rapidly, however, giving marked chemosis, early sixth nerve paralysis, followed

by involvement of the third, fourth and ophthalmic branch of the fifth. The patient is desperately ill with frequent chills. The orbital edema is of a bluish color and in later stages extends to the face and the other eye. In questionable cases the diagnosis settles itself in two or three days.

Benign tumors are all characterized by extraordinary chronicity and freedom from inflammatory reaction. Nasal examination is usually negative, unless the swelling pushes in the lateral wall.

The diagnosis of malignant tumors, as far as being a cause of exophthalmos, is usually made before orbital involvement occurs. The possibility of an early neoplasm being at the base of a purulent sinus infection was forcibly demonstrated in a recent case which came under my observation where exophthalmos developed within twenty-four hours, but persisted despite treatment of the acute infection. A squamous cell carcinoma of the ethmoid was later diagnosed.

The treatment of orbital cellulitis and abscess varies with the severity of the symptoms. Cases of pure edema are best treated intranasally. Logan Turner was able to cure fourteen of his fifty-eight cases in this manner. In children with ethmoid suppuration relief of congestion and suction or irrigation will bring a cure of the exophthalmos and a relief of symptoms in twenty-four to forty-eight hours. Adults may be cured by simple irrigation, but usually require some type of operative procedure. This may be intranasal, external, combined, or drainage of an orbital abscess. Whatever type of operation is employed, it should be sufficiently radical to insure adequate drainage, both of the infected sinus and the orbital pus.

Cavernous sinus thrombosis from a focus in the sinuses is an indication for immediate, complete and radical drainage of that sinus. Blood transfusion is recommended by Eagleton.

The prognosis in lesions producing exophthalmos from the nasal sinus varies, of course, on the pathology. Benign tumors have a good prognosis as to life. The impairment of vision depends on the duration of the symptoms. On the other hand cavernous sinus thrombosis and malignant disease give a very bad prognosis. Of a series of 684 cases of orbital inflammation recently reported, the mortality was given as 14%. Birch Hirchfield, in a similar series found 17%, death being due to meningitis, brain abscess, or cavernous thrombosis. Davis states that cases of orbital suppuration of sinus origin do not usually suffer permanent impairment of vision, and that in a series of sixty-two cases of his own and Logan Turner's, only one became blind.

It may be of interest to present two case records of exophthalmos of nasal sinus origin.

Case 1. W. B., a farmer boy of 14, came to the office on February 4, 1929, complaining of

headache and protrusion of the left eye. His family and past history were negative. Following a cold ten days before, he had profuse purulent discharge from the left nostril. One week before examination his left upper lid hegan to swell, and the following day the eye protruded. He had visited his physician twice. Left frontal headache, gradually increasing in severity, had been present since the onset of the nasal discharge.

Examination showed a well developed boy, who did not look acutely ill, but was in evident pain. T. 100. Pulse 90. There was considerable edema of the left upper lid, less of the lower, and marked protrusion of the globe down and out. Extra ocular movements were limited and diplopia was present. The bulba conjunctiva was only slightly reddened. On nasal examination the left cavity contained much pus, overflow was seen in the middle meatus, and both the left frontal and antrum were black on transillumination. The remainder of the examination was essentially negative.

Because the patient was not acutely ill, intranasal treatment only was begun. Both the frontal and antrum were carefully irrigated with
saline. Quantities of broken down pus returned
with the irrigating fluid. After two irrigations
the pain became much less, and the exophthalmos
began to subside. Continuing the daily irrigations, the diplopia had disappeared completely in
five days, along with the external signs of inflammation. Frontal and antrum washings hecame clear in ten days.

Case 2. D.M., a boy of 13, was seen by Dr. Lerner on November 23, 1931, in the Eye Clinic of the Rochester General Hospital. The family and past history were irrelevant, except for recurrent tonsillitis for the past five years. Four days before admission he attended school, but in the evening complained of pain in his right eye. He gave no history of trauma, but did have a slight cold. Later in the evening the upper lid became slightly swollen. The following day both lids became edematous, and protrusion of the ball was noted. Right frontal headache and fever developed. His symptoms increased in severity until two days later he came to the Out Patient Department. The following findings were noted: T. 103. Pulse 96. The right upper lid is intensely reddened and swollen, the lower less so, and both are tender to touch. Exoplithalmos is marked, with limitation of extra-ocular movements to 2° or 3° in all directions. The bulbar conjunctiva is chemotic. A slight exudate covers the cornea. The left eye is negative except for some edema of the upper lid. A diagnosis of orbital cellulitis was made, and the patient referred to the hospital.

General examination showed a well developed boy who seemed bright, mentally clear, but in considerable pain. Eye findings were as above. Nasal examination revealed no pus in the right middle meatus, and very little nasal congestion. The cars, throat, and general physical examination were essentially negative on probing the right naso frontal duct and bulla cell, a considerable quantity of pus was liberated. X-ray confirmed right maxillary, ethnicid and frontal sinuses.

Since some drainage was occurring, it was hoped the acute symptoms might subside by shrinking the membrane and applying suction. By the following night, however, even though drainage was profuse, the boy became definitely sicker, the temperature reached 104.5, with increasing lid edema and chemosis. Edema extended over the right frontal region across the midline. The white blood count showed 10,800 cells, of which 81% were polymorphonuclear.

Under general anesthesia and through a Killian incision, the right frontal sinus and anterior ethmoid cells were opened externally, and the bulla cell drained into the nose. Much pus was found in the sinuses, from which hemolytic staphilococcus albus was obtained. On pushing the orbital contents away from the floor of the frontal sinus, the whole region seemed bathed in thin pus, which was free in the orbital cavity. There was no thickening of the frontal mucous membrane. A large rasp was introduced intranasally into the right antrum for drainage through the inferior meatus.

The post operative course was stormy. On the first day, the temperature reached 105.6 with symptoms of meningeal irritation. Spinal tap showed clear fluid, 25 cells and a negative globulin test. After three days these symptoms cleared, but marked swelling developed in the soft tissues from the outer angle of the orbit to well back of the auricle. Two blood cultures at an interval of four days showed colonies of staphlococcus albus. Repeated incisions in the scalp were made over a period of two weeks, and a cervical abscess drained. By one week after the operation all the swelling about the eye had shifted to the soft tissues laterally, the exophthalmos had disappeared, and full rotation of the globe was possible. The sinus operative wound closed completely without drainage in three weeks. At this time a right otitis media developed but cleared without operative interference. One month postoperative, the lad developed osteomyelitis in the frontal and parietal bones, with an underlying extradural abscess. Since this focus was opened by Dr. Ward Williams the progress has been slow, but complete recovery seems certain.

In conclusion, the purpose of this paper has been to summarize briefly the relation of the various types of nasal sinus pathology to exophthalmos, and to point out the importance of recognizing this relationship as the first step in any successful treatment of such cases.

Discussion: A. M. Rooker, M.D., Niagara Falls, N. Y.—Dr. Hawkins was so thorough in

his presentation of the subject that it leaves very

little to be said in regard to it.

In exophthalmos due to benign causes the most frequent which I have encountered are those caused by mucocele. These present an extreme amount of exophthalmos frequently together with outward and downward displacement. There is a very slow onset and the response to the intranasal operative procedure is very satisfactory. In my cases I have been happily surprised to find that the eye has gone back to a perfectly normal position. I agree with Dr. Hawkins that the acute inflammatory conditions in young children respond well to intranasal operation. The older they are, the more frequently do we have to use the external operation.

The one case I wish to cite to show that we must not be led astray by our eye and nasal symptoms is that of a young man of 20, referred

with a temperature of 103.5, with considerable periorbital edema and history of rapid onset, with the nose on that side almost completely closed with acutely congested membrane. When the nose was shrunken with cocaine and adrenalin, the periorbital edema subsided so that he could open his eye. He was immediately hospitalized and operation was deferred even though he did seem extremely toxic. That night he became delirious, though the periorbital edema had not increased and the nose was somewhat less congested. Upon calling in his regular physician and having him go over him again, a short distressing cough, with rather hurried respirations, made me feel that probably we had another factor to contend with, and we found a beginning central pneumonia from which he died within 36 hours. You can imagine the gratification experienced by not having operated this case.

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EXOPHTHALMOS—ITS OCULAR SYMPTOMS*

By HAROLD H. JOY, M.D., SYRACUSE, N. Y.

Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

Exophthalmos is the cardinal symptom in most diseases of the orbit, and in some intracranial vascular lesions. It is an important sign in certain metabolic and systemic affections, and is frequent in skull malformations.

Its presence calls for:

1. A careful history.

2. Examination of lids, palpebral fissure, conjunctiva and cornea.

3. Palpation of orbit and globe, noting points of resistance and tenderness, as well as any mass which may be present.

4. Measurement of the proptosis with an exophthalmometer.

5. Examination of the globe for displacement and limitation of movement.

6. Vision and fields, and diplopia tests.

· Intraocular symptoms are omitted as they are to be presented by Dr. Reese.

7. Ophthalmoscopic examination.

8. X-ray of sinuses and orbit, and possibly of the optic canal.

Rhinological examination.

10. Complete physical and serological investigation, including metabolism tests in certain cases.

Exophthalmos depends upon disturbance in the relative size of the orbit and its retrobulbar contents-and to a lesser extent upon the condition of the external ocular muscles. As a consequence of this disturbance we may also have:

1. A wide palpebral fissure.

2. Eversion of lids, and ectropion of the lower lid.

3. Edema of lids and conjunctiva.

Desiccation and ulceration of the cornea.

5. Displacement of the globe. Limitation of movement.

7. Diplopia.

Visual symptoms

Pain and tenderness

Unilateral exoplithalmos is usually caused by local affections in or about the orbit, while bilateral exoplitlialmos is most often the result of systemic disease (Ruedemann)

I UNILATERAL EXOPHTHALMOS

Inflammatory proptosis may occur as the result of simple orbital cellultis or abscess, tenonitis, orbital periostitis or periostal abscess, or thrombosis of the cavernous sinus

Tever and other general symptoms are almost always present, and there is orbital pain of varying intensity. The lids and conjunctiva are chemotic, and the exophthalmos may be marked The position of the globe is usually primary (except in abscess and periostitis), and there is limited motility and diplopia, and frequently visual symptoms. It is sometimes impossible to differentiate the types of orbital inflammation, and often more than one type may be present

The chief points in differentiation are

In simple edema the signs are usually not so marked as in cellulitis, and the general symptoms are apt to be less severe

In orbital abscess the globe is usually displaced, and localized tenderness and fluctuation may occur, the abseess often breaking through the lid

In tenonitis

(1) The edema of the lids is only moderate while there is marked chemosis of the ocular conjunctiva, giving it a characteristic pale yellow

(2) The exophthalmos is of low degree, and it

may alternate from one eye to the other

(3) There is severe pain upon attempting to move the globe and extreme tenderness upon palpating it

(4) In severe cases the introcular tension may

be increased

In the purulent type of tenonitis the globe is extremely red and is usually fixed

In periostitis and periostial abscess there is (1) Severe spontaneous orbital pain, worse at night, especially in syphilitic cases

(2) Tenderness in the region of the lesion

(3) Displacement of the globe away from the lesion

Downward and temporally-if originating from the frontal sinus

Temporally (more rarely downward)—from the cthmordal sinuses

Upward—accompanied by edema of the cheek and lower hd if originating from the

maxillary sinus

Downward-in syphilitic periostitis of the orbital margin

Forward and temporally-in syphilitie periostitis of the orbital wall

In thrombosis of the cavernous sinus

1. Cerebral symptoms are almost always pres-

2 The inflammatory signs are more promment than in any other type

3 Edema in the mastoid region is usually present

4. Paresis of the external muscles is common

5 The exophthalmos usually extends to the other side within two to four days

6 The duration is short, almost always with a fatal termination

Mucococle of the frontal and ethmoidal sinuses may cause a slowly progressing proptosis with displacement and limitation of movement, and with little or no evidence of inflamination

X-ray shows a punched out hole in the orbital wall, and a mass can often be palpated

If from the frontal sinus

The displacement is often down and temporally

2 There is usually a swelling in the superior ınner orbital angle.

3 The root of the nose may be flattened out because of naso orbital hyperostosis

4 The upper lid is often smoothed out and the palpebral fissue narrowed

Pain is usually present in the frontal sinus 6 Visual and field changes occasionally occur

If from the ethmoid cells

1 Exophthalmos is one of the first symptoms to appear.

The displacement is usually down and temporally, but if from the posterior ethnioids it may be directly forward

A history of head colds or sinusitis is important in the diagnosis of pyocoele which in other respects is difficult to differentiate from orbital tumor.

Sclerosis of the retrobulbar tissues is a rare cause of exophthalmos There is disappearance of lacrymation, irregularity in position and function of the lids, limiting of movement, decreased vision and pain

In pulsating exophahalmos there is marked edema of hids and conjunctiva with widely dilated veins, and distention of the scleral veins is a varying degree of proptosis and the globe is usually displaced laterally or downward, more rarely directly forward. Movement is restricted. The eye can be pressed especially temporally. back, and a pulsation felt and occasionally seen A bruit is audible not only over the eye but often over the whole half of the skull, and the patient is conscious of a continuous roar. Intensity of the bruit and of the pulsation is increased upon raising the orbital blood pressure, and is diminished by pressure over the carotid Diplopia is frequent and vision is usually seriously affected Orbital pain is common, as well as vertigo and impaired hearing Corneal anesthesia and diminished accommodation are not unusual; and glaucoma or cataract may supervene.

Intermittent exophthalmos is rare. It usually follows coughing, straining or bending over, and is marked by sudden exophthalmos which may be of high degree, and is usually accompanied by pain. It is recurrent and loss of vision may occur.

Retrobulbar hemorrhage is usually traumatic in origin. There follows a rapidly developing exophthalmos in the primary position, with restricted motility, accompanied by ecchymosis of the lids and by subconjunctival hemorrhage (unless the hemorrhage is subperiostial). Visual symptoms may be present if the optic nerve or globe are injured.

Emphysema is characterized by a sudden proptosis accompanied by marked swelling of the lids, with crepitation. The symptoms appear, not as a rule at the time of the injury, but some time afterward, usually upon blowing the nose, thus forcinging air into the orbital tissues. The palpebral fissure is narrowed and the globe is in the primary position and can easily be forced backward.

Orbital tumor usually manifests itself as an acquired unilateral, slowly progressing exoplithalmos, with displacement, and restricted motility. A mass can often be palpated, and there are visual symptoms if the optic nerve or globe are involved. The presence of pain and tenderness, and edema of lids and conjunctiva depends upon the situation, the nature and the extent of the tumor. The further back the lesion the later the appearance of proptosis. The tumor may be vascular, cystic, bony, of the soft tissues, or of the optic nerve (Roemer).

Vascular tumors are rare. Pulsating hemangiomas cause erosion of bone and congestion of the neighboring soft tissues (Benedict). Telangiectases may be seen through the skin of the lids, and cavernomas may cause serious visual symptoms by pressure on the optic nerve.

Dermoid cysts frequently cause displacement of the globe down and nasally. Echinococcic cysts usually exhibit pain and inflammation in the surrounding tissue during their development. Encephalocele or meningocele through the superior orbital fissure may cause pulsation: upon emptying the cyst by pressing the globe backward symptoms of increased intracranial pressure are often produced.

X-ray is important in the diagnosis of bony tumors. Osteomata usually start in the sinuses and penetrate into the orbit. The optic nerve is usually involved as the first symptom if the osteoma originates in the sphenoidal sinus. Exostoses are most frequently situated on the roof or upper inner wall.

Sarcomata are the most frequent of the primary tumors of the orbit. Their growth is rapid

with no inflammatory signs. Primary carcinoma produces much irritation of the invaded structures. There is early disturbance of muscle function, and the globe may be drawn to one side and fixed to the orbital wall. Tumors originating in the sinuses usually cause inflammatory symptoms, while metastatic orbital growths develop without irritation. Intraocular tumors may extend into the orbit without producing irritation or there may be violent inflammatory reaction.

In tumors of the optic nerve vision fails early (except in glioma). Exophthalmos also appears early, and increases slowly and without pain. The globe is proptosed directly forward, or slightly downward and temporally. The course is comparatively benign.

It may be difficult to differentiate a tumor from orbital gumma, which is most frequently situated on the upper wall at the level of the superior orbital fissure. Edema of lids and conjunctiva is usually present. Corneal anesthesia is common, and neuroparalytic keratitis may occur. There is progressive proptosis with displacement; and often disturbed motility due to paralysis of the external rectus muscle. There is deep-seated spontaneous pain, which is worse at night. Iritis is not an infrequent complication. The Wasserman reaction is of course important in the diagnosis.

The so-called *pseudo tumors* include diffuse tuberculous infiltration, leukemic processes, diffuse lymphangioma, and chronic inflammation. The onset may be rapid or slow and insidious. The degree of exophthalmos is usually not great. Displacement, diplopia and restricted motility are common, and there is often edema of lids and conjunctiva. Visual defects are not rare. The symptoms may disappear spontaneously after a few months, but recurrence is frequent.

In external ophthalmoplegia there is ptosis and moderate exophthalmos in the primary position with restricted motility. The globe can easily be pressed back, but immediately sinks forward again.

II. (a) BILATERAL EXOPHTHALMOS IN CHILDREN

Infantile scurvy causes periosteal orbital hemorrhage resulting in proptosis usually accompanied by ecchymosis or edema of the lids. The onset is sudden and there is displacement forward, downward, and outward. Rapid and complete recovery follows anti-scorbutic treatment.

Christian's syndrome (diabetes insipidus) is characterized by exophthalmos with large defects in the bones of the skull, especially about the orbit. Visual symptoms are not infrequent due to involvement of the optic nerve or retina, or to desiccation of the cornea.

In chloroma or green blood tumor there is

cdema of the lids with exophthalmos. The parotid and other glands are often swollen, and corneal desiceation and panophthalmitis are frequent complications. The blood picture and greenish color of the child assist in the diagnosis. The discase always terminates in death.

Oxycephaly or tower skull causes a viariable degree of exophthalmos due to malformation of the orbit which may be confirmed by x-ray examination. The characteristic shaped skull cannot always be depended upon. Involvement of the optic nerve and nystagmus are usually present.

Although exoplithalmos occasionally occurs in hydrocephalus and rickets it has relatively little diagnostic importance.

II. (b) BILATERAL EXOPITHALMOS IN ADULTS

The most frequent eause of proptosis is exophthalmic goitre. In most cases it is the last cardinal sign of Graves disease to appear. amount of exoplithalmos is not proportionate to the severity of the disease, and while it is usually bilateral, it may be of unequal degree. The globe assumes the primary position, and its motility is seldom affected. There is occasionally periodic edema of the lids, and there may be either increased or decreased lacrymation. Vision is usually not affected if the cornea is not involved. Before discussing the classical signs which we associate with exoplithalmic goitre, it should be mentioned that they are occasionally found in nephritis and in ocular paralyses, and may be due to other toxemias and poisons, and to some diseases of the central nervous system. signs are nevertheless present in over eighty per cent of all eases of exophthalmic goitre. They

- (1) Dalrymple's sign—consisting of a wide palpebral fissure.
 - (2) Stellwag's sign-infrequent winking.
 - (3) Von Graef's sign-in which the rotation

Discussion — Charles A. Hargitt, M.D., Brooklyn, N. Y.: I am sure that we can all agree that the problem of exophthalmos is one that well descryes a thorough review from time to time. Furthermore, the proper consideration of this problem can be best undertaken in such a sectional meeting as we have here, for many phases of it require the cooperation of the rhinologist or laryngologist.

Dr. Joy is entitled to our heartiest congratulations upon the clear and logical manner in which he has presented the problem, as a whole, from the viewpoint of the ophthalmologist. In fact he has done it so well that it looks very easy. We all know, however, how of the globe and lid downward is not synchronous, the lid making a jerking attempt to follow.

(4) Gifford's sign—difficulty in everting the upper lid.

(5) Moebius sign-difficult convergence.

(6) Joffroy's sign — the forehead remains smooth upon looking upward.

(7) Another sign is sometimes found in early cases. It consists of four strike of congestion corresponding to the recti muscles.

A low degree of exoplithalmos may occur in hypathyroidism. There is edenna of the lids and weakness of aecommodation convergence. The individual is sluggish, has a dry skin and gives a history of gain in weight.

The proptosis occasionally observed in hypertension is not great. Opthalmoscopie examina-

tion assists in the diagiosis.

Asphyxia causes acute edema of the orbit with some exoplithalmos accompanied by intraoeular hemorrhage.

The proptosis in Mikulicz's disease is usually of unequal degree. There is swelling of the

lacrymal, salivay and parotid glands.

One of the earliest signs of trichinosis in about eighty per cent of the cases is edema of the orbit with exophthalmos of three to four millimeters.

Osteitis deformans (Paget's disease) usually occurs in elderly individuals. The exophthalmos is due to the deformity of the skull which has a characteristic appearance. The presence of hard tumor-like growths and the thickening of other bones, particularly the tibia, are important diagnostic points.

CONCLUSION

Exophthalmos is always significant. It almost always indicates a serious local or systemic disturbance. It may result in loss of vision, destruction of globe and lids, or in death itself. Early detection is important, but even more important is early diagnosis of the clinical cause.

highly individualistic some of these cases can be.

Dr. Joy does well to accentuate the importance of the unilateral exophthalmos, for there it seems to me, lies the chicf concern and responsibility of the ophthalmologist. I suspect that few, if any, of us see enough cases of this type that we can unhesitatingly and properly classify them. This is particularly true of the non-inflammatory unilateral exophthalmos. To illustrate this may I be allowed to very briefly describe two or three case, though I may be encroaching somewhat on Dr. Reese's field.

Over a period of eight years from 1923 to

a year ago, I followed a case of intermittent unilateral exophthalmos in a middle-aged maiden woman. The first development of it was a very gradual one. The eye was emmetropic, with a vision of 20/15. At its extreme stage of development, there was almost complete immobilization of the globe, with a moderate amount of proptosis, and a slight displacement temporally. There were intervals of almost complete remission of signs and symptoms. At one time her physician thought she exhibited some evidence of endocrine disturbance. There was never any enlargement of the thyroid gland. X-ray examination and nasal examinations never gave any clue to the cause. At times there would be a return or increase in the amount of proptosis following some nervous disturbance. The eye gradually changed from emmetropica to myopia of one and one-half diopters, without any demonstrable lens changes. During the past year, the exophthalmos has remained more or less stationary, but much less than in its periods of maximum development. There has been a gradual loss of vision with a developing optic atrophy. She always seemed extremely indifferent to her condition, and it was never thought advisable to strongly urge any exploratory operation of the orbit.

Another very recent case of unilateral exophthalmos exhibited some interesting variations in its development. A young man of 35 came into our clinic at the Brooklyn Eye & Ear Hospital three months ago. For the preceding few weeks he had noticed a gradually developing prominence of his right eye. At his first appearance at the clinic there was a moderate amount of edema of the lids and bulbar conjunctiva and beginning proptosis. The conjunctival and retinal veins were moderately engorged. During the period of investigation by laboratory, X-ray, etc., these signs became more marked. There was no

history of traumatism, nothing preceding could be palpated in the orbit, and no bruit could be detected, nor could any pulsation be detected upon pressure on the globe. Gentle pressure on a slightly accentuated fullness of the lower lid edema just below the inner canthus, elicited a slight pulsation. The x-ray and nasal examinations were entirely negative. He had been hospitalized during these investigations and toward the end of the second or third week, extensive retinal hemorrhage appeared. orbital exploration seemed imperative, and was made through an external canthotomy and entrance along the outer orbital rim, with section of the external rectus muscle. This permitted a thorough palpation of the orbital contents both inside and outside of the muscle cone. No tumor formation or unusual fullness could be identified. The rectus muscle was reattached, and the wound closed. Recovery from the operation was rapid and uneventful, with no change in the essential condition. Two weeks following the orbital exploration, a very distinct bruit was heard for the first time, over the right temple, and on backward pressure on the globe, a well marked pulsation could be felt. At this time, also, a paresis of the external rectus had developed. A ligation of the common carotid artery resulted in prompt obliteration of the bruit and pulsation, and a subsidence of the edema and proptosis to nearly normal, and improvement in the paresis of the external rectus.

Very briefly I mention the case of a young man of 39, a patient in the Kings County Hospital six years ago who made a spontaneous recovery from a cavernous sinus thrombosis. The vision of one eye was practically lost from extensive corneal ulceration and subsequent scar formation. One year later the vision of the other eye was 6/12 with a slight optic atrophy, a very slightly contracted field, and marked engorgement of the retinal veins remaining. There was practically no temperature reaction in this case, and hence, no septicemia.

Discussion—Jason L. Wiley, M.D., Auburn, N. Y.—I am impressed with the completeness with which Dr. Joy has covered this subject and with the strictness with which he has kept to the title of his paper. I have little to add. I should like to stress a few points made and mention one or two observations.

1. I think the statement "Exophthalmos depends on the relative size of the orbit and its contents" should be emphasized. The anatomy and mechanics of the forces holding the eye in position should be understood to intelligently deal with the abnormality under discussion.

2. In regard to measurement of the proptosis with an exophthalmometer. Repeated measure-

ments are important. First, to be sure of our diagnosis in cases of slight degree, and second, to keep track of the progress of the proptosis in all cases. Any method other than instrumental measurement is not reliable.

Two observations about cases secondary to nasal sinus infections. One word about x-ray findings. I believe rhinologists almost unanimously agree that a sinus can be very badly obstructed and infected and show nothing abnormal in the film. Of course, positive findings are of great aid.

Not infrequently swelling and proptosis are present early in these cases. Rhinologists consider it unsafe to operate early (I mean the first

few days). Vision is usually unt in danger until the eyeball is fixed or nearly so. It is hazardous to wait longer. I saw such a case in which the vision was lost a short time ago. The eyeball was fixed and absolutely blind from an obstruction of the central artery when first seen. We at least should insist that the rhinologist who wants to defer surgery after the globe is fixed understands the risk in regard to vision.

3. We should be careful not to let swollen lids mask the presence of proptosis. Equal care should be taken not to diagnose a case as exophthalmos in the presence of swollen lids when the position of the globe is normal.

4. Work recently done, in the Mayo Clinic I believe, strongly suggests that the proptosis of Graves' disease is caused by a disturbed metabolism of the orbital fat resulting in a waterlogged condition of this tissue. Dr. Joy's last statement cannot be repeated too often. "Early detection is important, but even more is the diagnosis of the cause."

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EXOPHTHALMOS*

Its Pathology and Ocular Manifestations By ALGERNON B. REESE, M.D., NEW YORK, N. Y.

N the time allotted for this paper it will, naturally, be impossible to discuss all phases of the subject assigned. It will therefore be necessary to exclude some very important causes of exophthalmos, such as hyperthyroidism; sinusitis; ascending thrombophlebitis from infection of the face, nose, lids and lips; orbital syphilis and tuberculosis; intracranial neoplasms and abscesses; nasopharyngeal neoplasms; bone neoplasms and hyperplasias in and around the orbit; congenital narrowing of the orbital space as seen in oxycephalis and others. At the conclusion of the paper time will be allowed for the projection of some microscopic specimens showing various ocular changes produced by orbital lesions and other specimens illustrating causes of exophthalmos which have not been discussed in this paper.

The conditions here presented are not necessarily those most frequently encountered, in fact they have been closen chiefly because they are not commonly emphasized. They will include pseudo-tumors of the orbit, varix orbitae or intermittent exophthalmos, orbital hemorrhages, defects in the roof of the orbit, blood dyscrasias, high myopia and relaxation of the recti muscles.

1. Pseudo-tumors of the orbit. The first group of cases to be emphasized comprises the so-called pseudo-tumors of the orbit. Their importance lies in the fact that a chronic inflammatory proccss here simulates in every detail a new growth, thereby sometimes causing an incorrect diagnosis, the consequences of which may be serious. Exophthalmos may exist to any degree. No inflammatory signs are present but usually a firm, nontender and sometimes well demarcated mass is palpable in the orbit. One of the characteristics distinguishing this condition from an orbital neoplasm is its tendency to spontaneous regression over a long period of time, another point of difference between the two conditions being the fact that primary orbital neoplasms are most frequently encountered in the first twenty years of life, while pseudo-tumors are usually seen in people past middle age. Biopsy in these cases shows fibroplastic repair in all stages, from the denser hyaloid, almost anuclear tissue of long standing to the delicate fibroglia and richly nuclear tissue of more recent production. Foci of lymphocytes are scattered through this reparative tissue. Blood vessels are plentiful, their intima usually showing proliferation to such an extent that the lumen appears almost occluded, and their media

^{*} Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N Y., May 24, 1932.

and adventitia being thickened with sclerosis which has undergone hyaloid degeneration. These vascular characteristics explain a strong tendency to hemorrhage at biopsy.

The etiology of pseudo-tumors is unknown. There is no evidence of syphilis or tuberculosis. The theory that they are a very late manifestation of syphilis, which has run its course and therefore gives a negative Wassermann, is apparently borne out by the fact that they seem to recede much faster under the usual treatment for late syphilis, but the effect may be absorptive rather than specific. One patient, who was observed for three months, at the end of this time developed a septicemia with exophthalmos of both eyes, resulting in death, indicating that the lesion is caused by a low grade metastatic embolis from some focus of infection which in this particular case gave rise later to a virulent septicemia.

A case followed by Birch-Hirschfeld was diagnosed as sarcoma of the orbit. Exenteration was performed and a microscopical examination of the orbital contents showed the usual inflammatory process. Some months later the other eye gradually became proptosed to the extent of 12 m.m., with no pain and no sign of inflammation. The vision was practically lost as the result of a corneal ulcer due to exposure. The exophthalmos receded gradually and spontaneously over a period of several years, during which time the patient's health was good. Exhaustive study revealed no clue to the etiology. A similar case, known to the speaker, was diagnosed as orbital neoplasm and after exenteration microscopical examination of the orbit showed a low grade inflammatory process resembling the one already described. These pseudo-tumors of the orbit are not uncommon and it is therefore not advisable to perform a radical operation in the case of a suspected neoplasm in a person past middle age until the possibility of a pseudo-tumor has been eliminated.

2. Varix orbitae or intermittent exophthalmos. In the next group, consisting of varix orbitae or intermittent exophthalmos, the provocative factor is congestion of the jugular vein area. Here the exophthalmos appears upon stooping, after compression of the jugular vein, after holding the breath, after strong expiration, etc., and disappears when the patient is in the ordinary standing, sitting or lying positions. It usually appears about middle age, is apt to be in the left eye and is more frequent in men than in women. It is caused by varicosities of the orbital veins possibly due to an atresia of the foramen through which the jugular vein leaves the skull and is usually on the left side because the foramen is normally smaller on this side. Some cases show varicose veins of the conjunctiva, lid and other parts of the body. In congestion of the jugular area occasionally intracranial symptoms appear

which suggest the existence of intracranial varicosities. The prognosis as to life is good but seven out of 89 cases showed failing vision due to optic nerve atrophy and occasionally to orbital hemorrhage. In a case of this sort, which has been observed for two years and in which an orbital angioma was at first suspected, the patient's condition has remained unchanged and he has no troublesome symptoms unless venous congestion is produced in any of the ways previously mentioned.

- 3. Hemorrhage in the orbit. The next group, that of hemorrhage of the orbit, is often connected with some systemic disease. In infants the possibility of scurvy as an etiological factor must be considered. In this condition subperiosteal hemorrhages may occur anywhere in the body, a characteristic location being along the inner aspect of the femur, but occasionally they occur along the orbital bones and unless the underlying cause is recognized they may be mistaken for orbital neoplasms. Exophthalmos in rickets is perhaps more often due to periosteal proliferations although it may be caused by hydrocephalus or subperiosteal hemorrhage. In myelogenous leukemia a tendency to hemorrhage may be manifested spontaneously in the orbit. In severe compression of the thorax hemorrhage may appear not only in the orbit but under the skin of the face and neck, under the conjunctiva and in the retina, even in the absence of any injury to the head. This may be explained by the fact that the great and sudden increase of pressure in the thorax forces the blood into the area of the jugular vein. This force, transmitted by the valveless veins of the region to the tributaries, ruptures the walls of the latter and results in hemorrhage. A similar explanation will suffice for the orbital hemorrhages occurring during paroxysms of coughing and those observed in asphyxiated new born infants.
- 4. Defects in the roof of the orbit. In this group of cases a defect in the roof of the orbit allows the brain and meninges in the anterior fossa to form a hernia into the orbit, producing an exophthalmos which sometimes pulsates. When this is due to a congenital defect in the orbital roof it is called a posterior orbital encephalocele or meningocele. The more common anterior encephalocele or meningocele gives rise to a lateral displacement of the globe and, less frequently, to exophthalmos. These congenital defects of the orbital wall may not be evident until a considerable time after birth, sometimes as late as ten years. Hydrocephalus and brain tumors may also produce exophthalmos through defects in the orbital roof.
- 5. Exophthalmos from blood dyscrasias. In lymphatic leukemia a proptosis may be the sign which first prompts the patient to seek advice. This proptosis is due to hyperplasia of the lym-

phatic tissue in the auterior part of the orbit, especially around the lachrynial glaud, which is a part of the general lymphadenopathy common to this disease. Its excessive manifestation in the orbit is probably caused by obstruction to the lymph drainage. In chloroma there is an involvement of the flat bones of the skull with a secondary extension of the lesion to the orbit. The orbital hemorrhages occurring in myelogenous lenkemia have already been mentioned.

- 6. High myopia. A prominence of the eye may be produced by very high myopia. One case known to the speaker, with a unilateral myopia of approximately 30 D was investigated from all angles in an effort to explain the exophthalmos, before the myopia was appreciated as the cause. The eye protruded 4 mm. and a tarsorrhaphy was necessary for cosmetic reasons.
- 7. Relaxation of the recti muscles. A complete tenotomy of one of the recti muscles, for instance in an operation for squint, may produce a mild proptosis of 2-3 m.m. A similar mild exophtianos may also be observed in paralysis of the oculomotor nerve.

Projection of Microscopic Specimens

- A. Globe and orbital contents of a case of pseudo-tumor of the orbit which was exenterated. This showed the orbital tissue involved by a low grade proliferative chronic inflammatory process.
- B. Specimens which showed ocular manifestations from orbital lesions.
- 1. Melano-carcinoma of the orbit which arose from a naevus at the limbus.
- a. from pressure around the optic nerve there was papilledema, optic atrophy and thrombosis of a branch of the central retinal vain
- of a branch of the central retinal vein.
 b. from embarrassment of the vortex veins
- there was secondary glaucoma.
- e. from pressure on the sclera there was acquired hyperopia or pseudo detachment of the retina,
- 2. Basal cell carcinoma of the orbit (cylindroma).
- a. from pressure on the optic nerve there was papilledcma.
- b. from embarrassment of the vortex veins there was secondary glaucoma.
- c. from pressure on the sclera there was acquired hyperopia or pseudo detachment of the retina.
 - 3. Round cell sarcoma of the orbit.
- a. from marked exophthalmos there was an ulcer lagophthalmos with hypopyon.
- C. Specimens which showed causes of exophthalmos other than those mentioned in the paper.
 - Panophthalmitis:
 - a. from an ectogenous endophthalmitis.
- b. from a necrotic melano-sarcoma. The similarity of types a and b were noted.

- Orbital contents and globe in a case of metastatic orbital cellulitis from septicæmia. Pure cultures of embolic foci of the bacteria were present.
- 3. Three cases of congenital orbital cysts and globes. One ease accompanied a microphthalmic eye and two cases accompanied relatively normal eyes—the one having a typical coloboma of the optie nerve but the other showed a mass of congenital fibrons tissue over the nerve head and the diagnosls was thought to be an orbital neoplasm.
- 4. Orbital contents in a case of long standing arterio-venous aneurysm (carotid in the cavernous sinus) which had undergone spontaneous recession due to atresia and occlusion of the vessel lumina from proliferation of the intima.
- 5. Orbital contents in a case of septie thrombosis of the cavernous sinus. This showed a marked inflammation of the orbital tissue which was a big factor in the production of the exophthalmos. In thrombosis of the cavernous sinus of the marantie or non-septic type only 10% cause exophthalmos while in those of the septic type 72% cause exophthalmos. The reason that exophthalmos is more prevalent in the septic type is because the septic process spreads to the orbital tissues as demonstrated in the above specimen. Simple stasis and congestion of the orbital veins seldom causes exophthalmos because of the several avenues of venous return—veins of the face, sinuses, fossa temporalis and brain.
- 6. Orbital contents, extra-ocular muscles and globe in a case of trichiniasis. Numerous foci of the encysted parasite were present in the extra-ocular muscles and a secondary inflammation of the surrounding orbital tissues. It was pointed out that metastatic lesions of the orbit show a predisposition to implant themselves first in the extra-ocular muscles. Metastatic carcinoma and sareoma of the orbit characteristically implant themselves first in the extrinsic muscles.
- 7. Two cases of conglomerate tuberculosis of the posterior half of the eyeball with spread to the orbit and exophthalmos. The anterior half of the globe was relatively free of any inflammation.

Lantern slides were shown of:
1. exophthalmos in a case of lymphatic leuk-

1. exophthalmos in a case of lymphatic leuk æmia.

2. exophthalmos in a case of myelogenous leukæmia.

3. unilateral high myopia simulating exophthalmos. This is the same case quoted in the paper.

Discussion: Macy L. Lerner, M.D., Rochester, N. Y. Very few ophthalmologists are fortunate enough to possess such a collection of microscopie specimens relating to the subject of exophthalmos. Dr. Reese has covered the subject thoroughly and taught us a great deal about the hystopathology of exophthalmos.

My particular interest in Dr. Reesc's paper is

with reference to pseudo-tumors of the orbit. I am in accord with the essayist that these groups of cases are, perhaps, often mistaken for true tumors; and, consequently, misleading diagnosis may influence us in advising enucleation. There is not, perhaps, a more difficult problem in ophthalmology which confronts the ophthalmologist than that of a case of exophthalmos. It requires not only detailed ophthalmological studies and careful judgment, but also complete laboratory, x-ray and basal metabolic studies, before one is in a position to advise as to rational treatment. Too much stress has been laid in the last few years on orbital tumors in exophthalmos ignoring many other etiological factors.

I recall a few cases which, perhaps, belong to the group of pseudo-tumors. A man 65 years of age reported, complaining of a bulging right eye, blurring vision, lachrymation, and diplopia after looking at small objects for a few minutes. He also had difficulty in keeping the lids open. He had these symptoms for six months. He gave a history of having lumbago for 20 years, suffered from slight shortness of breath, was subject to frequent colds, and was chronically constipated. An operation for aspiration of bilateral hydrocele was performed eight years before. Physical examination revealed that he had an enlarged heart and emphysema. Nose and throat examinations, including X-rays of the sinuses were negative. The Wassermann was negative and complete blood studies revealed that he had 8% eosinophiles. Otherwise there was nothing abnormal.

Ophthalmological findings:

Visual Acuity: O.D. 6/20, and O.S. 6/10 Right globe was moderately pushed forward without apparent injection. Upper lids felt rather tight over the globe. There was definite limitation of globe inwardly, up, and down. Pupil reacted to direct, consensual light, and to accommodation. Ocular tension (tactile) normal. Ophthalmoscopy revealed nothing abnormal except incipient lenticular opacities, and moderate degree of sclerosis of retinal vessels.

The possibility of an echinococcus cyst of the orbit was considered. The blood was sent to Albany for complete fixation with the echinococcus antigen. The test, however, could not be done at the State nor in our own local laboratories because of not having the echinococcus

antigen.

This patient was under observation from June to January without any apparent marked changes in external appearance of exophthalmos. His visual acuity averaged from 6/20 to 6/7. Lachrymation and difficulty in keeping his lids open were his chief complaints. I did not consider it wise to recommend an exploratory operation on the orbit because of his age. There was no palpable mass, and the X-ray findings were nega-

tive; therefore, I did not feel justified in suggesting a radical procedure. He was referred to Dr. Palmer for X-ray therapy and kept under observation. At one time Dr. Palmer thought that the exophthalmos decreased slightly. The patient died shortly afterwards rather suddenly of coronary disease. Autopsy was not permitted, and it was impossible to obtain the eye for study.

Dr. Reese cited a case of very high myopia with a bulging eye which was a problem for diagnosis as to the cause of exophthalmos. I wish to report a similar case in my own practise where a woman past middle life complained of bulging of the left eye. She noticed it particularly after an automobile accident. There was no history of disease nor injury to the eye or head. She had fractured ribs, and suffered from considerable Her case turned out to be a medicolegal problem. This woman went through different examinations, and during an ophthalmological examination she discovered that she did not see well with her left eye. She was studied by a number of ophthalmologists and different opinions expressed to her.

Upon examination I found the lids were normal except for some tremor. No impairment of occular motility. Pupils were slightly unequal, the right one about 3 to 4 m.m., the left about 4 to 5 m.m. The pupils were regular, reacted to direct, consensual light, and to accommodation promptly. When testing convergence, I noticed that the left eye turned out considerably. Ocular tension (tactile) normal in both eyes. Her visual acuity with correction in right eye was 6/7, in left less than 1/60.

Ophthalmoscopy: O.D. Numerous vitreous opacities were observed floating freely in all directions, as well as peripheral lenticular opacities. Disk well outlined, outer half slightly grayish, showing a crescent on the temporal side. Retinal vessels were normal for her age. No lesions were seen in the macula nor periphery of fundus.

O.S. Media showed numerous opacities floating in all directions in a cloud-like manner. Opacities were of different shape and size. Disk was irregularly outlined, appeared very large, with a large area of peripapillary choroiditis atrophica. A large conus was also noted. A patch of choroiditis could be made out along the superior nasal retinal vessels. The macular region showed an old chorio-retinitis. Details of the fundus were seen with a —20.

X-rays of the sinuses, orbit, and physical examination showed nothing abnormal. There was not a single point besides the exophthalmos and rather vague symptoms to indicate that there was an orbital tumor. Still this patient was told that she had a retrobulbar tumor and enucleation was advised. This information was given to me by her a few days later, after I had made my diagnosis of progressive myopia with secondary

fundus pathology. I obtained six photographs of this patient dating from 1898, 1909, 1911, and 1932, and all these pictures show plainly the prom-

inenec of the left eye.

My feeling has always been that an exploratory operation or enucleation should not be recommended until we are fairly convinced that a true orbital neoplasm is present. In doubtful cases, or even in cases where a diagnosis is fairly well established as to the existence of a neoplasm, I wonder whether X-ray therapy, perhaps, would not offer a better solution. I recall Dr. Pfahler of Philadelphia once having a heated argument with the late Dr. Webster Fox about the treatment of orbital neoplasm. Pfahler contended that the best results are obtained from X-ray therapy in such cases when not interfered with surgically first. He substantiated this statement a few years later by reporting before the Section of Oplithalmology of the A. M. A. a number of cases of orbital tumors treated with X-ray showing excellent results. I am aware of the fact that treatment does not come into the phase of my discussion, but I wish to emphasize this partieular statement of Dr. Pfahler so as to keep us on guard in our differential diagnosis as to the ctiology and pathology of exophthalmos, and remind ourselves that we can do a whole lot more with conservative treatment.

Dr. Reese has not mentioned the type of exophthalmos of central origin. W. R. Brain, reeords in the British Medical Journal for November, 1931, that he has observed a number of eases of exophthalmos in which the condition was evidently of central origin occurring in association with signs elearly indicating organic lesion of the central nervous system. "Exophthalmos of this type may be associated with supranuclear ocular palsies, especially paralysis of conjugate vertical movement and convergence; with external or internal ophthalmoplegia, and with lid retraction or ptosis, either of which may be unilateral or bilateral. The lesions associated with it are pathologically varied and usually obscure. Chronic eneephalitis lethargiea, especially of the Parkinsonian type, has been responsible for a small number of eases. Several have high blood pressure; in a number of eases the exophthalmos has been associated with ophthalmoplegia and enlargement of the thyroid, although the relationship between the two is difficult to explain. Clinical signs and symptoms indicate that the lesion is usually in the midbrain."

I would like to ask Dr. Reese if he would be kind enough to explain the mechanism of exophthalmos seen occasionally in patients with hypertension where there is no evidence of hyper-

thyroidism.

Discussion: Walter S. Atkinson, M.D., Watertown, N. Y. I have very little of interest to add in the discussion of Dr. Reese's most interesting paper.

He was necessarily obliged to omit many of the causes of exophthalmos which unfortunately included the ones we see more commonly in Northern New York.

Being in the so-called goiter belt, we see quite a number of such cases with exophthalmos.

Also, as most everyone in our vicinity seems to have some sinus trouble, according to the nose and throat men, consequently there are a number who have orbital involvement with exophthalmos but this is not pertinent in discussing Dr. Reese's paper.

Again, Watertown is said to be in the eancer belt but in spite of the fact that we see a number of cancer cases very few of our patients seem to select the orbit as a site for their new-growth.

We do see a few angiomas of the orbit which cause exoplithalmos. In an infant aged 4 months, I made the diagnosis of a dermoid cyst. There was no increase in size of the tumor when the baby cried or the usual bluish color, and it seemed quite freely moveable. I thought there might be a process or ramification of the cyst extending deeply into the orbit to give rise to the slight exophthalmos.

Under local anaesthesia, the tumor was exposed and then it had the appearance of an angioma which with some difficulty was removed as it did extend quite deeply into the orbit.

On microscopic examinations by our pathologist, the State Institute here in Buffalo, Verhoeff and Friedenwald, the diagnosis varied from an adenocarcinoma of the lacrimal gland to an angioma. As the recovery was uneventful with no recurrence after two years, no doubt the diagnosis of angioma was correct.

About two years ago in Vienna, I saw 2 patient with a tumor which presented at the lower orbital margin temporally, pushing the eye, which was microphthalmie, up and nasally, and had the eye been of a normal size it no doubt would have been somewhat proptosed.

The tumor was quite freely moveable and the diagnosis on the hospital record was eyst and

micropthalmus.

At operation the suspected eyst did not shell out as anticipated but seemed to have a very substantial pedicle, which extended well back into the orbit.

On examination later, the eyst was considered a rudimentary eye. Possibly it was similar to the microphthalmic eye with retina lined cyst mentioned by Lang and Collins and the last two microscopic slides shown by Dr. Reese;

EXOPHTHALMOS, ITS SURGICAL TREATMENT*

By WEBB W. WEEKS, M.D., NEW YORK, N. Y.

OU have just listened to an explanation of the causes, the symptoms and the pathology of exophthalmos, unilateral and bilateral. Systemic or constitutional causes are taken care of by the internist. Encroachments upon the orbital cavity from the nasal sinuses are handled by the rhinologist. The neurologist and the neurological surgeon take care of conditions arising intracranially, producing an exophthalmos.

With your permission, I will limit my remarks

With your permission, I will limit my remarks regarding the treatment of exophthalmos in this article to a description of three surgical procedures, which take care of local conditions likely to be of serious danger to the usefulness of an eye.

Consideration will be limited to those cases in which the eyeball is displaced forward far enough to threaten serious pathological changes from a failure of eyelid closure. Temporary conditions arise, such as are seen in exophthalmic goitre cases where medical treatment is being carried out with the likelihood of a subsidence of the exophthalmos in the near future. Where the rhinologist exposes the ethmoid or frontal sinus by the external route, when an exploration of the orbit is made or when an orbital tumor is removed, the eyeball is pressed forward between the eyelids and exposed to injury. An ulcer of the cornea may result with subsequent loss of the eye.

To forestall these possible complications the exophthalmic goitre cases may be carried along by the use of oil drops during the day and an eye patch at night. The annoying diplopia may be at least temporarily relieved by the use of prisms or the wearing of a ground glass over one eye to exclude the vision of that eye. Failure to control the dangers of a lagophthalmos by this means, makes necessary a partial tarsorrhaphy. Either one central intermarginal adhesion or two lateral ones are made. These are allowed to remain until all danger of an ulcer is passed, the exophthalmos having subsided through medical treatment. The method of accomplishing this operative procedure is depicted by the following lantern slides.

Areas 4 mm. in length are marked out on the intermarginal portions of the upper and lower lid margins which touch each other when the lids are closed. The lid clamp is applied so as to include this area on first one lid, then the other. The mucocutaneous intermarginal area from the cilia follicles to the posterior lid margin is pierced to a depth of about ½ mm. The knife is carried from one end of the 4 mm. space marked out to the other and this piece of tissue excised. This exposed area is incised centrally to the depth of 2 mm., allowing the wound to spread when the lid margins are approximated by sutures.

A double armed suture on which a rubber pig

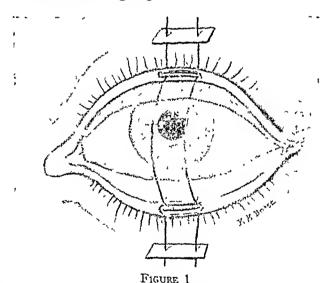
* Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

is threaded with needles attached, starts 2 mm. below the cilia, 3 m.m. apart, on the skin surface, running backward and upward through the thickness of the lid to emerge 3 mm. apart at the posterior part of the denuded area of the lower lid, entered at the posterior margin of the corresponding denuded area of the upper lid, similarly placed and spaced, to emerge through the skin of the upper lid, a similar distance above the cilia.

A rubber pig is threaded as before, and the suture tied snug enough to approximate and hold the denuded intermarginal areas included together, until healing takes place.

A small amount of Bichloride ointment is placed between the free lid margins and a light dressing is applied to both eyes.

The complications arising in carrying out this procedure are from placing the incision too near the cilia follicles injuring them, resulting in a loss of the cilia. Too deep an incision may lead to a deforming notch after adhesions are severed. Tying sutures too tightly may cause them to cut through. This holds more often where too shallow a bite is made and no rubber pigs used. The lid margin between tight sutures may be lost by necrosis and sloughing.



Shows a central intramarginal denudation with central incision and insertion of double arm suture with rubber pigs.

The sutures are left in five to eight days, the dressing on this eye about ten days. Adhesions are left intact until the purpose for which they were intended is accomplished—may be two to six months or more. In some cases these adhesions gradually stretch out through muscular effort to open the eyelids. They need not be cut for this reason as they still are of some aid in holding the eyelids together enough to prevent exposure of the cornea. Should a conjunctivitis

of a purificial nature set in, these adhesions may have to be cut carly although the usual secretions easily escape between the adhesions

Liamples

I 1 cmale, Age 53 Seen December 1, 1929 Complant —Sudden pain and swelling of the left eye

History —Negative except for present illness which began two dijs ago Subjective sensition of pulsations in the left eye since onset. Orbital prim, worse at night

Objective signs — Marked exophthalmos with swelling of eyelids and chemosis and congestion of the conjunctiva, left eye

Conhith-lunometer readings, O.D. 18, O.S. 26. Ocular movements ml. Failure of lids to close 3 m.m. Corner hazed with struning of the lower 1/3. Photophobra and te iring.

Lenderness on pressure of globe backward Lundus shows vems engaged and fortnous

Ocul ir tension normal Bruit over the orbit ind left temporal region Vision OS 20/70

Blood and spinal fluid gave ++ Wassermann X-ray negative

Diagnosis - Periostitis-orbital, syphilitie

I rentment —General—Anti-Luctic

Local—Partial tarsorrhaphy, two adhesions
—left eye

Result —Gradual subsidence of exophthal mos, with symptoms in six weeks

Eyelid adhesions ent Corner clear—vision 20/20

II Male, Age 55 Scen January 5, 1930

Complaint —Swelling about left eye and loss of vision OS

History —Gradual swelling of left eye two months, with loss of vision otherwise negative. Irritation with photophobia and tearing

Objective signs—OS exoplith ilmos of 26 "Schootz" Slight edenin of eyelids and conjunctiva. I ailure of eyelids to close 3½ mm. Corner slightly hized, no stam

Vision O S 16/200—constricted fields 10° to form

Optic atrophy Vems engorged

Wassermann 4 plus

X-ray—Dense osseous mass filling left antrum apparently surrounding the optic foramen

Diagnosis —Osteoma of the left maxilla, in operable

Treatment -Anti Luctic

Operation —Partial tarsorrhaphy—two ad liesions

Result —Rehef of local irritative symptoms for four months when patient disappeared No change in exophthalmos noted

For operations during which the orbit is opened attended by possible exposure of the eyeball either at the time of the operation or subsequently, due to the congestive reaction following such procedures, similar sutures may be applied without interinarginal adhesions being made

For an exophthalmos likely to be permanent, a keratus from lagophthalmos threatening, with a very annoying irritative conjunctivities, necessitates the operative procedure of external tarsor rhaphy. Approximate amount of closure of the pulpible fissure can be determined by finger closure of varying degrees at the outer canthal ingle enough to insure closure when the patient is isleep. Many times it will amount to an insufficient closure not permitting of the effect desired and giving a disfiguring deformity. It is then necessary to enhance the tarsorrhaphy affect by means of the external canthal ligament reces-

The Fuch's tarsorrhaphy and a modification as developed by Dr. J. M. Wheeler is shown by the following lantern slides

A six to ten mm closure of the palpebral fissure inving been determined upon, a knife nick marks this distance off on the intermarginal space from the external eanthal angle misally, on both upper and lower cyclids

A Jaeger Lid Plate slightly smeared with Inchloride ointment at one end, is then inserted into the cul-de-sac at its external limit, first the lower Pressure backward on the other end of this plate holds the lid taut and brings into prom mence the intermarginal space The same pro cedure is carried out when the upper lid is to be operated upon The narrow knife now is inserted into the gray line and the lid split from the mark indicated, to the canthal angle. The splitting of the lid is carried to the depth of 4 mm from the masal end of the cut, the skin portion is cut through perpendicular to the lid margin for a depth of 4 mm The cilia follicles of this portion are excised to the external canthal angle

The Jaeger plate is inserted into the outer upper cul de sac. The lid is similarly split and a perpendicular cut made to the lid margins approximately 3 inm in depth. From the superior end of this cut a cut is made through the ciliary thickness of the lid obliquely outward and downward to the external canthal angle. This triangular shaped skin flap is excised.

The needles of a double armed suture are inserted 3 mm apart through conjunctiva and tarsus of the upper hid about 2 mm above tarsal lid margin. The needles and suture are carried through the skin flap of the lower hid from within outward 3 mm apart and 3 mm from the flap margin. The needles and suture are carried

through a rubber pig and tied, bringing the skin flap into the defect of the upper lid. The conjunctiva and tarsus of the upper lid slides over that of the lower lid.

Interrupted black silk sutures are then inserted approximating accurately the skin edges of flap and upper lid. One suture through the lower and nasally cut edge of the skin flap and the cut skin edge of the upper lid skin wound just above the cilia should be made insuring close approximation of the intermarginal fissure and a perfect canthal angle.

Bichloride ointment 1-5000 is applied to the lid

margins and a snug dressing applied.

Perforation of tarsal or skin flaps with the knife lead to granulations, imperfect healing and subsequent deformity. Faulty denudation of the upper lid or poorly shaped skin flap of the lower lid give poor adjustments and cause a deforming scar in healing. Too tight tying of the double armed suture, may cause death of the skin flap, nullifying the operation's object and producing a marked scar deformity.

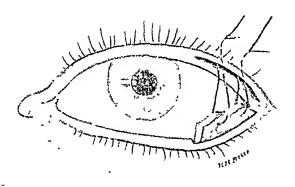


FIGURE 2

Shows the splitting of the upper lid, the isolation of the tarso-conjunctival flap and insertion of sutures which pull this flap into the split of the upper lid above.

Sutures are removed on the sixth or eighth day although a dressing should be kept on for ten days. Healing is usually uneventful. In cases where the effect from this operation is not all that is desired, but on pressure backward and outward over the external canthal ligament a closer approximation of the palpebral fissure occurs, a recession of the canthal ligament can be done.

A skin incision may be made following the curve of the orbit margin. The incision is deepened through orbicularis, septum orbitale and aponeurosis of the levator muscle and the flap

The canthal ligament thus exposed is freed from its insertion, caught in a double armed chronic gut suture and the point of attachment carried back behind the tubercle as far as necessary to accomplish the result desired, or the ligament may be resected and be reattached well back on the tubercle periosteum.

The septum orbitale should be sutured with plain catgut and interrupted sutures to its original attachment to periosteum at the orbital

The skin closure is made by interrupted black silk sutures. Dressing should be applied with firm even pressure to prevent hemorrhage and

congestive swelling.

Some scarring may result from the lid incisions, too narrow tendon flaps do not hold and infection from the gut suture may take place. Where the orbicularis muscle flaps are used instead of the canthal ligament, they tend to stretch out giving a partial result.

Healing is usually uneventful. The skin suture is removed on the fifth day. The result desired as an adjunct to the external tarsorrhaphy is ex-

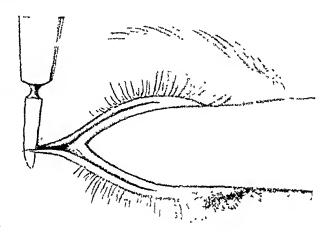


FIGURE 3

Shows a splitting of the lid and extension of this splitting externally, exposing the external bony orbital margin.

Case Report:

Female, Age 51. Seen-1928.

Chief complaint-Eyestrain, corrected by glass correction.

Vision 20/20 O.U. Visual fields normal. Ocular movements normal. Eyes prominent 23 O.U. General condition—Graves disease under medical treatment including X-ray therapy.

Seen again in 1929. Early eye tire, conscious of eyes-tearing, burning sensation, vision unimpaired, sensitive to light.

Highly excitable. Vision 20/20 with change of glass.

Exophthalmos-Right 26, Left 25. Congestion of conjunctiva, staining of lower ½ of each cornea. Eyelids fail to fully close with gentle effort. Ocular tension + to fingers. As condition progressively became worse with intraocular tension rising and the eyelids could not be closed within 4 m.m., miotics were given, treatment of the thyroid condition was pushed with no relief.

External tarsorrhaphies were done on each

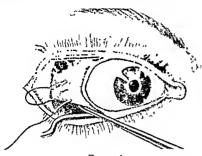


FIGURE 4

Shows the isolation of the external canthal ligament and the insertion of suture,

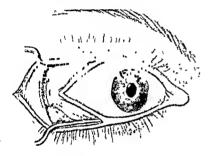


FIGURE 5

Shows the excision of the canthal ligament and the approximation of the stump by insertion of the double arm suture shown in illustration No 4

eye. The right side requiring a recession of the canthal ligament to insure eyelid closure. This procedure has cleared up the irritative symptoms and the corneal changes but though the tension seemed relieved for eight months, it was finally necessary to do a LaGrange operation on each eye.

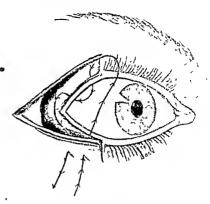


FIGURE 6

Shows the excision of the upper skin-flap and the making of the lower section flap with the excision of the

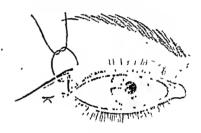


FIGURE 7

Shows the tying of this double arm suture and the suture tring at the margin of the lids to form the new external conthal angle

For two years now, the case is well controlled with no return of the external eye symptoms

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Discussion. Harry M. Weed, M.D., Buffalo, N. Y.; Dr. Weeks has so well covered the local

treatment of exophthalmos that very little remains to be said without going outside the field of this paper

I would like to stress the making of two partial tarsorrhaphys one over the inner margin of the cornea and the other over the outer. One does not know when resorting to this procedure whether the cornea will require protection for a

Median Tarsorrhaphy Panas: Traite des Maladies des Yeux, Zome II, 1894, 137. Van Lint: Arch d'Ophth, 46,411, (July) 1929

few days or weeks or a much longer time. With the two intermarginal adhesions so placed it is quite possible for the patient to have useful and comfortable vision for an indefinite period looking out between the two adhesions which stretch out to a moderate degree.

And here I wish to call attention to the fact that in Graves disease exophthalmos to an alarming extent may appear months after the apparent surgical cure of the disease. It seems to be the

general belief that the exophthalmos is the result of the toxicity of hyperthyroidism; if there is no toxicity there likewise is no exophthalmos. But notwithstanding this dictum and the expectation that surgical cure of the disease will be followed by disappearance of the eye signs and symptoms in milder forms and improvement in the more» severe ones, it nevertheless is true in a considerable number of cases that after a more or less complete thyroidectomy followed by relief and apparent cure of all symptoms, exophthalmos and other eye signs characteristic of this disease may make their appearance months later. Associated dysfunction of other ductless glands does not entirely explain this picture. We therefore must stand ready to treat this form of exophthalmos along the lines which Dr. Weeks has suggested long after the disease seems to have been cured.

Case: Mrs. B. D. W., age 47, first seen 5 years ago. Examined for refraction, moderate error and normal corrected vision. Eyes otherwise

O.K. Some months later symptoms of Graves disease gradually appeared without exophthalmos and thyroidectomy was performed with apparent cure of all symptoms. Six months later exophthalmos gradually developed with marked retraction of upper lids and the usually associated signs plus diplopia: parcsis of left superior rectus muscle. The diplopia persisted for more than a year then gradually disappeared but the exophthalmos is still present to a marked degree. Local treatment with no surgery, and covering one eye during most of the period of double vision was all that was required.

Just one other suggestion—external canthotomy will give all the relief required in some cases of temporary exophthalmos which threatens the integrity of the cornea. Chief of these are those resulting from severe orbital hemorrhage—and orbital cellulitis. This is a simple procedure and one that probably should be employed much more

often than it is.

Discussion: Dr. John F. Gipner, Rochester, N. Y. The operative technics of partial tarsorrhaphy, the Fuchs' tarsorrhaphy and a modification of the latter developed by Wheeler have been most ably described and illustrated by Dr. Weeks. If one wishes to save the cilia of the lid margins the Elschnig tarsorrhaphy is advisable. I should like to stress a point mentioned by Dr. Weeks, viz., the importance of suturing the lids together preliminary to any exploratory operation of the orbit whether one employs the Kroenlein or the brow incision route. If the lids are not sutured, the displacement of the orbital contents when the exploring, palpating finger is inserted into the wound, causes protrusion of the globe through the open lids with consequent corneal damage.

From my experience in observing the eyes of many exophthalmic goitre cases at the Mayo Clinic I would say that ophthalmic surgical relief is rarely required. Operations which narrow the palpebral fissure or in addition retroplace the external palpebral ligament have little effect in reducing exophthalmos. It would be a great advance in ophthalmic therapeutics if some medical or surgical procedure could be devised which would reduce the exophthalmos in those cases of hyperthyroidism where the exophthalmos persists in spite of thyroidectomy and medical treatment. Perhaps Naffziger's orbital decompression operation is the answer to this need.

There is a form of severe exophthalmos that follows thyroidectomy which fortunately is rarely seen. It develops rapidly after removal of the gland and is not associated with hyperthyroidism as measured by clinical signs and the basal metabolic rate. No satisfactory explanation for this phenomenon has been advanced. Plummer thinks it is due to the secretion of an inferior thyroid product. It is usually bilateral and is character-

ized by a tense edematous swelling within the orbits and rapid protrusion of the globes between the lids. The onset is so rapid and the edema of the orbit so firm that the eyeballs become fixed. the ocular conjunctiva becomes chemotic protruding between the lids so that they can not be To relieve the tension of the lids canthotomy may be performed but it affords little relief. Canthoplasty is impossible. must be treated with oil and an air-right Buller's shield until the acute stage subsides after which motility of the globe and exibility of the lids re-These cases : . . . distressing problem in as much as there is no way of predicting who will develop this condition and it may appear in hyperthyroid patients who previous to thyroidectomy had little or no exophthalmos. Up to the present time in spite of the most careful protective treatment many of these eyes have been destroyed,

Howard C. Naffziger of the University of California performs orbital decompression on these cases. Through the transfrontal route the anterior cranial fossa is opened and after dissecting up the dura, the roof of the orbit is removed The decompression opening is extended backwards to include the roofs of the optic foramen and the superior orbital fissure. The zonule of Zinn at the apex of the muscle cone is split. These measures are performed to free any possible constriction to the veinous circulatory outflow from the orbit. Naffziger finds the extraocular muscles greatly enlarged, not from hypertrophy but due to muscle swelling from edema and fibrosis. He reported his results from eight such operations at the A. M. A. convention at New Orleans this month. In a case reported in the Trans. of the Am. Surg. Assoc. last year he reduced the exophthalmos in a patient 9 m.m. by this operative procedure.

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Discussion Martin B Tinker, MD, Ithaca, N Y-The papers in this symposium have been most interesting and instructive. The paper by Dr Reese seemed to me of unusual scientific Dr. Gipner in his discussion has mentioned the work of Dr Howard Naffziger of San Francisco in the treatment of extreme exophthalmos from gotter I heard Dr Naffziger's original paper at the meeting of the American Surgical Association it seems to offer a definite source of relief in certain advanced cases. Certain types of exophthalmos offer difficulties which are of spccial interest to those of us who have to do with large numbers of gotter Experience in over 5 000 cases of gotter during 27 years leads me to believe that surgery for exophthalmos should be resorted to only in extreme cases and usually after they have been kept under observation for a considerable period of time. I have seen disfiguring exophthalmos exist for over five years after the gotter had been removed and then disappear entirely without any special treatment. It is usually the last of the characteristic symptoms of goiter to disappear. The most important considerations are disfigurement, pain, and danger of loss of the eye, the last two occasionally demand mg some radical operation for relief Several years ago I presented before the Oplithalmolog ical section of the American Medical Association a method of approach in the radical operation having for its eluef advantage that the filaments of the facial nerve were not divided. It seemed to me that this might be of interest to this section in connection with this discussion. A study of 25 dissections of the face by students at Cornell Medical College in Ithaca showed a distribution of the facial nerve such that the incision could be placed in the eyebrow, continuing downward and outward along the upper border of the zygoma without injuring important filaments of the facial nerve in any case and injuring iminportant filaments in only a very few cases. This offers a great advantage over the old musion proposed by Kronlein as shown by Bockenheimer (Arch f klin Chir 1904 LXXII) Kocher urged the danger of the Kronlein incision and quoted statistics of 120 cases with injury to the facial nerve in a very large proportion

CLINICAL PICTURE OF UNILATERAL INFARCTION OF THE MEDULLA By EDWARD LIVINGSTON HUNT, MD. and GORDON H GRANT, MD, NEW YORK, N Y

from St. Luke's Hospital New York, N. Y. Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932

INTRACRANIAL occlusions are common; they are responsible for a certain percentage of transitory somatic paralyses and, to a lesser extent, for the deaths of the apopletic type. A review of the literature indicates, however, that the lesion does not commonly occur in the region here described. The following case is of interest for two reasons, first, because the lesion produced definite localizing signs, and second, because it masked physical signs of a serious intra abdominal condition.

This patient was a seventy-year-old clergyman, a mild diabetic, who, for two days, had suffered from a severe headache, and for several months, from dispinoea on evertion and repeated attacks of vertigo. The day before admission the vertigo became so severe that he collapsed and went to bed. The next morning he awoke with projectile vomiting and at once realized that he had difficulty in speaking and swallowing and temporarily saw double. The difficulty in speaking and swallowing made him so helpless that he was obliged to come to St. Luke's Hospital in New York, where he

remained without improving until his death, eighteen days later.

On admission the patient was hoarse and had difficulty in breathing and swallowing. The left pupil, larger than the right, was sluggish, the right was immobile and both were irregular. There was no nystagmus. There was an intermittent slight facial ass immetry. The right vocal cord was motionless in the midline, the left moved freely. The tongue deviated to the right and tendon reflexes were normal. Babinish's sign was present on both sides. There was slight dismetria in the right arm and leg.

On the left side of the body there was complete loss of prin and temperature sense, up to, and including the ear, but not in the area supplied by the trigeminal nerve. Touch was normal throughout

Moist rales and diminished breath sounds were heard over the bases of both lungs

The heart was enlarged to the left The aortic second sound was ringing. The pulse was 105, the rhythm being interrupted by extrasys-

toles every fourth beat. The radial arteries were thickened. The blood pressure was 139/90.

Abdominal examination, apart from flatness in

the flanks on percussion, was normal.

Urinalysis showed faint traces of sugar, albu-

min, and acetone.

Blood examination showed 98 per cent hemoglobin, 5,400,000 red cells, and 11,900 leucocytes per cubic millimeter. The blood sugar was 2.85 per cent, urea nitrogen 15.7 and the carbon dioxide combining power 50.4 volumes per eent. The Wassermann test was negative.

The diagnosis was: Thrombosis of the pos-

terior cerebellar artery.

Progress: The patient showed no improvement during his stay in the hospital. His blood pressure on the day following admission was 200/100, but dropped to 146/100 and remained there until The leucocyte count shortly before death was 20,000 per cubic millimeter, with 92 per cent polymorphonuclears. The high temperature, leucocyte count, and chest findings suggested a complicating broneho-pneumonia. On the twelfth day the temperature and pulse began to rise and six days later he died with a temperature of 108.

The autopsy made by Dr. Gordon H. Grant,

The pupils were equal and there was no strabismus. The lungs were air containing throughout, showing only slight eongestion at the bases. The heart was enlarged weighing 570 gm. coronary arteries showed extensive atheromatous change, but were patent. The aorta presented moderate atheromatous change, but no ulceration.

The gall bladder lay deeply embedded in the substance of the liver. It was very large, the surface brown and granular, and the viscus tense. The cavity contained a few small black stones and a large amount of foul-smelling black fluid mate-The walls were very much thickened and the mucosa showed large irregular areas of gangrene. The hepatic and common ducts were normal. There were many adhesions above the fossa vesicalis, but the peritoneum was glistening and free from exudate.

The cerebrospinal fluid was increased. brain weighed 1470 gm. and was softer than usual. The medulla oblongata, in the right pyramidoolivary region, presented a small oblong area of softening, paler than the surrounding tissues, except at its margins, where it was slightly hemorrhagic. The area measured approximately 7 mm. in length and 5 mm. in diameter. The pyramidoolivary groove was flattened at the point of emergence of the right hypoglossal nerve, that of the right vagus being also slightly involved. cerebellum was very soft with no appreciable difference on the two sides. No areas of softening or hemorrhage could be found elsewhere in the brain substance. The proximal portion of the posterior inferior cerebellar artery showed neither thrombotic nor embolic process. Its smaller

branches were embedded in the medullary substance and were examined in the sections.

Microscopic cross-section of the medulla at the point of emergence of the vagus and hypoglossal nerve showed an irregular area of infarction extending along the right lateral border of the medulla from the middle of the restiform body superiorly to the pyramido-olivary groove ventrally. Medially the process extends to the middle of the olivary nucleus and sends an oblique prolongation upward to the region of the hypoglossal and vagus nuclei. The process is essentially one of anemic infarction, showing necrosis of blood vessels as well as of the nervous tissue, producing a rarefied zone in which the nuclei are in various stages of degeneration, and all the structures are progressively degenerated toward the center of the infarcted area. There are practically no infiltrating polynuclear cells, but a few collections of lymphocytes are occasionally seen, and a zone of congestion and hemorrhage exists around the terminal vessels. This closely follows the outline of the olivary nucleus over most of its extent but is not entirely limited to it. extensive fatty and cystic degeneration. ganglion cells show granular degeneraion, swelling and loss of their nuclei; almost none of them retaining their normal outlines. Amyloid bodies are very numerous throughout not only the medulla but also the remainder of the brain tissue. The blood vessels of the meninges in this region are relatively normal. The veins contain no emboli, nor are they especially thickened. The remainder of the brain shows no lesions; neither meninges nor eerebrum appear involved.

This is obviously a localized degenerative process in which acute infection has undoubtedly played a part, but the absence of septic lesions in the remainder of the brain shows that the blood vessel involved is limited to this portion of the

Suppurative changes have not taken place, and therefore it is suggested that the vascular lesion is the result of an aseptic thrombus, as the degeneration is clearly of a duration long enough to have given rise to suppuration had there been any general blood stream infection.

Sections of the gall bladder show a gangrenous process localized to portions of the wall, with an

active infection in the remainder.

The cardiac muscle shows extreme degenerative and productive myositis. The fibers have been hypertrophied, show secondary atrophy, and large areas of fibrosis in which no muscle fibers remain.

In the lungs are small areas of bronchopneu-

monia; in the vessels septic thrombi.

The spleen shows the changes due to sepsis. The clinical signs and symptoms with one exception, are well explained by the position and extent of the medullary lesion. The exception is the interference with the light reflex in the pupils. There is no anatomical basis for belief that the motor supply of the ciliary muscle was interfered

with by the lesion

The interception of the impulses of the hypoglossal, vagus and glosso pharyngeal nerves were demonstrated by the unilateral motor paralysis of the tongue, the paralysis of the right vocal cord with hourseness, the tachycardia and the difficulty in swallowing The vertigo at the beginning of the illness was probably due to the close proximity to the area of infarction of the descending root of the vestibular division of the acoustic nerve and the transitory facial asymmetry to the close proximity to the lesion of the nucleus of the facial nerve. There was nothing to indicate involvement of any of the cranial nerves cephalad to the facial. There was no skeletal paralysis, the lesion had not included the pyramidal tract, it occurred above the decussation

The dysmetria of the extremities of the right side was undoubtedly due to the destruction of the arcuste and cerebello olivary fibers in the right side of the medulla. If further tests had been made, it is probable that more extensive loss of cerebellar control would have been demonstrated

The loss of the sense of pain, heat and cold on the contralateral side of the body is explained by the impinging of the infarct on the right inedial lemniscus The lemnisci decussate just medial lemniscus below the area of infarction and the fibers carryme the sensation of touch were not affected

Explanation of the projectile voiniting must, at best, be a matter of conjecture Vomiting is a common symptom in intracranial pressure, and such may be the explanation of this case. It is also possible, that the vomiting was a direct re suit of the lesion being in the medulla

A man of seventy who, on admis sion to the hospital, presented a syndrome characterized by various motor and sensory nervous phenomena, of a few hours' duration. A dingnosis of a viscular thrombosis in the mid portion of the right side of the medula oblongata was substantiated at autopsy

ARTIFICIAL LIGHT IN TUBERCULOSIS*

By GEORGE G MARTIN, MD, BUFFALO, NY.

F OR the purpose of this discussion a useful classification of light sources into three groups can be made

I hose sources radiating a high intensity of the ultra violet portion of the spectrum with a relatively low percentage of visible and infra-red The common source of this type wave lengths

is the mercury vapor are in quartz Those sources radiating a moderate intensity of ultra violet but having a high intensity in both the visible and infra-red range of the This group gives us, physically, our nearest artificial approach to sunlight. It includes the better carbon arc lamps and the General Electric Sun lamp

TlurdThose sources emitting a negligible per centage of ultra violet but having a high intensity of the visible and infra red portions of the spec-This includes ordinary types of Tungsten filament, carbon filament, and infra red apparatus Many of the carbon arc lamps on the market prop-

erly belong in this group

The above three groups are distinct and a phytions of sources from groups one and three which will give a radiation falling within group two It is sometimes important for a physician with limited equipment to remember this fact has a good mercury vapor lump, he can, with a small additional outlay, secure a good source of the group three type. With this he is able to make

sician using the lamp should know in which group his lamp belongs It is possible to make combina The selection of these patients suitable for arti

ficial light treatment is not easy. Patients with advanced pulmonary tuberculosis do not, as a rule show any appreciable improvement. The degree of toxemia appears to be as important a consideration as the extent of the lesion, at times it appears to be more so. With a few exceptions which will be discussed later, patients with advanced disease and evidence of toxenna are not given radiation There is a rare patient with advanced tuberculosis

combinations which will give him radiations falling in each of the above three groups

In the treatment of tuberculosis we have found that radiation from each of the above three groups is valuable. For practical purposes, however, the different types and makes of apparatus coming within each of the above groups may be used to meet the indications for the group with satisfac tory results. We may have our personal prefer ences and may be able to obtain better results with a given type of apparatus Physically, and ther apentically, it is difficult to offer proof that this preference is based on more than our familiarity with the use of the particular apparatus. Some change in technique may be necessary in making a change of apparatus No two lamps even of the same make and type, emit exactly the same radia

For this reason the indications for the selection of the source of light will be given with the understanding that substitution of equipment within each group may be made

Chronic pulmonary tuberculosis in adults

^{*}Read at the Annual Meeting of the Medical Society of the State of New York at Buffalo N Y May 25 1932

but showing little or no evidence of toxemia, in whom a trial with light therapy is indicated. Some of them will show improvement but many will have to be discontinued after a brief trial.

Patients in this group with extra pulmonary complications are given radiation more frequently. Even in the presence of moderate toxemia they are given treatment to secure an improvement of their complication. If given carefully, this improvement may be secured without ill-effects so far as the pulmonary condition is concerned.

Great care must be given in the radiation of any tuberculous patients and particularly those with an advanced lesion. Fatigue is easily produced. The effort involved in artificial light therapy, is not sufficiently appreciated. The end result of treatment is frequently harmful because this point is overlooked. If facilities are available for treatment at the bedside, it is possible to give light a trial when it would otherwise be contra-indicated. Transportation of patients, even within a hospital, involves considerable effort on the part of the patient. Transportation to and from a physician's office involves considerably more effort. value of light in the treatment of pulmonary tuberculosis is not sufficiently definite to warrant fatigue. Patients should be sufficiently observed before and after a treatment to estimate the amount of fatigue which has resulted. If there is evidence of fatigue, means must be taken to reduce the effort, and if this is not possible, the treatment should be discontinued.

The importance of fatigue in this connection is not overlooked as frequently as it was ten years ago. There are many physicians using light therapy at present who do not seem to appreciate that the fatigue is doing their patients more harm than the light could ever possibly do good.

In patients with moderately advanced pulmonary tuberculosis a relatively higher percentage is suitable for radiation. The percentage is still small and the degree of toxemia is again a very important factor in selection.

Of the group selected many will have to be discontinued. Evidence of increasing toxemia as noted by an increase in pulse rate, fever, irritability, headache, etc. is to be looked for. Progress, in the lung lesion, is unfavorable. If evidence of either one or both of the above is noted, it is usually desirable to discontinue treatment.

In incipient tuberculosis our results have been more favorable. Toxemia of any degree is again a contra-indication for treatment. All other patients in this group who, on admission, or after a period of rest, are in a good general condition, are considered suitable for a trial with light therapy.

The evaluation of the results obtained in the treatment of pulmonary tuberculosis is difficult. This is probably the reason for the widely different viewpoints expressed in the literature on the subject. All of our patients receive other indicated therapeutic measures. We have not felt

that the withholding of these measures in an attempt to evaluate the results of radiation was justifiable.

In carefully selected and carefully observed patients definite improvement has been noted. Many of the patients, at first selected, were discontinued after a relatively short period of radiation. Radiation has never been used as a routine for pulmonary tuberculosis. The possible advantages of this are to be considered. Tuberculosis is a long drawn-out confining disease. The usual exposure to natural light does not occur as it would in a healthy individual. Harmful results from carefully graduated, small dosage has been observed too frequently to allow of its routine use.

Improvement is to be noted in selected patients in regard to the amount of rest which they obtain. The sedative effect of ultra-violet light is well known. The exact mechanism of its action is not important for this discussion. The added rest and improvement in patients' mental attitude are important. An improvement in the appetite with a gain in weight in individuals who are below par is frequently noted. Subjective improvement appears to be more noticeable than objective. first a slight increase in moisture may be noted. This should be temporary, and should be followed by a decrease. If it is persistent, it is considered unfavorable. In many patients no objective changes in the chest findings are noted. The subjective improvement is considered of sufficient importance to warrant the expense and trouble involved in treatment.

In the selection of the source of artificial light it is our impression that a high intensity of visible and infra-red light is undesirable. These wave lengths have a heating effect. Many patients will tolerate them. Many observers have found that some patients with pulmonary tuberculosis will show improvement from exposure to sunlight. The same patients will tolerate the added heat, and can be given light from group two. There is a considerably larger group in which group one is tolerated. In doubtful cases a selection of the source from group one is more desirable. have used different makes of mercury vapor lamp for this purpose. The addition of heat has appeared to increase the toxemia. It has also increased the chest findings, more moisture and expectoration have been noted. Many patients have been seen who will tolerate the mercury vapor lamp, but will not tolerate the carbon arc, or the addition of radiant heat and light to the mercury vapor. Our experience with the General Electric sunlamp has been too short to permit of an opinion. It has many points of convenience in operation, and we are giving it a trial at the present

The Buffalo City Hospital has had to rely on artificial light for treatment. Sunlight has not been a dependable source for more than two or three months of the year. A comparison of nat-

ural and artificial sources has not been possible. This is probably the experience of most institu-

tions situated within the city limits

In review, artificial light particularly from the mercury vapor sources, is useful for a carefully selected group of patients with chronic pulmonary inherculosis. It is not recommended as a routine treatment. Patigue must be avoided if the treatment is to be beneficial. Radiation from group two sources is applicable for a smaller group of patients. Patients given radiation should be kept under observation and if evidence of in mercase in toccinia or more than a temporary increase in local chest findings is noted the exposure should be discontinued.

Considerable has been written of the treatment of the complications of pulmonary tuberculosis with light. Unterities is a complication which has The results have not been so been discussed favorable as the early literature would indicate Improvement has been noted in many when the chest condition has not been too severe with light therapy is given to many patients with enteritis in which the pulmonary condition, itself would not warrant radiation. A definite percentage of these show improvement of the enteritis without any ill effect on the lung condition Our results in advanced pulmonary tuberculosis with enteritis have been very disappointing. We have used general radiation with the addition of local radiation to the abdomen - The local radiation has been given just short of and up to a first degree ery thema

Larungeal involvement has also been treated Our indication and results have been about the same as for enteritis. It is of value particularly when the cliest condition is moderately advanced Symptomatic relief is considerable. Occasionally apparent healing has been noted. We have used general radiation with the addition of local radiation through a quartz applicator attached to a water cooled hup. It must be remembered that the epiglottis is a relatively avascular structure The dosage must be kept low if irritation is to be A little reaction is desirable but this should be kept at a nummum. If it is too great irritation with cough etc is produced. This defeats the purpose of rest. Lamps vary greatly in their efficiency With a new burner, between 15 to 45 seconds is the useful initial dose an increase with each subsequent treatment is given. Treatments every other day have given as good results as daily treatment. We have not noted any ini provement in rapidly advancing pulmonary dis-The results do not warrant the effort of the treatment for this particular type of patient

Pulmonary tuberculosis in children

When there is definite involvement of the lung parenchyma the above considerations are applied ble Children as a class show a better response than adults to light When the lesion is largely confined to the fulus nodes the condition is more satisfactory for treatment. Tuberculosis of all lymphatic nodes responds to light therapy. The results are satisfactory in children showing a fulus node enlargement both in those with tuberculosis as a definitely established citological agent, and those in which it can only be suspected. The treatment for both types is essentially the same

We have found involvement of the lymphatic nodes more frequently in children than in adults It is not rare in adults. The common sites of in volvement are the lulus cervical and axillary

node

Radiation from group two sources has given the best result. General radiation with a suberythema dosage is indicated. Sunlight is preferable when it is ditainable. Artificial light gives satisfactory results. An increase in the distance and time is more desirable than a short treatment. In accessible areas of the body the addition of a local first degree crythem i over a considerable area of surrounding skin is desirable.

The majority of these conditions subside in a satisfactory with Recurrence is seen if the treatment is not continued for a few months after apparent healing is noted. Treatment is indicated during the winter months of the following year for severe cases. If suppuration of accessible nodes does occur aspiration is used. The addition of thirty minutes exposure to a comfortable intensity of radiant heat and light will hasten the suppurative process and make aspiration easier. Unsightly scars due to surgical interference are avoided. The addition of x ray is sometimes an advantage. Surgical interior is seldom necessary. Involvement of the pleural and personal cavities.

The membrane of these cavities is closely allied in structure. They both become the site of tuberenlous involvement at times. Artificial light therapy is valuable in the treatment. The principles of its application are the same for both peritoncal tuberculosis and tuberculosis of the pleura Gen eral radiation from group two sources with a suber thema dosage is indicated. If the amount of fluid is excessive, the addition of a thirty to forty minutes local exposure with group three is an advantage Treatment should be commenced It is not necessary to wait until the temperature has completely subsided The majority of these patients make a good recovery erease of the fluid may be noted for the first few days but need not cause alarm. Aspiration except for diagnosis is rarely necessary Resolution occurs more rapidly and the amount of residual thickening is reduced to a minimum. In minipatients with a severe pleurisy with effusion no trace of the condition can be found a year later If there is much evidence of involvement of the ling parenchyma with the pleurisy or if there is little tendency to fluid formation in the peritoneal civity the addition of the group three as noted

above, must be made carefully. It is not always contra-indicated.

Satisfactory results have been obtained with chronic fibrous pleurisy under the same regimen.

Bone and joint tuberculosis

The results in this condition are sufficiently well known, to require no discussion. We have not been able to obtain the remarkable development of muscle and the increase in muscle tone which is noted under natural light. This is a valuable feature of light treatment, and it makes the results obtained with artificial light distinctly inferior to those obtained with heliotherapy. A combination of light therapy and surgical treatment is indicated and is usually possible. Good results can be obtained in this condition with general radiation without local exposure. A spirit of cooperation between the physical ther-

apeutist and the orthopedic surgeon will secure better results than an antagonistic attitude. More attention should be given to the necessary details which allow both methods of treatment to be carried out concurrently than to relative value of the two methods of treatment if used separately.

Genito-urinary tuberculosis

A few patients with genito-urinary tuberculosis are admitted to the Buffalo City Hospital every year. We have used light from group two sources and while the number of patients actually treated is not large, the results obtained are in agreement with other observers. It is a valuable adjunct to treatment. It does not replace surgical treatment when this is feasible. The results to date warrant continuation of its use as a supplement to surgical treatment and in inoperable cases. An occasional surprisingly good result is obtained.

SUPERSPECIALIZATION IN NEUROPSYCHIATRY

By IRVING J. SANDS, M.D., BROOKLYN, N. Y.

Chairman's Address before the Sections on Neurology and Psychiatry, at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

HE duty of the medical profession is to prolong life and to relieve human suffering. Such suffering may result from physical or psychic causes. In order adequately to perform their duties, medical men must not only acquaint themselves with the fundamental facts concerning the different diseases and the best methods of treating these disorders, but they must also seek for new truths that may enable them to discover new causes of illness and more adequate means of treatment. Furthermore, it is the duty of physicians to train properly qualified men to treat the sick. Moreover, they have the additional task of preventing illness whenever possible. Hence, we have in medicine several subdivisions, namely, therapeutics, research, teaching, and preventive medicine.

Human behavior is the resultant of several factors, the most important of which are the physical, intellectual, instinctive and emotional ones. Of the physical factors, the nervous system and the endocrines play the dominant roles. Defective intelligence leads to mental deficiency. Instinctual and emotional disorders lead to the psychoneuroses, many of the psychoses, delinquency, and general maladjustment.

Neurology concerns itself with disorders due to physical and chemical changes in the nervous system. Neurologists have for years concerned themselves not only with neurological medicine, but also with behavior disorders for which no structural alteration in the nervous system could be established. Psy-

chiatry, in its broadest sense, deals with all forms of abnormal behavior. While it is generally regarded as primarily concerned with the psychoses, it has been dealing with the psychoneuroses, mental deficiency, criminality and delinquency, and with general maladjustment

Neurology and psychiatry have been regarded as independent specialties, each with its own peculiar interests, and requiring different training and preparation for those physicians who might later follow the particular specialty. However, it has been found that the field of interest of the two specialties are not clearly demarcated and frequently overlap. In fact, many of the better types of neurologists and psychiatrists have long realized a basic unity in the two specialties, and have hoped for the union of the two into a common specialty. The World War fulfilled this hope, and created the specialty of Neuropsychiatry. The fundamental unity of neurology and psychiatry became quite apparent in dealing with the large number of neurological and psychiatric disorders encountered amongst the troops, and the neuropsychiatric division in the medical corps was established as the most logical and feasible method of treating them. A similar division exists in the Veterans' Civilian hospitals, in response to their own particular needs, have established neuropsychiatric wards and outpatient departments. The specialty of neuropsychiatry has thus become a reality.

Specialization is a natural development in

modern civilization. It is found in every field of human endeavor. Its aim is efficiency and perfection. Specialization in neuropsychiatry may be best achieved after a general hospital training or several years of general medical practice, followed by special studies in neuro-anatomy, neuropathology, and medical psychology, with intensive training in clinical neurology, psychiatry, psychoneuroses, mental deficiency, delinquency, and, if I may add, psychoanalysis

Neuronsychiatry is therefore a large specialty embracing amongst others such subdivisions as neurology, jisychiatry, psychonenroses, delinquency, child guidance, mental hygione montal deliciency and general maladjustment Because of the very breadth of this specialty, it is natural to expect that some neuropsychiatrists may devote most of their time to one or two subdivisions, such as psychoanalysis, clinical neurology, child guidance. Nevertheless, by virtue of their training and experience, they are competent to recognize and diagnose and even treat all other subdivisions of neuropsychiatry. When they meet cases which fall in subdivisions other than those in which they have special interest, they are able to refer these cases to other competent physicians for proper therapy

In recent years there has been an increasing tendency towards superspecialization in neuropsychiatry By superspecialization I mean the limitation of one's activities to some one subdivision of neuropsychiatry without any previous adequate training in the other subdivisions | Frequently these superspecialists lack even a general hospital internship training, or a general medical practice experience This tendency to superspecialization is due in part to the unique mental make-up of the superspecialist partly to the trend of some medical schools to encourage and foster a so called research spirit in third and fourth year medical students, and partly to the peculiar psychology that has dominated the post-war decade now fairly common for recent medical graduates to enter into clinical neurology, psychoanalysis, child guidance psychiatry, etc., without any previous fundamental training or experience in basic allied subjects

Superspecialization has certain advantages in that it enables one to devote his entire energy in training and research in one particular disorder. It occasionally leads to new discoveries. It carries with it the rewards that accrue as a result of intensive application to a small and limited field. Medical schools en courage superspecialization as it stimulates research and arouses enthusiasm in students. The superspecialist may prove to be somewhat of a showman, and may invite endowments to

various departments in the school. The patient, in the hands of the properly selected superspecialist, receives most expert care. The superspecialist often establishes a well merited reputation, and is in the eye of both the profession and the laity. Superspecialization, therefore, has a definite place in neuropsychiatry, and, when practiced by modest men who are cognizant of their limitations, is extremely productive of excellent results to all concerned.

Superspecialization has its definite drawbacks. It tends to create a feeling of omnipotence and even intolerance in those who practice it I have heard the dcan of a leading medical school in New York City say that he has found a tendency on the part of the full time teachers attached to his school to look down upon the part time men, and to disparage their work. It often leads to misunderstanding and to unwarranted criticism The prevention of nervous and mental diseases has been called a myth, and child guidance clinics an effrontery. It leads to conflicting opinions that tend to shake the confidence of laymen in the medical profession At a recent trial the professor of psychiatry in a leading medical school and the superinten dent of a State Hospital both declared the defendent to be suffering from the manic phase of manie depressive psychosis, while an eminent neurologist, who has a well merited reputation in his particular field, declared the patient to be of sound mind. Many of the sol diers who had suffered traumatic encephalo pathic conditions in the war, were diagnosed as livsterical and their troubles as psychogenic ın nature Many neurologists and even psychiatrists still decry the psychoanalytic movement without making the least effort to understand its basic principles. It occasionally leads to unwarranted claims at cures. The claims of some endocrinologists many of whom sit in the councils of the medically select are both unscientific and contrary to facts

The neuropsychiatric patient is often in a quandary to whom to turn for help. He knows neither the nature of his own ailment nor the special field in which each superspecialist is To him they are all "nerve most proficient specialists" It is therefore not uncommon for the patient to seek help from those who are not competent to treat his illness. The super specialist is often in no position to correctly diagnose the patient's neuropsychiatric disorder The early manifestations of such diverse conditions as cerebral arteriosclerosis, cerebral neoplasin, and some of the psychoneuroses may be identical. A superspecialist in clinical nenrology proudly told me of his ingenious method of treating a patient suffering from an auxicty

neurosis. She had attributed her illness to having eaten some meat which had lodged in her throat and had blocked her stomach. He immediately put the patient under a mild ether narcosis, and when she regained consciousness, produced a piece of meat which, he told her he had removed from her stomach. A superspecialist in psychoanalysis, most competent in his own limited field, was treating a young woman for a neurosis, but, to be fair, not in the orthodox and accepted psychoanalytic technic. When two days before her death from an obvious cerebral disease, it was suggested to him that she might be suffering from an organic brain lesion and most likely from a neoplasm, he scoffed at the suggestion.

The attitude of medical schools in encouraging research is most commendable. However, it should be restricted to those who show special inclinations in that direction, and should not be universally applied to all students. It would seem advisable to have a complementary tendency in medical schools to encourage the students to obtain a general and thorough medical training, and later an adequate special training if they were contemplating entering a specialty. This latter tendency would be applicable and beneficial to a very large number of students, and would prove of greatest benefit to a large number of patients. Medical students are often left in a most confused mental state after listening to some superspecialists; they surely fail to get the proper perspective of the subject. It would therefore seem advisable that in those medical schools where the various subdivisions of neuropsychiatry are taught by superspecialists, that a course be given by a competent neuropsychiatrist in order to orient the student in the proper evaluation of the general field of neuropsychiatry,

The superspecialist is always at the mercy of his own limited and restricted specialty; in his own circumscribed field he is expert, but outside of it he is helpless. If modest and cognizant of his own limitations, he is most productive and highly valuable, otherwise he may become dangerous. He must constantly consult his medical colleagues whenever he is treating any patient.

One often hears rather discordant notes in modern trends in medical teaching. Neurologists and psychiatrists alike preach the necessity for treating the patient as a whole, and for an understanding of the totality of the patient's reaction as an indispensable prerequisite in instituting adequate therapy. And yet there is the opposing trend of urging recent medical graduates to spend all their time on some one problem, which leads eventually to superspecialization. How a superspecialist can possibly understand the totality of the patient's behavior is indeed puzzling to me. A large number of the superspecialists are full time institutional men or occupy full time teaching positions. It is highly problematical whether

such sheltered and exclusive environments are conducive to an understanding of the totality of the patient's behavior in an entirely different environment.

The neuropsychiatrist on the other hand, by virtue of his broad training and experience, is able to diagnose the various subdivisions of neuropsychiatry. He is better equipped than is the superspecialist to manage the patient as a whole. When the neuropsychiatrist limits his work to one subdivision of neuropsychiatry, he is less apt to fall into the pitfalls that confront the superspecialist. As a teacher, the neuropsychiatrist is more likely to give the student the proper perspective of the special subdivision which he may be teaching, even though he may be lacking the extreme enthusiasm of the superspecialist. In the field of preventive neuropsychiatry, the neuropsychiatrist is particularly fitted to appraise the various factors that may contribute to the person's disorders.

Conclusions

1. Neuropsychiatry is a broad specialty and embraces such subdivisions as neurology, psychiatry, psychoanalysis, mental deficiency, delinquency and maladjustments. It entails a long and intensive study in neuroanatomy, neuropathology, medical psychology, and clinical experience and training in the various subdivisions of neuropsychiatry.

2. A distinction is made between specialization in neuropsychiatry on the one hand

and superspecialization on the other.

3. Specialization in neuropsychiatry entails a broad and exhaustive study of the fundamentals of neuroanatomy, neuropathology, neurology, psychiatry, the psychoneuroses and allied forms of abnormal behavior. It carries with it a sense of satisfaction in being able to recognize the various subdivisions of neuropsychiatry and in being able to manage the total behavior of the patient. The neuropsychiatrist may, with benefit to himself and the patient, eventually limit his work to one subdivision of neuropsychiatry without impairing his general efficiency.

4. Superspecialization in neuropsychiatry is the limitation of one's effort to a subdivision in neuropsychiatry without any previous adequate training and experience in the other subdivisions. It enables a man to acquire proficiency in a very limited field, and to devote himself to intensive study and research in that field. It tends to create reputations, and indirectly to enhance the prestige of medical schools. The superspecialist is handicapped by his own inadequate training in other subdivisions of neuropsychiatry, and by the very limitations which such intensive superspecialisations.

cialization imposes.

THE THERAPEUTIC USE OF ANTIPOLIOMYELITIS SERUM IN PREPARALYTIC CASES OF POLIOMYELITIS*

By WILLIAM H PARK, MD, NEW YORK, N Y.

I is now definitely decided that poliomyelitis is due to a true filterable virus. This is of extreme importance since we know of no other disease due to a filterable virus that ean be benefited by an anti-scrum after clinical symptoms have developed. As we read of the attempts made to cure the discase we note that at first the scrim was advocated to be used, not only in paralyzed cases but in those in which the paralysis had existed for some days. Thus in France. Netter in 1915 treated intraspinally thirty-two cases after paralysis had developed and was en-Light of the thirtythusiastic about the results They were of the bulbar type two cases died In America, Zingher in 1916 treated, at the Willard Parker Hospital, eighty-eight cases Thirtyeight of these cases died At the Minturn Hospital he treated eighteen cases that were already paralyzed Fifteen recovered Zingher was less enthusiastic than Netter, but believed "the serum showed possibly, in a certain proportion of cases, an inhibitory effect on the further progress of the disease, which resulted in a saving of life." He added, "It is difficult to forecast, however, what the natural result of the disease would have been in these cases "

Neal, also in the research laboratory, who saw many cases both treated and untreated, noted no beneficial effects from the serium in the paralyzed cases. Since then, very few have seriously recominended the giving of the serium in cases al ready showing paralysis, but it has been given to a small percentage of cases where the person or

their families requested it Before the great epidemic of 1916, few recognized that there was a preparalytic stage in the disease, which could at times at least be diag-It was believed that the majority of these cases went on to develop paralysis. In the 1916 epidemic, Zingher treated fifty-four preparalytic eases with one or two intraspinal injections of scrim Forty-four of these (81 4%) recovered without paralysis, while five developed marked, and five slight paralysis His comment on the outcome of these cases treated with serum was "It is known that in poliomyelitis we have a group of abortive nonparalytic eases in patients who go through the premonitory symptoms, but do not It is difficult to state theredevelop paralysis fore, how many of the patients treated with serum would have remained free from paralysis without serum treatment It seems to me however that the action of serum in polioinyelitis is bene fieral and that human serum is indicated in the treatment of the acute stages especially in the preparalytic period of the disease" Neal, watch-

*Rend at the Ann al Meeting of the Medical Society of the State of New York at Buffulo N Y May 24 1932

ing treated and intreated preparalytic cases seen in consultation during this same epidemic, formed the opinion that the treated cases did no better than those not treated. She also feared that the increased fever and the marked cellular response of the cerebrospinal meninges in the presence of the serum might be harmful, at least in some cases.

In 1928 Aycock and Luther reported 106 cases of poliomy elius treated in the preparalytic stage. They used, for the administration of the serum, the combined intraspinal and intravenous routes. The mortality was only 0.92%, while in cases first seen in the stage of paralysis and who received no serum, it was 14 per cent. No paralysis developed in 36 per cent of the treated cases. They believed these results were favorable.

McEachen and his co workers reported the results of treating 107 cases occurring in 1929 in Manitoba. They gave the serum intramuscularly The dose was also small, being often but 25 cc Almost 94 per cent developed no paralysis. They concluded that the serum was of value in the preparalytic stage.

In the Lancet of February 27, 1932, there is a report by MacNamara and Morgan of the use of serium in an outbreak of poliomyelitis in Australia One hundred and thirty-three cases were treated in the preparalytic stage. Their decision was that the serium gave excellent results. Here, as in all the other cases, there were no controls to compare with the treated cases. The physicians feeling that they had no right to exclude any preparalytic cases from receiving the serium

In 1931, we have the report of Shaw, Thelander and Limpos of the use of serum in the cases occurring in California both in the preparabite and paralytic stage. In the fifty-three cases treated before the onset of paralysis 84 4% developed no permanent paralysis while on the thirty-nine treated after the development of paralysis, only 23 per cent remained.

Show in his article on early treatment in the booklet on "Practical Suggestions Regarding Poliomyelitis," supplied for the scientific exhibit prepared for the American Medical Association, states on page 24 reasons for caution in accepting the evidence obtained from treating cases without controls. They are in my opinion so weight; that I feel justified in quoting them

'In table 3 are presented the results of convalescent serum therapy given by a number of observers. From this it can be seen that the view that the method is of probable value resulted from each set of observations. Such an opinion should be viewed with respect, but results are fur from conclusive statistically, especially because of the almost insuperable difficulty in prop-

erly controlling clinical trials of this nature. It is, of course, possible for one's opinion to be influenced by the apparent effect on occasional cases treated with certain highly specific serums, without numerical results being conclusive. The most glaring error into which one is tempted to fall is the comparison of end-results in a series of treated cases with an untreated group selected at large, which latter group may fail to account for many mild or abortive unreported cases. In other words, cases which are diagnosed on the basis of early symptomatology and treated with serum must not be compared, as regards end-results, with those in which paralysis was the diagnostic criterion.

"The clinician must maintain a strictly critical attitude toward the study of results and be prepared later to abandon such treatment in the not altogether unlikely event that its utility be finally conclusively disproved. The clinical point of view must remain one of thoughtful inquiry rather than eager acceptance or impatient rejec-

tion of the method."

Before taking up the results obtained by the health department inspectors and the pediatricians serving the Academy of Medicine, I shall consider the very important communication of *Kramer, Aycock, Solomon and Thenebe.

The authors note that their earlier studies were not adequately controlled, and that a study of alternate series is essential to establish the value of convalescent serum. Such a study is not feasible under the conditions in Massachusetts; it should be made where opinion is divided as to the value of serum or where the supply of serum is insufficient for all the cases diagnosed in the early stage.

The epidemic in 1931 in Brooklyn and in Connecticut offered suitable conditions. studied in a hospital in Brooklyn and one in Hartford, patients treated in the preparalytic stage, and a similar untreated group. Of eightytwo cases studied in the preparalytic stage, approximately half had received human, convalescent serum by the intravenous and intraspinal routes. No patient was accepted for study if his illness had lasted more than 3 days on admission to the hospital; careful physical examination was made, including the testing of all muscle groups to eliminate cases with weakness. All cases reported had the physical and spinal fluid findings or preparalytic poliomyelitis. The patients treated were given convalescent serum immediately upon admission to the hospital. The dosage was 60 c.c. given intravenously at the first sitting, and 40 c.c. intraspinally in two sittings, 8-12 hours apart.

A second muscle examination was made usually within 24 to 48 hours after admission and again before discharge, usually two or three

weeks later. At the end of the study a complete muscle examination was done on all of the patients.

Of the eighty-two cases studied in Brooklyn and Hartford, forty-two, or 51% developed some paralysis, the number being about evenly divided between the two cities. Two deaths from respiratory paralysis were both in the treated group, one in each city. In the remaining cases, the average paralysis for the treated group in Brooklyn and Hartford combined was 12.1 and for the untreated group, 5.9. The average paralysis per case in the treated group in Brooklyn is 1.4, in the untreated 4.3; while in Hartford the average paralysis in treated cases was 20.4, whereas the untreated cases showed an average of 4.3.

The proportion of cases developing paralysis in Hartford and Brooklyn was about the same, but the outcome was different. This difference is due to the including of a relatively small number of severely paralyzed cases in the Hartford In Brooklyn when the outcome of the treated cases is compared with that of the parallel untreated cases, the weight of evidence is with the treated group. In Hartford, because of the five badly paralyzed cases, the results are reversed and the untreated group is favored. The outcome of cases with respect to the day of illness on which the patient received treatment seemed to give some indication that the irregular results in Hartford might be accounted for by the lateness of the treatment in several of the patients which developed severe paralysis, but no statistical deduction could be made. These cases had been included on the same basis as othersand the irregularity can be ascribed only to chance variation in a limited number of cases in a relatively mild outbreak.

They conclude: "This therapeutic test of serum more nearly approaches a controlled experiment than any previously made by the authors; no statistical evidence was obtained that convalescent serum is effective, but the reverse conclusion—that it is of no value—may not be drawn. The outcome of this study of controlled cases justifies its continuation on a larger scale."

Serum Treatment in Preparalytic Cases of Poliomyelitis in New York City During the 1931 Outbreak.

During the time that Kramer and Aycock were carying on their adequately controlled and carefully supervised tests, the polionyelitis committee of the New York Academy of Medicine in cooperation with the Department of Health were interested in the comparative results in a much larger series of cases treated in the homes and in the contagious hospitals of New York City. As the opinion as to the efficacy of serum in the treatment of preparalytic cases was about equally divided between those who favored it and those who did not, we had no difficulty in obtaining

^{*}Convalescent Serum Therapy in Preparalytic Poliomyelitis. New England J. Med., 206: 432-435 (March 3d), 1932.

about equal numbers of treated and untreated cases.

In order to test the comparative value of the different methods of giving the serum, we administered it to some of the patients by what we might call Aycock's method of combined intraspinal and intravenous injections, and by the Canadian method of subcutaneous injection. We also treated a considerable number of patients by the intravenous method alone or combined it with the intransuscular injection

The total dosage also varied from a minimum of 25 cc. to a maximum of 100 cc. We have carefully taken records as to the day of the disease at which the case was seen, its apparent severity, when serum was given and the time of the first

injection.

The presence of paralysis and, if present, its amount was noted at the end of three weeks and again after a period of from five to six months. The amount of paralysis was noted and recorded at this time, but this was not done in as much detail as recommended by Aycock. Full reports will be made at a later time by the Academy of Medicine and by the Department of Hospitals.

In the consideration of the days of treatment and the outcome, as shown in Table fig. 1, those persons treated in the first day of their meningeal symptoms showed somewhat better results than those treated later in this illness; still, even those in whom treatment was delayed showed remark-

TABLE I-DAY OF TREATMENT AND OUTCOMES

Outcome 0 Per		Per Cent	Per .	Per Cer	+++ Per	Died Per	TOTAL	
	Cent of Cases	of Cases	Cent of Cases	Cent of Cuses	Cent of Cases	Cent of Cases	Vo. of Cares	Per Cent
1	73 8 62 1	6 0 8 1	6 3 13 0	0 7 8 1	4 4 3 7	2 8 5 0	252 161	100
3	68 6	17 9	ii i	28	28	28	36	100
5	8 PD 100 0	12 5 0	12 5 0	0	6 2	0	16 2	100 100

* Quoted by permission of the Academy of Medicine. The day of treatment is calculated from the date of the meningeal symptoms.

TABLE II-Comparison of Methods, Including Intraspiral and Others*

Outcome	0	1	+	++	+++	Diel		
outcome	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Per Cent	Ton	AL
	of	οľ	of	of	10	of	No. of	
Intraspense Method	Cases	Cases	Cases	Cases	Cases	Canes	Cases	Cent
Intraspinal intra-								
venous	70 0	67	67	4 4	78	4 4	90	100
Intraspinal intramu:	71.2	5 4	9 3	73	4 4	2 4	205	100
Intraspinal intra-								
venous intra- muscular	69 0	3 5	13 8	10 3	0	3 4	29	100
Total per cent in	70 7	5 5	.90	4 9	4.9	3 1	324	100
group treated .	10 1	3 3	.90	4 9	4 7	3 1	321	100
METHOD OTHER TO	TAN							
INTRASPINAL Intravenous	66 7	0	33 3	0	0	0	6	100
Intramuscular .	61 9	16 G	8 3	60	12	6.0	84	100
Intravenous intra- muscular	69 8	6 4	9.5	63	3 2	4 8	63	100
Total of group not					• •		450	100
treated intraspinally	7 65 3	11 8	98	8 9	20	5 2	153	100

^{*}Q toted by permission of the Academy of Medicine.

ably good results. The results in the untreated patients were, however, equally good.

As shown in Table 2, the method of giving the serum made no appreciable difference in the outcome. Those who received it intramuscularly developed in a larger percentage some weakness, yet it was of a very mild form.

The results in patients treated with convalescent scrum by the pediatricians working under Poliomyelitis Committee of the Academy of Medicine are almost identical with the results in those receiving only the usual treatment (Table 3).

TABLE III-COMPARISON OF RESULTS IN TREATED AND UNITERATED PATIENTS.

	On Dischange				FOLLOW-UP (3 OR MORE MONTHS LATER)				
	TREATED		Unt	UNTRPATED		TRECTED		UNTREATED	
Status 0 1 + + - Ded of poliomy chius	No. 329 36 41 31 19	Per Cent 59 0 7 5 9 2 6 6 4 0 3 8	No. 72 12 7 5 4 2	Per Cent 70 6 11 7 6 9 4 9 3 9 2 0	No. 346 40 23 17 8	Per Cent 78 0 9 1 6 4 3 0 1 8	No. 83 8 4 3	Per Cent 84 7 8 1 4 1 3 1	
Total Followed		100 0	102	100 0	439	100 0	98	100 0	

*Quoted by permission of the Academy of Medicine.

TABLE IN-COMPARISON OF PERCENTAGE OF PARALYSIS AND DEATHS IN TREATED AND UNTREATED PREFARALYTIC POLIOMYELITIS

	Total	or Weaknes at End of 3 Weeks	Weak	Paralysis	Died
Controls Untreated by Serum Observed by health depart- ment and city hospitals		o necia	100	20.2.70.0	0.04
pedratricians	305	229 (74 8%)	46 (15%)	(9 9%)	2
Observed by Academy of Medicus pediatricians	102	72	12	18	2
Combined totals	408	301	(14 2%)	(15.6%) 45 (11.0%)	(0 9%)
Patients Treated with Con- valescent Serum Observed by health depart- ment and city hospitals		(10 1727	((44 74)	1,.,
pediatricians	95	72 (75 7%)	10 (10 5%)	10 (10 5%)	3
Observed by Academy of Medicine pediatricians .	424	285 (67 2%)	30 (7%)	92 (21 7%)	17
Combined totals	519	357 (58 8%)	40	102	20
Total of all cases	927	(00 0%)	(1.170)	(18 0/0)	(3 8%)

A careful study of the results given in the tables especially discloses the fact that there certainly is little or no statistical evidence of any difference between the serum treated and untreated patients with preparalytic poliomyelitis as observed by the pediatricians serving under the Poliomyelitis Committee of the Academy of Medicine and by those observing the cases in the hospitals for communicable diseases in the City. The slight difference in favor of the untreated patients may probably be attributed to the accidental inclusion of a somewhat larger number of graver infections in the treated patients.

The fact of the increased meningeal irritation caused by the intraspinal injection of serum might conceivably have some effect but this is not statistically proved.

The figures given in Table 4 are disappointing to those who hoped that the serum would demon-

strate its value statistically.

Some of us were hardly surprised for we knew that antiserums have been of little or no value in other diseases known to be due to filtrable viruses. These invade the cells themselves and seem then to be beyond the curative reach of the serum.

Not one of the pediatricians who treated these patients felt that he had seen any evidence of a curative influence of the serum.

Dr. Alfred Fisher and Dr. Milton Levine as-

sisted in collecting these statistics.

Conclusions

In summing up, we can say that statistically there certainly was no evidence that the serum did any good; also, as stated by Kramer and Aycock, there is no evidence that it did any serious harm. The results of these two controlled investigations, certainly indicate that we should, wherever possible, treat only a portion of the cases with serum, and observe equally carefully the cases not treated. In this way we may finally come to a conclusion whether the serum is of any value, at a time when the spinal cord is already invaded by the virus of poliomyelitis.

Personally I think the treatment with convalescent serum cannot be given early enough to be that the serum may be of value as a preventive just as in the case of children recently infected

by the measles virus.

SERUM TREATMENT OF MENINGITIS*

By JOSEPHINE B. NEAL, M.D., NEW YORK, N. Y.

THE treatment of meningococcic meningitis by a potent serum properly administered is highly gratifying. Unfortunately, there is no laboratory test which adequately measures the therapeutic power of the serum and the best treatment of any individual case is largely a mat-

ter of experience.

Meningococcic meningitis shows wide variations in its severity in different outbreaks. Since 1910, when the service for meningitis was established by Dr. Park, there has been no real epidemic in New York City. In 1917 and 1918 and again in 1928, there was a sharp increase in the number of cases but at neither time was there a large number of the severe fulminating types that have been described in epidemics in other localities. It is probable, therefore, that we have pursued a more conservative method of treatment than we would have found necessary had an epidemic of the most virulent type arisen. During the past 22 years, our division has had under its care or has advised in the treatment of more than 1,100 cases of meningococcic meningitis. have emphasized repeatedly that it is impossible to formulate a method of treatment which is applicable to all patients and to all types of the disease. We believe that in general, a conservative method of treatment is the best. We have studied the results in hospitals where more intensive methods of treatment have been employed and the comparison of their results with ours has seemed to justify this conclusion.

Our method of treatment is usually as follows: Whenever a lumbar puncture yields a cloudy or hazy fluid, antimeningococcic serum warmed to

* Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

body temperature is immediately administered intraspinally by gravity. Further serum treatment will depend on the cultural examination of the fluid, but all cases of purulent meningitis are treated as being of the meningococcic type until they are proved to be caused by some other organism. The intraspinal administrations of serum are continued about every twenty-four hours until at least two successive specimens of the fluid show no organisms by smear or culture. dose of serum is usually twenty c.c. if as much or more, fluid has been obtained. If the amount of fluid withdrawn is great and the serum runs in easily by gravity, without untoward symptoms on the part of the patient, thirty to forty c.c. of serum may sometimes be administered. On the other hand, in certain instances when only a small quantity of fluid is obtained, we may inject more than the amount of fluid withdrawn provided the serum runs in easily and no unfavorable symptoms result. It is desirable to drain the subarachuoid space as completely as possible before injecting serum, but if the fluid is under greatly increased pressure, care should be taken to withdraw the fluid slowly. Using this precaution fifty to sixty e.c. or more of fluid may be safely withdrawn. If headache develops during the removal of the fluid it usually quickly disappears when the serum is injected. Almost the only condition under which we inject serum oftener than once in twenty-four hours is when the fluid is under so greatly increased pressure that a puncture at more frequent intervals seems indicated to relieve it. This condition rarely occurs.

Some physicians have recommended graduated doses of serum for young children depending

rither arbitrarily on the age. We have not found this necessary. We depend rather on the amount of fluid withdrawn and the ease by which the serimi runs in by gravity in determining the size of the dose. But it is necessary to exercise more than ordinary erre in removing fluid and injecting serium in joing habies.

It is rarely safe to give fewer than four doses of serum. A case of average severity will require perhaps from six to ciglit doses, and cases are occasionally seen where twenty or more doses of serum are necessary before the fluid becomes sterile. As his been stated the serum treatment is continued until two successive fluids are free from organisms This is by far the most important indication for stopping treatment indication of less value, is the return to normal of the spinal fluid sugar The cell count of the spinal fluid is, by itself, of comparatively little value, since the cell counts of different nortions of the spinal fluid will show variations, and since the prognosis is pour when the spinal fluid be comes elearer and the organisms persist. When two sterile spinal fluids have been obtained it is usually safe to stop the scrum treatment temporarily at least. It is often necessary to do several lumbar punctures during eonvalescence for the relief of pressure, and these fluids should be carefully examined and cultured as the return of organisms would indicate additional serim treat-We have emphasized the laboratory tests as a guide to the administration of the serum as it is rare indeed that the chinical picture is not accurately reflected or even predicted by the changes in the spiral fluid. If, however, the symptoms do not improve after the fluid becomes sterile, and the serum has been temporarily discontinued it is well to resume the injection of the serum as the symptoms may be due to a localized meningitis with adhesions which may be favorably influenced by the continued use of the serum

If signs of blocking develop recourse should be made to ventricular or disternal punctures and the administration of serum by these routes. In babies where the fontanelle is still open ventricular puncture is to be preferred to disternal as it is less dangerous to the patient and more certain of success, since the block is quite as likely to be above the cistern as below it have occasionally encountered cases where little or no fluid has been obtained by lumbar puncture and yet serum has run in easily by gravity, and there have not been signs of increased pressure Several such cases have made satisfactory recoveries without resorting to ventricular or cisternal punctures We are, perhaps, more conservative than many in doing ventricular or disternal punc Comparatively few babies where repeated ventricular punctures have been necessary have recovered We do not believe that we know at present what may be the after effects of the repeated training to the brain tissue. As regards

eisternal puncture, we do know that death has occasionally followed promptly, due usually to hemorrhage. It seems unfortunate that these fatalities are not reported, as we not infrequently read accounts of large series of cases without accident written by physicians using this technic in patients with syphilis of the central nervoirs system. The dangers are much greater when there is an active inflammatory process with layers of adhesimis in the neighborhood of the cistern as is likely to be the case in meningitis.

Cisternal punctures should be attempted only those who have had adequate practice on the cadaver

It is important, after doing two or three ven tricular or eisternal taps, to again attempt lum bar punctures. In this way we can determine whether or not the block has been relieved. The relief of the block obviously prevents the devel opinient of obstructive hydrocephalus, but in certain instances a communicating hydrocephalus arms result.

In regard to the intravenous or intramuseular injection of seriim, we believe that this is indicated only in cases of meningococeie senticenin without meningitis or in those cases of menin Litis which show a prolonged invasion of the blood stream by the organisms as indicated by repeated positive blood cultures or a rash that shows a tendency to persist or to recur. While it is probable that in practically all eases of men ingitis there is an invasion of the blood stream early in the disease we think that in the very great majority of cases this invasion is transitory and that injections of serum other than intrasor nally are unnecessary. In some instances this has been proved by blood culture and in many more it has been very definitely established by the rapid fading of the rash and the clinical improve ment of the patient. In a series of 43 patients 21 of whom had a hemorrhagic rash at the time the blood culture was taken there was a positive culture in only three instances. The intravenous administration of the serum is not without dan ger as a severe or fatal reaction occasionally fol lows Several such instances have been brought to our attention. Certainly patients tolerate serum much more easily by the intraspinal than by the intravenous route

We are frequently called to see patients who are not responding satisfactorily to treatment. This may be due to the fact that the serum being used is of low potency. A change of serum is therefore advisable. Unfortunately, there is no reliable laboratory test for the therapeutic properties of serum. It is possible that the meningitis may be due to an aberrant strain of the organism which is not represented in the serum. This point is somewhat theoretical as the grouping of the strains of the meningococcilis is by no means sharply defined.

In some of the obstinate cases we have substi

tuted an antibody preparation after the ordinary serum had failed to produce results. In a general way it may be stated that, when a satisfactory preparation of antibody was used, the results were generally especially favorable. The agglutinating titer of the antibody preparations has been much higher than of the serum from which it was made. We hesitate, however, to stress the value of the agglutination test, as we have observed that it does not run parallel with the therapeutic action of the serum. While we realize that the antibody preparation is still in the experimental stage, our experience with it leads us to believe that it may be so developed as to be much more effective in the treatment of epidemic meningitis than the serum as ordinarily prepared.

We are thoroughly convinced that in a certain number of cases unsatisfactory progress is due to overtreatment. While the exact way in which the serum exerts the curative action is not entirely understood, it would seem that its chief action lies not in a bactericidal power, but in increasing the phagocytic action of the cells or in so affecting the organisms that they may be more easily ingested by the cells. Tapping of the spine at very frequent intervals, it seems to us, would remove many cells that had been stimulated to a high degree of phagocytosis. Furthermore, as serum injected intraspinally does not entirely pass out of the subarachnoid space for about twenty-four hours, its more frequent administration seems to us illogical. Aside from the theoretical considerations, performing a lumbar puncture and administering serum two to four times daily subjects a patient to considerable pain and discomfort, and keeps him in an almost constant state of local reaction to the serum. By this reaction we mean the rise in temperature and increased meningeal symptoms and restlessness which in the great majority of instances takes place in two to four hours after the serum is injected and continues for a varying length of time. Then too, horse serum is a foreign protein that must be eliminated and that usually shows definite evidence of being more or less toxic. We are not at all convinced that the large quantities of serum that are given when the patient is intensively treated, may not be actually harmful in a certain percentage of instances. At any rate, we have frequently been called to see patients who have been treated rather intensively but have failed to make progress. In many of these cases progressive improvement followed the elimination of further use of serum.

In many cases that have become chronic and in a few patients that have reacted unfavorably to serum, we have used an autogenous vaccine sub-cutaneously or intraspinally. We have on record a number of patients who have responded favorably to vaccine therapy, after becoming refractory to serum.

Mortality

During recent years a larger proportion of cases of meningitis have been sent to hospitals. In many institutions we are called to see only the patients who are failing to respond to treatment.

In analyzing our cases of meningococcic meningitis for the past five years, there are 302 for whose treatment we were responsible. Most of these were treated in their homes in cooperation with their family physicians. The remainder were in hospitals under our direct supervision. Of these 302 cases 57 died—a mortality of 18.3 per cent.

Of the 57 fatal cases, 7 received only one in-

iection of serum.

The results of the serum treatment of other forms of meningitis are disheartening. Nevertheless, every effort should be made to give the individual patient the benefit of any form of treatment that may be of value. Occasionally, patients suffering from various forms of meningitis recover, but we can seldom honestly attribute the recovery to any particular method of treat ment.

As to our own experience, none of our patients with pneumococcic meningitis have recovered, although we have used the appropriate type of serum either alone or in combination with numoquin hydrochloride. In spite of the disappointing results, we still continue using the serum. Six recoveries have taken place of 164 cases of streptococcic meningitis In two of these, the action of the serum (antiscarlatinal) seemed really specific. They followed scarlet fever, and in spite of a long and stormy course recovery occurred. In the other cases, we were more doubtful as to the value of the serum.

Influenzal meningitis scens to offer more hope for successful treatment than other forms not due to the meningococcus, since it usually runs a more sub-acute course. Of 90 cases of influenzal meningitis under our care, 3 have recovered. But in most of them, we could not definitely ascribe the recovery to the influenzal serum. We are more impressed with the marked though temporary improvement in clinical symptoms and in the spinal fluid that has so often followed the use of the serum. It is, therefore, my impression that a more potent serum may be developed which may yield better results.

In spite of the discouraging results so far obtained, it is imperative to continue our efforts to find a more satisfactory method of treating these so highly fatal forms of meningitis. It is well to remember at times a quotation from Thoreau: "Nothing is denied to well-directed, persistent

effort."

HE USE OF CONVALESCENT SERUM IN THE TREATMENT OF MEASLES, HICKEN-POX, MUMPS AND WHOOPING COUGH, INCLUDING THE PROPHY-LACTIC VALUE OF PARENTAL BLOOD*

By I M LEWIS MD, AND L H BARENBERG, MD, NEW YORK, N Y

THE high morbidity and mortality associated with measles in infants and young children, particularly those housed in institutions rges the use of a procedure that will either preent or modify this disease. To accomplish this nd, Nicolic and Conscil in 19181 recommended he serum of patients convalescing from incasles t is now well established that convalescent nersles serum is very effective in preventing nersles when given in sufficient doses in the ourse of the first five days of the incubation peiod and in attenuating the disease when given somewhat later in the incubation period or in In spite of its great clinical maller amounts value, however, convalescent serum has not come into general use, chiefly because of the difficulty encountered in procuring it Cases of mersles in adults are uncommon, and in the case of children parents are reluctant to allow blood to be withdrawn, especially during convalescence

The permanent immunity that almost in variably follows one attack of measles and the fact that a mother who has hid incasles imparts to her offspring sufficient anti-bodies to render the infint immune for the first few months of life indicates that most adults have an approciable amount of these immune bodies in their blood It was, therefore, logical that the value of adult blood in the prophylaxis of measles should have been investigated. In 1920, Degk witz inoculated adult serum into seven children who had been exposed to measles, six receiving 30 cc and one 20 cc of scrum. Four of the seven developed measles but in an attenuated form One veir liter Reitschels reported good results from use of adult blood. Later. Salomon,4 Gerlich, Hilsinger, Kovacs and others abroad and Zingher 8 Karelitz and Levin, Bivings, 10 Bader's and Van Cleve' in this country reported favorable results with the use of adult whole blood or serum as a prophylactic measure against measles

An epidemic of measles broke out in the Home for Hebrew Infants in the Spring of 1929 and lasted two months. This Institution harbors ap proximately 325 children, about 150 being under 2 years and the remainder from 2 to 4 years of age. The death rate in the institution has been highest during those years in which measles his occurred, the increase in mortality having resulted from complicating pneumonal or empyema. At the beginning of the epidemic considerent measles serum was not available but since the reports of the use of adult whole blood

were so encouraging it was decided to employ this agent as a menus of modifying the chiracter of the epidemic. Accordingly, 56 children from 2 to 4 years of age were given intramuscular mijections 30 cc of whole blood which was obtained usually from the parent of the child after careful history had been obtained to eliminate the possibility of tuberculosis or syphilis. It may be added that the injections were well tolerated and that in no instance was a rise in temperat renoted.

As the epidemic progressed we were able to obtain convalescent serum from some of the children and also from three of the nurses who developed the disease. This form of treatment was given to 64 children. Twenty three children did not receive injections of any kind and served as controls.

Results

The entire immoculated group of 23 children came down with measles which in no instance eould be classed as modified or attenuated, and therefore an excellent opportunity was afforded of evaluating the prophylaetic merits of parental Thirteen or 23 per cent of the 56 children receiving 30 cc of blood remained free from the disease, although they had been exposed to measles throughout the epidemic Of the 43 children who developed measles, 23 were of the modified or attenuated type thus 36 children or 64 per cent of this group were definitely bene fited by the use of adult whole blood Of the 20 children who were not protected, seven received the injection of blood somewhere between the seventh and tenth day of the incubation period, which was obviously too late, and ten received blood from 12 to 23 days before they actually contracted measles, at which time they were no longer protected by the blood previously injected It should therefore be emphasized that in order that the measles be modified by the use of this procedure, blood must be inoculated during the first five days of the incubation period, or from one to eight days prior to infection

In institutions and in hospitals where there are usually a number of successive outbreaks in order to insure attenuation of measles in almost every child who develops the disease, it would be necessity to repeat the injections of blood every 12 days in those who have not as yet come down with the disease. In private homes, however, since children are in closer contact, infection almost always follows exposure to measles and therefore a single administration of 30 cc of blood will almost always bring about an atten-

^{*}Real at the At that Meeting of the Melical Society of the State of New York at Buffalo N Y May 24 193?

uated form of measles. The attenuated type of measles in our series was characterized by a slight to moderate increase in temperature with an average duration of three days; the eatarrhal symptoms were either absent or very mild; Koplik spots were present in about 50 per cent of the cases; the rash in some instances was scanty, in others widespread but never confluent. Of great importance was the fact that these children did not appear ill. They were almost invariably either sitting or standing in their beds and showed no signs of discomfort. No complications developed.

Convalescent Serum

Sixty-four children received 6 cc. of eonvalescent measles serum which was obtained either ten days or thirty days after defervescence. Forty-four or 73 per cent remained completely protected. Of the 16 children who developed the disease, 14 came down with a markedly attenuated form of measles. One of the two children who developed measles of moderate severity received the serum on the last day of the in-No complications were obcubation period. served in this group. It may be added that the thirty-day serum seem to be just as potent as the ten-day serum. Convalescent serum was therefore of particular value in preventing the disease, whereas adult blood was effective in bringing about attenuated measles in a high proportion of the children. This form of disease is highly desirable for children of private homes, since permanent immunity also results from an attack of attenuated measles. In institutions and hospitals complete protection should be the goal. With the injection of 30 cc. of blood, complete prevention was brought about in only 23 per eent of the children. Had we used a larger amount. the percentage of complete protection undoubtedly would have been higher. Since it is difficult to inject intramuscularly more than 30 cc. of whole blood, it is necessary to use blood serum if a larger amount of anti-bodies is desired. amount of adult blood serum which will bring about absolute protection against measles is not definitely known, but we should estimate that about 40 cc. of serum would be sufficient to protect completely infants and young children up to four years of age and somewhat larger quantities for older children.

Chicken-Pox

Chicken-pox is one of the mildest of the contagious diseases of childhood, and it is therefore obvious that one would-not desire to bring about an attenuated form of this disease. However, it is not an uncommon experience for institutions and hospitals to have their wards quarantined for weeks or even months on account of succes-

sive outbreaks of chicken-pox. It is therefore of great importance to make use of a procedure which will eheck further cases of varicella in such institutions. It has been shown by Blackfan. Petersen and Couroy,13 Mitehell and Ravenel.14 Weech15 and others that 5 to 6 cc. of convalescent serum will prevent this disease in about 90 per cent of the cases if given during the first few days of the incubation period, but as has been pointed out with measles, it is rather difficult to obtain convalescent serum when it is needed. We therefore attempted to determine the amount of blood from adults who have had the disease during childhood, which would be necessary to prevent chicken-pox. Five infants received 30 cc. of whole blood and 8 infants received 40 cc. of serum from a professional donor. All of the infants who received 30 ce. of blood developed chicken-pox in a mild form but not one of the eight infants which received 40 cc. of serum eame down with this disease, so that this amount can be relied upon to prevent the development of chicken-pox in infants. Larger amounts may be required to prevent the occurrence of chickenpox in older ehildren.

Mumps

Hess¹⁶ was the first to use convalescent serum in the prevention of mumps. In 1915, he injected 3 to 4 cc. of serum intramuscularly into 12 susceptible children and not one child developed the disease. In 1925, Regan injected 2 to 4 cc. of serum into 70 children and only one child developed mumps. In 1931 Barenberg and Ostroff¹⁷ reported results of the use of convalescent serum in an epidemic that broke out in our Institution. Twelve cc. of blood (5 cc. serum) obtained from patients convalescing from mumps were given to 40 children who were exposed to this disease, 125 children served as controls.

Six out of 40 treated children developed mumps, an incidence of 15 per cent, whereas, 49 out of 125 untreated children developed the disease, and incidence of 39 per cent. The course of mumps was much milder in the treated series. The epidemic lasted only two months which was a much shorter time than the duration of previous epidemics at the institution, and would have been undoubtedly curtailed still further had larger quantities of serum been used. basis of this experience, we would recommend 12 to 15 cc. of convalescent serum if one is desirous of obtaining complete protection which should be the aim in hospitals and in institutions. We have had little experience with the use of adult blood in the prevention of mumps. Last year, 11 children received 12 cc. of blood from an adult who had had mumps in childhood, but this quantity was not sufficient to bring about a modified attack of mumps. Deducing from our experience in measles, 30 cc. of blood obtained from an

adult who has had mumps probably would bring about a modified form of numbs.

Whooping Cough

It might be of interest to mention our experience during the past winter in regard to the prophylactic effect of normal adult blood on the course of whooning cough. Seventeen children in one of our wards were exposed to this disease; six received 30 cc. of blood and 11 served as controls. This was a very good opportunity of testing the value of adult blood in whooping cough, as the children were harbared in the same ward and thus the diet, hygiene and nursing care were similar for both groups, and of still greater importance was the fact that the children had been exposed to the same source of whooping cough, in other words, to organisms of the same strain or virulence. The results of this experiment may be summed up in a few words; All of the six children that received blood developed whooping cough which however was of lesser severity than that of the controlled group. Of the six treated children, the course of whooping cough was mild in five instances

and moderate in one, whereas of the ten untreated, two were mild, three were moderate and five It was necessary to administer codine to three of the severe cases in an attempt to reduce the number of paroxyms. The results following the inoculations of adult blood were definitely superior to those obtained with the use of pertussis vaccine.

Recapitulation

Convalescent serum is very effective in preventing the development of measles, chicken-pox and mumps but its application is limited because of lack of availability.

If one is desirous of preventing measles. chicken-pox or mumps and convalescent serum cannot be obtained, the serum of adults who have had these diseases should be employed and complete protection may be expected in a large percentage of cases.

For attenuation of measles after infection, the blood of adults who had previously had measlesis of great value.

Adult blood is also of value in modifying the course of whooping cough.

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DISCUSSION FOLLOWING "SYMPOSIUM ON THE THERAPEUTIC USE OF BIOLOGIC PRODUCTS," NEW YORK STATE MEDICAL SOCIETY, BUFFALO, MAY 24, 1932

By AUGUSTUS WADSWORTH, M.D., ALBANY, N. Y.

Director, Division of Laboratories and Research, New York State Department of Health, Albany.

HTHERE were a few points in the papers just presented on which our experience at the state laboratories may be of interest. I wish particularly to stress the recommendations of Doctor Neal regarding the continued intensive treatment of meningococcus meningitis by the intraspinous method. I think it is unfortunate that there has been a tendency on the part of some physicians to substitute intravenous injection for intraspinous. The bacteremic form of the disease does occur and intravenous treatment may be of importance in those eases but, with meningeal involvement, it should supplement, not supplant, intraspinous treatment. As I have reviewed our reports on the use of different sera in the treatment of meningitis over a number of years, I have been impressed with the close correlation between the laboratory standardization by the agglutination test and the clinical results. I think the reflection on standardization by the agglutination test has come largely from the practice of testing cultures freshly isolated from the cases, with the serum to be used in their treatment. Many eultures do not agglutinate when recently isolated and thus this practice is no griterion of the effectiveness of the serum. A very important factor, however, in the production of the serum is the selection of strains for the immunization of horses.

I think it is of great value to follow the serum treatment of scarlet fever and erysipelas, especially with due regard to the potency and valency of the serum used. From the beginning, we have questioned the establishment of a specific streptococcus as the etiologic agent of any form of streptococcus infection and the results of our investigations have supported that position fully. The serum which we have prepared and distributed is monovalent and not concentrated. The sera which have been generally available, although polyvalent, have, according to our very thorough study, lacked potency and valency—and to such an extent that a year ago the Public Health Council of the state established, independently,

minimum standards of potency for, and methods of testing, sera that are offered for sale in New York State, exclusive of New York City. The reports of the treatment of scarlet fever have, I think, been colored by the fact that sera of high potency and broad valency have not been available and that the dosage has not been adequate for the treatment of severe infections.

The reports on the use of the scrum which we have distributed now include many forms of streptoeoccus infection-over 1,000 eases of scarlet fever, approximately 200 of erysipclas, and a miscellaneous group including septic sore throat, cellulitis, mastoiditis, and puerperal infectionsome of them with bacteremia. The results in the treatment of scarlet fever confirm the conclusions of previous observers; namely, that the serum is most effective in eases predominantly toxemie, whether mild or severe. The general impression that the serum has no effect on the complications may be questioned, especially since the potency of the sera generally available has been so unsatisfactory and the doses have been so utterly inadequate for the treatment of streptocoecus infection eharacterized by a bacteremia or a parasitie invasion of the tissues. Doses of from 10,000 to 20,000 units should be used in such cases and should be repeated at twelve- or twenty-four-hour intervals if necessary.

The full report of these studies was presented at the May meeting of the Association of American Physicians at Atlantic City and will appear in the Transactions; also before the Section on the Practice of Medicine of the American Medical Association and has been published in the Journal.

The scrum therapy of streptococcus infection should be developed from a broad point of view in order to have scrum of high potency and broad valency available and especially since there is no other treatment that is of avail, and despite the fact that, until the valency covers all strains, certain cases of scarlet fever, erysipelas, or any type of infection may fail to respond to the serum.

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For list of officers of County Medical Societies, see January first issue, advertising page XXX.

Annual Meeting, April 3-5, in the Waldorf-Astoria, New York City.

SCIENTIFIC EXHIBIT

A scientific exhibit is planned for the Annual Meeting of the Medical Society of the State of New York, to be held April 3-5, 1933, in the Waldorf Astoria, New York City. The exhibit will be located within easy access of the other features of the Annual Meeting, and will be of practical value to general practitioners of medicine. Invitations to take part

in the exhibit are extended to physicians, nedical schools, and laboratories; and applications for space and information should be made to Dr. Frederic E. Sondern. 20 West 55th Street, New York, Chairman of the Committee. The number of applications which have already been received, assures the success of the exhibit.

S.M.S. Minion

TESTS FOR DRUNKENNESS

It is a surprising fact that very little original work or research has been done on the subject of alcoholic intoxication, especially in the development of tests that are simple and reliable. The discussion now taking place in The Congress regarding the intoxicating qualities of beer reveals a multiplicity of opinions, but few accepted facts, as is shown by quotations from prominent authorities printed on page 44 of the January first issue of this Journal.

Everybody knows that "alcohol makes a person drunk," but that assertion involves two unknown

quantities:—

(1) How much alcohol is needed to produce

measurable effects of intoxication.

(2) What constitutes drunkenness or intoxica-

If ten per cent of the huge sums of money spent in propaganda, both for and against prohibition, were devoted to scientific investigation of the effects of alcohol on the human body, the question of stimulation and intoxication would be lifted from party belief and controversy into the realm of scientific demonstration.

Let anyone engage a group of physicians in discussion of the effects of a glass of whiskey on the human body and mind, and he will get replies as diverse as those which laymen would give.

Search the medical literature and one will find only meagre records of accurate observations on the milder stages of drunkenness. Any reliable investigation of alcohol is therefore a valuable contribution to the cause of true temperance.

An original record of value is contained in the December, 1932, issue of the Pennsylvania Medical Journal, in which Dr. Heise and Dr. Halkorn of Uniontown, Pa., describe tests which they applied to 200 persons charged with driving automobiles while drunk. Their basic test consisted in estimating the percentage of alcohol in the urine, and correlating the findings with psychological tests and the case histories. The judges and lawyers at first were openly skeptical about the tests, but they realized their reliability and value when the urines of persons with brain injuries were proved to be free from alcohol, and intoxication was thereby excluded as a cause of the symptoms. It was then but a step to the acceptance of positive urinary findings as indicating alcoholic intoxication.

The authors conclude their paper—"We wish to acknowledge our gratitude to the innumerable persons who have offered to drink whiskey for the sake of science, and also to the attorneys for the defense, whose 'razzing' has furnished the incentive for this paper."

LOOKING BACKWARD

This Journal Twenty-Five Years Ago

Animal Experimentation:—The "antivivisectionists" were with us a quarter of a century ago and as active along the same lines of legislation and propaganda as at present, as is shown by the following editorial in this Journal of January 1, 1908:

"The signatures of medical men in this State are being solicited to a petition in favor of a proposed bill entitled an 'Act to prevent cruelty by regu-

lating experiments on living animals.'

"The bill specifies in which cases anesthetics must be used, while the fact is that the habitual use of anesthetics in laboratories has long been practised.

"It is also most injudicious that a system of reports should be established by law, so that the system might readily become a means of persecution, should the State Commissioner of Health be perverse, or yield to the pressure of the agitators by whom the administration of the law would be jealously watched.

"The persistency of agitators regarding experiments on animals would make the proposed law merely that 'entering wedge' that 'first instalment' for which some of them have long clamored. The passage of the bill in question would not forestall further agitation, as is claimed; it would incite to it. This is abundantly clear from the foreign experience of thirty years.

"Let no medical man of the State of New York sign the petition to change the present laws, which amply suffice for the purposes of scientific experiment, and, should the case ever arise, for the pun-

ishment of wrong doing."



MEDICAL PROGRESS



Chronic Progressive Chorea -In reviewing the history of chronic progressive chorea, Stmon Stone quotes Huntington's original description of the disease, in which he writes 'There are three marked peculiarities in this (1) Its hereditary nature tendency to insanity and suicide (3) Its manifesting itself as a grave disease only in adult Davenport has traced the origin of the disease in the United States to the seventuenth century, when three chorese brothers migrated to Connecticut Their descendants spread over Connecticut Massachusetts, Rhode Island, and New York, and by 1909 about 4,300 descend ants of the original choreics were tabulated and studied by Davenport and Muncie They find that because of intermarriage with normal individuals, a number of biotypes have arisen showing some modifications of the eardinal symptoms described by Huntington they have classified as follows (1) A type in which tremors are present and no mental deterioration (2) Tremors absent and mental deterioration present (3) Non-progressive elio rea (4) Chorea beginning in early life instead of adult age (5) Mental symptoms preceding by years the onset of choreiforn movements Stone reports 5 cases, 2 with no family history of chorca and 3 in two chorese families with a total of 218 members, among whom 23 have suffered from the disease. He finds that the symptomatology varies not only in different families, but also in members of the same fam ily Huntington's impression of nervous instability among unaffected members of choreic families was verified by Davenport and is apparently borne out by his own studies. A history of alcoholism was frequently obtained among unaffected members also a history of nervousness and maladjustment. No valid explanation of the disease has been found. The diagnosis is rather simple in advanced cases exhibiting choreiform movements, characteristic gait, speech defect and mental changes, together with a family history of chorea. The prognosis is practically hopeless though the disease may last as long as twenty years before the patient dies. No drug is known that will completely arrest the progress of the disease Stone has obtained some temporary improve ment with arsenicals and luminal Stramonium in increasing doses, until 12 to 15 cc daily are administered has given the most no ticeable results. Under this treatment in one of the milder cases choreic movements entirely disappeared, and in three cases in which other

therapy had failed the stramonium treatment was followed by a marked reduction in the number and extent of the movements. Because of its strong hereditary tendency and the fact that it incapacitates an individual in the prime of life, Huntington's chorea has a certain social importance. Members of choreic families should refrain from having children—New England Journal of Medicine December 1, 1932 cevii, 22

Vascular Reactions to Heat and Cold -Sev eral months ago the idea came to Th. Brosse, J Lenegre, J Mage and A van Bogaert to undertake to characterize by objective findings, as for example by an abnormal reaction to a mode of excitation, the subjective and object tive disturbances experienced by certain patients and habitually attributed to an anomaly of the local circulation. They accordingly studied the reaction to heat (42° C) and cold (7° C) in 9 normal subjects with supple arter ies and in 24 individuals, either old or young, with sinuous or indurated arteries. As criteria of the vascular reaction they chose the variations in the amplitude of the arterial pulsations and in the diastolic pressure, the former revealing the reaction of the walls of the large and medium sized arteries, and the latter the condition of the terminal elements of the arterial For purposes of precision, in order to prevent variations of systolic pressure from in fluencing the amplitude of pulsation the comparison was made under conditions of counter pressure immediately above the minimal pres sure, and for further accuracy, a complete os cillometric curve was registered from centi meter to centimeter, or for every two centimeters, of mercury in every examination. Thus the amplitude of pulsation under all counterpressures from maximal to minimal, was registered in all subjects before the 20 minute bath, and every 5 minutes during the course of each bath It was found that in the young normal subjects heat increases the amplitude of arterial pulsations at all counter-pressures, but especially at those immediately above the minimal pressure, it generally lowers the minimal pressure, but sometimes fails to modify it The reactions occur most frequently at the fifth minute of the warm bath, and always by the tenth Cold on the other hand reduces the amplitude at all counter pressures and raises the minimal pressure. In the subjects with deteriorated arteries the results were in most cases the same; but in 5 cases the diastolic

pressure was raised instead of lowered by heat, and in 2 cases the amplitude of pulsation was considerably increased instead of diminished by cold, without the minimal tension changing. The authors regard as pathologic reactions to cold and heat: (1) a lasting and progressive increase of diastolic tension under heat, observed in several arteritics; (2) a lasting and progressive lowering of diastolic tension under cold; (3) an increase of amplitude of pulsation under cold, at all counter-pressures, but principally at just above minimal, when the minimal does not change; and (4) a diminution of amplitude under heat, principally just above the minimal tension, whatever may be the modifications of the latter. In these cases cold dilates and heat contracts the walls of the large arteries and their terminal arborizations .-Archives des Maladies du Cœur, October, 1932.

Heredosyphilitic Tabes.—The existence of heredosyphilitic tabes is today an incontestible fact, according to J. Chalier, H. Naussac and I. Boucomont. On the basis of a study of 128 cases found in the literature and 2 personal cases, they assert that heredosyphilitic tabes in children presents certain differences in its course from that in adults. While the meningeal lesions of tabes of hereditary syphilis in the adult are practically the same as those of acquired syphilis, this is not true in the juvenile form. Here the affection presents a forme fruste, with a poverty of symptoms and a slow evolution that render it what must be called an abnormal tabes. The first symptoms are not generally, as in the adult, pains or ataxia, but are more likely to be either troubles with vision (amblyopia) or with micturition (incontinence). The ocular or the vesical disturbance, as the case may be, remains for a long time the only symptom; it may increase, diminish, or remain stationary, while the other symptoms. such as absence of reflexes, Romberg's sign, ataxia, gastric crises, pains, etc., may not appear until a very late period. Thus a child may become blind, and several years elapse before the tendinous reflexes are lost. In a case of Marjoulis characterized by incontinence of urine it was 3 years before any other sign of tabes appeared. The slowness of the evolution of the affection makes its course doubly abnormal. This abnormality is the greater, the younger the subject. Hence the diagnosis in children presents great difficulty, since in the absence of numerous characteristic tabetic symptoms the physician does not think of this affection as a rule. In 16 cases of adult heredosyphilitic tabes, symptoms did not begin till after the age of 20. These accordingly represent 12.4 per cent of the 128 cases studied, and juvenile cases 87.6 per cent. In 10 of the 16

adult cases hereditary syphilis was easily established; in the other 6 it was only presumed, there being no indication whatever that syphilis had been acquired. In order of frequency the symptoms of tabes in these adult cases were fulgurating pains 11, ataxia 7, optic atrophy 7, bladder troubles 5, ocular paralysis 3, gastric crises 2, arthropathy 1. In reaching a diagnosis, differentiation must be made from syphilitic meningitis and Friedreich's disease, as well as from tabes of acquired syphilis. A word of warning is uttered against discarding the idea of syphilis altogether for lack of signs of acquired syphilis.—Journal de médecine de Lyon, November 5, 1932.

A Follow-Up Report on the Clinical Study of Cardiac Asthma.-In 1929, Palmer and White published an analysis of 250 cases of cardiac asthma. Because this is by far the largest collection of these cases in the literature, Sylvester McGinn and Paul D. White present this follow-up report. Of the 250 patients 230 have died. The records in these cases show that cardiac asthma occurs most frequently in males over fifty years of age with hypertensive or coronary heart disease. The average expectancy of life has been found to be a little more than two years, one patient out of four dving within six months. There were 72 patients who lived more than two years. It is evident that the better the treatment the longer the life. Rarely a patient may become free from attacks. The prognosis is much more serious vi cardiovascular syphilis is the underlying factor or when cardiac asthma is associated with congestive failure, aortic regurgitation or auricular fibrillation. The presence of pulsus alternans, gallop rhythm or very severe long attacks likewise makes the outlook dubious. The outstanding findings in 15 post-mortem examinations were chronic passive congestion and left ventricular hypertrophy. The most effective treatment of acute attacks of cardiac asthma consists in the hypodermic injection of morphine and the assumption of the upright position. Venesection is rarely required, but should be carried out in severe attacks. Hemostasis by the application of tourniquets to the extremities was not used in these cases. In another series of 22 cases all the patients were warned against overexertion, advised to rest in the most suitable surroundings, with the head elevated, and were given constant maintenance doses of digitalis after full digitalization. The maintenance of an adequate digitalis effect is of the greatest value in most cases for the prevention of cardiac asthma and the prolongation of life. A few patients find small daily doses of brandy helpful. Diuretics such as theocin and mersalyl (salyrgan) have been prescribed for the slightest evidence of decompensation and have been given at intervals when there has been no sign of congestive failure -New England Journal of Medicine, December 15, 1932, ccvn, 24

Adamantinoma of the Tibia: Etiology and Pathogenesis -B J Ryrie reports a case of ad mantmoma of the tibia and states that only two other cases of the kind have been recorded namely, that of Fischer (1913) and that of Baker and Hawksley (1931) In each case there was a history of trauma, slight so far as surface mjury was concerned, and the trauma was followed by a tumor after a latent period. In each case the tumor was one of the hone and periosteum and not of the soft parts. The Instology of the tumor was the same in all cases, being that of certain types of adamantinoma, basalcelled carcinonia, or rodent ulcer, a structure which possibly justifies the diagnosis of ada-To the pathologist the chief intermantinoma est of these tumors hes in their etiology and pathogenesis Fischer accepted the view that the tumor had its origin in a fetal cell rest and Hawksley also postulate a fetal cell rest, but lay a little more stress on the trauma as stimulating this rest into growth. Ryrie dislikes the idea of fetal cell rests in positions in which they are adequately explained on embryological grounds, and accounts for the growth on the theory of "thwarted repair" He claims that there can be considerable laceration of the subcutaneous tissues skin appendages, and periosteum without breach of the skin surface, and it is this dragging, with consequent deep laceration, that is the peculiar feature of trauma in this region, entailing subcutaneous and periosteal hemorrhage and a long process of organization and ossification. We know that thwarted reparative growth at the edge of a chronic ulcer passes over into neoplastic growth, and that thwarted hyperplasia in liver cirrhosis passes into neoplasia Similarly, the reasonable explanation of adamintmoma of the tibia appears to be that in the region of the ossifving hematoma thwarted repair ultimately passes over into tumor growth. That the exact reaction or environment necessary to maintain a growth stimulus and yet prevent repair will rarely arise, and then only by the fortuitous coincidence of many factors, fits in with the rarity of these tumors. It removes the tumor from the position of a mysterious and isolated entity into the great group of tumors which have chronic irritation as an important factor in their Ryrie further suggests that we should etiology look upon these tumors as arising certainly from trauma, but also as a peculiar response to trauma in persons congenitally predisposed to such reac tions If this theory is correct it suggests that some other cases of epithelionia following trauma may be explained similarly—British Medical Journal December 3 1932, ii, 3752

Allergy and Some Allergic Diseases -W Langdon Brown describes allergy as an unusual response to an ordinary stimulus, which, though marte and familial, is yet modified by conditioned Every known protein contains a lustadine fraction Break off a CO2 molecule from this and it becomes a powerfully toxic substance, histanine, which can produce all the phenomena These phenomena are possibly due of allergy to an inborn error of metabolism characterized by lack or shortage of a particular intracellular ferment-histaminase Part of the reaction depends upon the nervous response W E Dixon (1917) showed that after the vagus to the heart and been stimulated a substance could be extracted from the heart muscle which was antagomized by atropine. It seems as if atropine prevents the liberation of an inhibitory hormone which is usually secreted in answer to vagus This accords with the well-known stimulation effect of atropine in checking other secretions Dale observed that adrenalme directly antagonizes Here we are upon the threshold of the mystery regarding the interrelations of nervous and chemical mechanisms Dale's observation explains why adrenaline is by far the most effective treatment in an allergie crisis, for it both nentralizes lustamine and stimulates the sympathetic nerves to smooth muscles, such as those of the bronch, uterus and intestine These observatious show further how it is that the psychie state can modify allergic manifestations great function of the parasympathetic or extended vagus may be described as promoting the assimilation of suitable and the rejection of unsuitable material. In allergy the response usually takes the form of trying to evict the invading foreign protein by every possible means, but if this is inadequate the cell will die rather than surrender its chemical individuality

In discussing the relation of purpura and especially arthritis purpura to giant urticaria, Brown states that there is an allergic factor in certain infections and purpura is sometimes a manifestation of this. A patient may have purpura at one attack and giant urticaria at another In this condition Brown has found organisms in the stools similar to those found in Henoch's purpura A typical case of this kind showed B a clchu, which can produce a series of events ranging from intense hemolysis to recurrent attacks of giant urticaria. It has been suggested that some cases of enuresis are due to allergy Here as elsewhere, there is a clear cut antagonism between the sympathetic and parasympathetic nerves Ephedrine, by stimulating the sympathetic, may check enuresis more effectively than belladonna which paralyzes the parasympathetic. In angioneurotic edema and asthma the nervous factor plays an important part. In some cases asthma is purely a psychological problem, in others the toxic factor is the primary thing

the nervous factor being merely the failure of the nervous system to cooperate in getting rid of the toxin. The universal belief in the efficacy of beliadonna in asthma finds its justification in the paralyzing effect of the drug on the parasympathetic. The importance of restoring impaired endocrine balance in cases of allergy should not be overlooked.—Practitioner, December, 1932, exxix, 774.

A Skin Carcinoma Regarded for Two Years as a Varicose Nodule.—A case is reported by C. Lang in the Münchener medizinische Wochenschrift of November 4, 1932, which apparently has no counterpart in the literature. A painless bluish swelling of the right lower leg above the internal malleolus was mistaken by several physicians for a varicose nodule on account of its striking resemblance to a dilatation of a vein. Not until the nodule was extirpated and the histological findings reported was the lesion recognized as a skin cancer by its numerous epithelial proliferations, which in some places exhibited concentric formations with cornification and manifestation of parakeratosis. The whole course of the disease and the clinical findings pointed to a local venous dilatation, that is, a varicose nodule the skin of which presented an inflammatory appearance. The entire external part of the bluish tumor consisted of disintegrated red blood corpuscles which owed their origin to hemorrhages caused by the carcinoma. It is true that there are cases in the literature in which varicose nodules have been mistaken for tumors, and there are many observations in which their differential diagnosis from tumors in the region of the saphenous vein has been difficult; but in all these cases a tumor had been thought of before operation, while here the case was reversed, and what was clinically a varicose nodule proved upon histological examination to be a malignant tumor. Relations between varices and carcinomas are as a rule not observed until processes of ulceration of dilated venous regions set in, and a carcinomatous disintegration of a leg ulcer appears. The author believes this is the only case in the literature in which a nonulcerated varix has been described in connection with a carcinoma. That surgical extirpation is the safest way of handling an isolated venous dilatation is emphasized by the possibility of a carcinoma appearing clinically as a varicose nodule.

Infected Wounds of the Limbs and Syndromes of Syringomyelia.—According to B. Pomme and M. Daniel, the etiology of syringomyelic syndromes, which is of great importance in forensic medicine, has been the object of two lines of research, the anatomopathological and

Taking only the latter into considthe clinical. eration, the authors have concerned themselves particularly with infections, especially small infected wounds of the extremities, accompanied by inflammation or prolonged suppuration, which may be followed by grave syndromes. The history of the infectious episode is in brief as follows: On the palm of the hand or the sole of the foot there has been an infected wound of only slight dimensions transversely and in depth only moderately penetrating. Cicatrization has been effected first upon the surface, more or less rapidly and completely. Meantime microbes of anærobic tendency have succeeded in vegetating under the surface, and have produced toxins in sites difficult to reach. These have impregnated the nerve extremities of this territory, silently for the most part, but in a slow and prolonged manner. Occasionally the evolution is more rapid. and the result is a phlegmon. In any case, torpid inflammation, long suppuration or a phlegmon has induced a veritable imbibition of the peripheral nervous tissue, which bears a certain analogy to tetanic intoxication. The interval separating this period from the appearance of the syringomyelic syndrome is characterized by an unbroken series of manifestations finally orienting toward syringomyelia only after many months or years, as much as 20 years in one case on record, always with increasing severity. An eventuality against which the medicolegal expert must be on guard is that the infection which appears to have been primary is in reality only an epiphenomenon grafted upon a syringomyelic syndrome already in course of evolution. After a positive diagnosis and differential diagnosis of the clinical syndrome, the expert must satisfy himself with regard to the following facts: (1) The prior existence of the infectious process; (2) a topographical correspondence between the site of the primary infection and the zones of secondary manifestations of syringomyelia; (3) an unbroken succession of symptoms. A few of the less classical points in diagnosis are the remnants of lesions, the somewhat indefinite limits of radicular systematizations, absence of hyperalbuminosis, the ease with which lipiodol passes, and even the slow and irregular evolution of the syringomyelia, in contrast with other causes of medullary changes. If these conditions are fulfilled, one is justified in assuming that the axis cylinder of the nerve has been affected by an ascending neuritis. Such cases are, as a matter of fact, quite rare, and presuppose an ensemble of circumstances that do not seem to depend solely upon the microbe (toxins proceeding in a neurotropic direction), but also upon a soil that has been rendered fragile primarily or otherwise. -Journal de Médecine de Lyon, November 20.



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NECESSITY FOR MEDICAL TESTIMONY IN MALPRACTICE ACTIONS

By LOREN J. BROSNAN, ESQ. Counsel, Medical Society of the State of New York,

A malpractice action illustrating the attempt which patients sometimes make to spell out a cause of action against a physician by the use of lay testimony, was recently decided by the highest court of one of our southwestern States. The case was instituted on behalf of a minor about nineteen years of age. Fifteen years previously it seems that the defendant, who specialized in ear, nose and throat work, had operated upon the boy for the removal of his tonsils. The claim was made that at the time the defendant performed the tonsillectomy he removed also the uvula, palate and tonsillar pillars and, in addition, failed to properly diagnose and treat a condition of adenoids and suppurating cars from which the child was suffering at the time. The complaint charged that as a result of the improper treatment the child had lost his powers of speech and hearing, and as a further result that his mentality was impaired so that although he was nineteen years old his mental development was that of a child of six years of age. The physician interposed a general denial to these charges and also contended that the boy's defects of speech and hearing were congenital as he had always been practically deaf and dumb since the time of his birth.

On the trial of the case the plaintiff's condition during the fifteen-year period was established by lay testimony. No doctor was called to testify that he knew from observation the condition of the boy's throat during the long period of time. In order to bridge the gap between the operation by the defendant and the time when suit was commenced, the mother of

the boy testified in part as follows:

"Ever since the operation why the phlegm has collected in his throat and at night gets out on his pillow.

"Q. Did that ever happen before the opera-

tion? A. No sir, it never did.
"Q. State whether or not that condition began right after the operation. A. Yes sir, right after the operation.

"Q. Mrs. S-, has Carlton outside of this condition of phlegm you describe, has he ever had any kind of disease of his throat of any kind? A. No sir.'

Counsel for the defendant strenuously objected to the last question on the ground that the witness, as a lay witness, was incompetent to so testify. The court overruled this objection. A similar ruling was also made when the boy's father was asked the following question:

"Q. Has Carlton at any time had any apparent; outside of adenoids and tonsilitis, has Carlton at any time had any apparent disease of his month or throat?"

Three doctors were called as experts on behalf of the plaintiff, each of whom had examined the boy. One of the said doctors stated that from his examination of the boy's throat he was able to state that the condition he observed, namely, obliteration of the uvula, palate and tonsillar pillars, was due not to disease or atrophy, but to the tonsillectomy performed over fifteen years before by the defendant. He said that the nature of the scars was such that he could make the statement with certainty. The other two experts called by the plaintiff were more cautious in their testimony, however, and each said that the conditions which he had observed might have been due to any one of several things, either congenital defects existing since birth, traumatic injury, operation or disease causing a sloughing or atrophy. The three doctors testifying against the defendant were each asked a hypothetical question of which an essential portion required the assumption that the boy had during the fifteen-year period suffered no disease of the ear. head or throat. Each of these doctors answered that, assuming along with other facts, the truth of the testimony of the parents that the child had suffered from no disease, they could state that the unfortunate condition of the child's month and throat at the time he was examined by them was due in their opinion either: (a) to the use of improper methods or instruments during the tonsillectomy; or (b) to negligence or lack of care during the tonsillectomy; or (c) to lack of proper knowledge and skill to perform the tonsillectomy,

On the strength of said testimony the case was sent to the jury and a substantial verdict was brought in in favor of the plaintiff. From the judgment an appeal was taken to the Court of Civil Appeals, urging various grounds for reversal.

The Appellate Court carefully considered the record of the trial in the lower court and decided that several points entitled the defendant to a reversal and a new trial. The court concluded that the case was one where the burden of proof was on the plaintiff to prove that the defendant's

operation was the positive cause of the injuries and that during the fifteen-year period none of the various other possibilities which had been stated by the two experts could have existed. In other words the Appellate Court was of the opinion that in this sort of a case the plaintiff was under the necessity of showing by competent proof that the operation by the defendant was the only possible competent producing cause of the injuries complained of. If it was possible that disease, atrophy, trauma or congenital defects caused the condition, then the verdict could not stand. The court ruled that the doctrine of res ipsa loquitur could not be applied to connect up the injuries with the tonsillectomy, for the competent medical proof of the plaintiff's own witnesses had shown that other causes than the operation were possible. The only testimony to negative the existence of the enumerated possibilities and to pin the blame on the earlier operation was the lay testimony above set forth in part. In ruling that the said testimony had been improperly admitted in evidence the court stated the following:

witness cannot testify that a person did not in fact have any disease of the throat or mouth during any given period of time. In the instant case the expert witnesses testified to a number of specific diseases which might have caused the sloughing off or an atrophy of parts of appellee's throat during the fifteen or sixteen-year period in question. They gave none of the physical symptoms or physical evidences of these particular diseases of the throat while running their course, such as might be observed by any person, or especially by the parents of appellee, who constantly associated with him during the period in question. Some of these diseases may have been of an insidious nature and only ascertainable by those engaged as specialists for treatment of such throat diseases. So, if the conclusion of appellee's parents that he had no disease of the throat during the period in question be eliminated as incompetent evidence, then the only remaining part of this non-expert testimony is that of appellee's mother to the effect that continuously since the operation appellee has been discharging phlegm from the mouth and LEGAL

seriously. The said trial resulted in an acquittal, and subsequently thereto the man so examined by the doctor and acquitted in the Justice of the Peace court instituted an action for duringes mining as one of the defendants the doctor and charging him with having improperly compelled him to submit to a physical examination, and without proper cause so conducting the same examination that as a result thereof the plun-

tiff was confined in jail. The constable who had arrested the plaintiff was named as co-defendant

This ease was brought on for trial in the Supreme Court and after all the testimony had been put in the case was submitted to the jury like jury retuined a verdict in favor of the defendants thereby completely exponerating the doctor from all charges that the examination made by him had been improper

ABDOMINAL OPERATION—MALPRACTICE CASE BARRED BY JUDGMENT FOR DOCTOR'S BILL

A surgeon was consulted by a middle aged man with respect to various complaints of intestinal trouble. The doctor examined him and made a tentative diagnosis of appendicitis. The doctor advised an operation and the patient consented. The doctor upon opening the abdomen discovered the presence of a tumor in the ascending colon. He corrected the condition which he found and made a so called sidetracking duct which proved satisfactory to relieve the condition. The wound was closed and the patient improved uneventfully.

Apparently sometime later the patient consulted another surgeon, who found a small sinus at the site where the first surgeon had operated. The second doctor opened the abdomen and found a carcinomatous condition in the ascending colon. He removed the ascending colon completely attaching the stump of the gut to the transverse colon. The man obtained a very satisfactory end result.

The first doctor at the close of his treatment sent the min a bill for his fee, and the patient claimed that said bill was rather excessive and offered to the doctor a settlement of half the amount. The doctor, feeling that his fee was moderate, refused to accept the offer. The doctor was obliged to institute sint in the City Court for the amount of his bill, and the patient defended on the theory that the professional services which he had received were not worth the amount claimed.

After the said action had been pending for several months, an action was instituted against the doctor by the patient in the Supreme Court illeging that the treatment iendered the patient was improper. Thus, of course was the same treatment with respect to which the doctor had several months before sned for his bill in the City Court. The purpose of the Supreme Court action apparently was to delay the doctor's action for his fee for as soon as the doctor had put in an appearance in the Supreme Court action, the patient applied for an order to consolidate the City Court action with the Supreme Court action.

The doctor's personal attorneys who represented him in the City Conrt action, and your Society's coinsel who represented the doctor in the Su preme Court action, united in opposing this application on the ground that the only purpose of the same was to delay the collection of the doctor's bill. The result was that the conrt refused to order the consolidation of the two actions.

The doctor's personal attorneys brought on the City Court action for trial shortly thereafter, and the said case was tried before a judge and jury. After a two day trial in which the value of the doctor's services was challenged by the patient the jury awarded a verdict in favor of the doctor for substantially the entire amount of his bill. Judgment was entered on the said verdict and promptly paid by the patient

Thereafter the attorney for the doctor in the Supreme Court action obtained leave from the court to serve a supplemental answer setting up the facts of the trial in the City Court action as an adjudication of the entire matter and as a defense to the cause of action based upon malpractice A further application was made to the court on behalf of the defendant doctor in the Supreme Court action to compel the patient to reply to the said supplemental pleading. The patient's reply admitted that the doctor had obtained a verdiet in the City Court in his action to recover his fee for professional services but chillenged the contention made on behalf of the doctor that the City Court adjudication amounted to a defense. An application was then made on behalf of the defendant by your Society's coun sel for judgment on the pleadings thereby square ly presenting to the court the question whether a determination of an inferior court in favor of a doctor in his suit for his professional fee amounted to a bar to an action for malpractice The Supreme Court judge who heard the application at Special Term ruled that the City Court judgment did operate as a bar to the action for ninlpractice, and granted the defendant doctor's motion for judgment on the pleadings finally ended the matter in favor of the doctor

operation was the positive cause of the injuries and that during the fifteen-year period none of the various other possibilities which had been stated by the two experts could have existed. In other words the Appellate Court was of the opinion that in this sort of a case the plaintiff was under the necessity of showing by competent proof that the operation by the defendant was the only possible competent producing cause of the injuries complained of. If it was possible that disease, atrophy, trauma or congenital defects caused the condition, then the verdict could not stand. The court ruled that the doctrine of res ipsa loquitur could not be applied to connect up the injuries with the tonsillectomy, for the competent medical proof of the plaintiff's own witnesses had shown that other causes than the operation were possible. The only testimony to negative the existence of the enumerated possibilities and to pin the blame on the earlier operation was the lay testimony above set forth in part. In ruling that the said testimony had been improperly admitted in evidence the court stated the following:

"We are clear in the view that this was error. The decisions uniformly hold that whether a person has a disease is a question calling for professional or expert testimony. Manifestly this rule would extend to any throat disease, and particularly to any disease which might cause the sloughing off or atrophy of the parts of the throat. It is true that a non-expert witness may testify to the presence of disease of an outward nature, or one physically apparent and obvious to any person; or to the non-presence or non-appearance of any physical or outward evidences of disease of a person whom the witness had opportunity to closely observe; but a non-expert

witness cannot testify that a person did not in fact have any disease of the throat or mouth during any given period of time. In the instant case the expert witnesses testified to a number of specific diseases which might have caused the sloughing off or an atrophy of parts of appellee's throat during the fifteen or sixteen-year period in question. They gave none of the physical symptoms or physical evidences of these particular diseases of the throat while running their course, such as might be observed by any person, or especially by the parents of appellee, who constantly associated with him during the period in question. Some of these diseases may have been of an insidious nature and only ascertainable by those engaged as specialists for treatment of such throat diseases. So, if the conclusion of appellee's parents that he had no disease of the throat during the period in question be eliminated as incompetent evidence, then the only remaining part of this non-expert testimony is that of appellee's mother to the effect that continuously since the operation appellee has been discharging phlegm from the mouth and throat, which to the lay mind would indicate that appellee had continuously from the date of the tonsillectomy suffered from some character of throat or mouth disease, the nature and deleterious effect of which only experts are competent to testify."

The court having thus ruled that the vital link in the testimony had been improperly in evidence, ruled that the hypothetical questions had also been improper, embodying as they did the offending testimony. Consequently, the expert opinions that had been put in evidence to the effect that the defendant doctor had been guilty of malpractice were also ruled out.

PHYSICAL EXAMINATION TO TEST INTOXICATION

One evening a physician received a request by telephone call from a member of the local police force to go to the police station for the purpose of making an examination of a certain individual who had just been arrested for reckless driving, driving while intoxicated, and leaving the scene of an accident. The doctor immediately went to the police station and found a person apparently in a state of intoxication.

He made an examination which consisted of taking the man's reflexes, asking him to walk in a straight line, taking his blood pressure and asking him various questions. The answers which he obtained from the man suggested that this person was in a state of intoxication. When asked his occupation he said that he was an actor, whereas in fact he was a lawyer. When asked what his name was, he stated that it was John Doe. When asked if he drank liquor, he stated

that he drank "only as much as you can get at P—'s" (a certain restaurant). The doctor tried the man on five typical expressions for the purpose of testing his speech, and the man managed to pronounce properly three out of the five. The doctor also smelled alcohol on the man's breath. He reported to the police authorities that as a result of his examination his diagnosis was that the man was intoxicated.

Later the case arising out of the arrest came to trial before a Justice of the Peace and a jury of six. The prosecution was not represented by an attorney although the defendant did appear by counsel. The defendant in said proceedings explained in court his conduct at the physical examination by stating that he did not believe that the doctor had any right to examine him and that his replies were merely facetious as he did not take the proceedings in the police station

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seriously. The said trial resulted in an acquittal, and subsequently thereto the man so examined by the doctor and acquitted in the Justice of the Peace court instituted an action for damages naming as one of the defendants the doctor and charging him with having improperly compelled him to submit to a physical examination, and without proper cause so conducting the same examination that as a result thereof the plain-

tiff was confined in jail. The constable who had arrested the plaintiff was named as co-defendant.

This case was brought on for trial in the Supreme Court and after all the testimony had been put in, the case was submitted to the jury. The jury returned a verdict in favor of the defendants, thereby completely exonerating the doctor from all charges that the examination made by him had been improper.

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A surgeon was consulted by a middle-aged man with respect to various complaints of intestinal trouble. The doctor examined him and made a tentative diagnosis of appendicitis. The doctor advised an operation and the patient consented. The doctor upon opening the abdomen discovered the presence of a tumor in the ascending colon. He corrected the condition which he found and made a so-called sidetracking duct which proved satisfactory to relieve the condition. The wound was closed and the patient improved uneventfully.

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After the said action had been pending for several months, an action was instituted against the doctor by the patient in the Supreme Court alleging that the treatment rendered the patient was improper. This, of course, was the same treatment with respect to which the doctor had several months before sued for his bill in the City Court. The purpose of the Supreme Court action apparently was to delay the doctor's action for his fee for, as soon as the doctor had put in an appearance in the Supreme Court action, the patient applied for an order to consolidate the City Court action with the Supreme Court action.

The doctor's personal attorneys who represented him in the City Court action, and your Society's counsel who represented the doctor in the Supreme Court action, united in opposing this application on the ground that the only purpose of the same was to delay the collection of the doctor's bill. The result was that the court refused to order the consolidation of the two actions.

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NOTES NEWS



TRI-STATE CONFERENCE

The twenty-first meeting of the Tri-State Medical Conference was held in the Hotel Chelsea, Atlantic City, New Jersey, on December 20, 1932, with Dr. A. Haines Lippincott, of Camden, President of the Medical Society of New Jersey, in the Chair, and eighteen representatives present. Those from New York were: Drs. W. D. Johnson and G. M. Fisher, Past Presidents of the State Society; Dr. J. S. Lawrence, Executive Officer; and Dr. John A. Hartwell, President of the New York Academy of Medicine.

The general subject of the conference was national health insurance, with particular reference to the report of the national committee on the Costs of Medical Service, which was made public on November 29, 1932. The stenographic report of the proceedings of the Tri-State Conference fill 135 typewritten sheets.

Dr. Henry O. Reik, Editor of the Journal of the Medical Society of New Jersey, gave a paper in which he described the English system of health insurance as he saw it during a tour of

England in the summer of 1930.

Dr. T. C. Routley, Toronto, General Secretary, Canadian Medical Association, gave an address on "National Health Insurance in England and Canada." He said that each Canadian Province is autonomous in its control of medical practice, as is a State of the United States. following descriptions which he gave concerning investigations in several Provinces are news items of interest to physicians of New York

British Columbia has had a Royal Commission which has collected information and opinions for

three years. This commission reported:

"Compulsory health insurance is proving to be an important and valuable factor in the improvement of health. The people of British Columbia are in favor of compulsory health insurance and the maternity benefit scheme. The British Columbia Medical Association decided to support the scheme, provided it included certain safeguards such as free choice of the doctor, compulsory entrance for all wage earners under a certain figure, and payment of the doctors."

"The figures indicate that the cost of the service would be much greater than its proponents estimated, and it is doubtful that the Province will be able to introduce the measure for a

"Alberta has a government commission which made inquiry into the system of State Medicine,

"Under state medicine there will be only as

many physicians, druggists, and nurses as are needed to do the work well. There will be no cults or isms. The health service will reach every family in the nation. Every community will be a part of some health district served with all that medical science has to offer. Research work will be a part of the individual health service. There will be no money profit. New ideas will be tested, and, if found of value, added to medical science. Doctors will be paid liberal salaries and will do their best to secure advancement in the service."

"People will be taught to care for their bodies. In ill health they will be sure of attention and thus relieved of that sort of anxiety. Periodic health service will enable doctors to practice preventive medicine, which will eliminate very largely the use of drugs."

"Health activities will continue and the medical service will have full public confidence because the economic interests of the doctor and patients

will be identical."

"Saskatchewan has 301 municipalities, 75 of which have nunicipal or per diem physicians who are hired by the locality to look after all the illness in that locality. If he is a whole-time man, that is his income. The salary varies from \$3,000 to \$6,000, raised by taxation."

"Manitoba has 500 to 600 doctors whose economic condition is so bad that they are demanding that something be done for them. A conference will soon be held between the government authorities and the doctors, looking to some arrangement whereby the doctors will be subsidized."

"Ontario is the scene of a unique experience. in that the Cabinet has issued an 'Order in Council,' that relief for unemployed persons shall include medical services and medical supplies; but payment for the services shall not exceed one-half of the standard medical charges." (Dr. Routley then described the opinions of thoughtful doctors regarding the best methods of administering the proposed relief measures, and they agreed generally with the methods adopted by some medical societies in New York State in dealing with the County Welfare Commissioners in regard to bills for the treatment of the indigent.—Editor's note.)

"Quebec also has a Royal Commission investigating health or 'social' insurance. The physicians seem to favor some form of social insurance, but they say that they do not want the English panel system."

Dr. Routley said in closing:-

"We cannot divorce the business from the professional side of medicine today, unless we hand over all of the business side to some third party;

against."

Dr. John A. Hartwell, President of the New York Academy of Medicine gave an address on the subject, "A résumé of the work of the Committee on the Costs of Medical Care," and compared the recommendations in the majority report with those made by the minority.

Dr. Arthur C. Morgan, of Philadelphia, one of

the signers of the minority report of the Committee on the Costs of Medical Care, described some of the steps taken by the majority and minority members in writing and revising their reports.

Dr. R. G. Leland, Chairman of the Bureau of Economics of the American Medical Association, discussed the report of the Committee on the Costs of Medical Care with special reference to practice by medical groups, and insurance schemes to provide for hospital care for the insured.

ORANGE COUNTY PUBLIC WELFARE COMMITTEE

The account of the annual meeting of the Orange County Medical Society held on December 13, 1932, which was printed in this Journal of January 1, 1933, contained a brief reference to the annual report of the Welfare Committee on the payment of bills for the medical care of the indigent. The physicians of Orange County have developed plans and methods which are somewhat different from those in other counties, and yet are adapted to the peculiar conditions of their own County of Orange. An abstract of the report is therefore printed for the information of physicians and welfare commissioners of other counties.—Editor's note.

Welfare cases can be classified in two groups: (1) Those which are treated in the home or from the physician's office; and (2) those which are treated in a hospital or other institution.

In considering the first group, it was found that certain municipalities have made special arrangements for doing this work on a contract basis. This condition obtains in two of the cities and also in one or two towns. In most of the towns, however, the work is being done by the physicians of the locality on a fee basis in cooperation with the local welfare officers with varying degrees of satisfaction. It would seem that the degree of cooperation between welfare officer and local physician has improved during the year, and has to a large extent depended on whether or not the physician concerned had the time and patience to follow the procedure laid down in the law of asking the welfare officer to investigate, and where indicated, authorize treatment under the welfare law.

When your committee came to investigate the question of hospitalized welfare cases, a somewhat different situation was found. When the law became active, representatives of the hospitals in the county met with a committee of the Board of Supervisors, and a hospital rate of \$5.00 per day was agreed upon. It was considered advisable by both committees to establish a uniform rate throughout the County, and the rate established was slightly under the average per diem bed cost. It should be pointed out that hospitals

charge all the way from nothing to private patient costs, and that this welfare rate is evidently meant to more nearly approach actual cost than the so-called ward rate. The hospital welfare situation, however, has been very much confused by the fact that one or two hospitals in the County have classified welfare patients as ward patients, so far as medical treatment is concerned. The ward rate is, of course, a semi-charity rate and varies from \$3.00 per day in one or two hospitals in the County to \$3.50 per day in St. Luke's, Newburgh, and \$4.00 per day in the Horton Memorial at Middletown. This classification is of considerable importance to the physician, because the ward rate usually marks the dividing line between where the attending physician may charge for his services and where he gives his services gratis.

During the early years of the Compensation Law, this same condition obtained, and many hospitals continued to classify compensation cases as ward patients and thus precluded physicians from rendering a bill to which they were legally entitled. It would seem that a somewhat similar situation now obtains in at least one hospital in the County with respect to welfare cases. Although this is a hospital problem, it also presents a problem in the practice of medicine and would seem to be a fit and proper subject for discussion in this Society.

At the present time your committee finds that lospitalized welfare cases are being charged for medical and surgical services in the following hospitals in the County: St. Francis and Deerpark, Port Jervis; Horton Memorial, Middletown; The Goshen Hospital; The Warwick Hospital; The Tuxedo Hospital; and to a limited extent, The Cornwall Hospital. It was found that many of the hospitals already have made special arrangements for those welfare cases which originate in the municipality where the hospital is located. These cases are not subject to competitive bidding on the part of the other hospitals in the County and do not need to be considered at the present time. Your Committee feels, however, that in order to eliminate unfair

and dangerous hospital competition, it is essential to maintain the principle of uniform hospitalization charges for those cases which do not originate in the municipality where the hospital is located. As it is the total hospitalization cost which is of interest to the welfare officer, it is apparent that to achieve this, there must also be uniform charges for medical services. Recommendations to this effect were made at the last regular meeting of this Society and following this report, the following resolution was adopted by this Society:

1. That there should be uniform medical and surgical charges for the treatment of all County Welfare cases in the hospitals of Orange County.

2. That the Public Welfare Committee be asked to submit a schedule of such charges to the Society at the Annual Meeting in December.

3. That if this schedule of medical and surgical charges for welfare cases in hospitals be adopted by the Orange County Medical Society, it should then be submitted to the Medical and Surgical staffs of each hospital in the County with a view to obtaining uniform hospital charges for all County welfare cases.

4. That such schedule is not meant to apply to cases originating in the municipality in which

the hospital is located.

On November the 23rd, an open meeting of the Welfare Committee was held, to which each hospital in the County was invited to send a representative of the medical staff. In addition to the committee members, the medical staffs of the following hospitals were represented: St. Luke's, Newburgh; Cornwall, Goshen; Warwick; Horton Memorial, Middletown; and Port Jervis. At this meeting it was generally felt that, if the physicians would agree to attend hospital welfare cases at approximately one-half the prevailing charge for private patients, they would still be making a considerable contribution to community welfare work. It would seem that such a rate could be accepted as fair and reasonable by the hard pressed public official and would be of at least some help in meeting the overhead charges of the hard pressed physician.

It was the opinion of those present at this joint meeting that it would be desirable to have the hospital render a joint bill which included

both the hospital charges and the physician's charges. From the standpoint of the welfare officer, it should be pointed out that he is already paying medical bills directly to the physician for hospitalized cases in the majority of hospitals in the County.

The advantage of this proposed scheme to the welfare officer is that it will prevent over-charging on the part of any physician who might be so inclined, inasmuch as the physician's charges can be estimated in advance and become a matter of record in the hospital office. This matter calls for active cooperation between hospitals, physicians, and welfare officers, and it is in the hope of furthering such cooperation that these recommendations are made to this Society:

In medical cases and non-operative surgical cases the charge for medical services shall be \$1.50 per hospital day, irrespective of the num-

ber of daily visits.

The charges for operative surgical cases shall be fifty per cent of the prevailing charge for private patients, this charge to include aftertreatment while the patient is in the hospital.

The surgeon's fee shall include that of his

assistant.

The charge for anesthesia shall be \$5.00 in cases under one hour of operation, and \$7.50 in cases over one hour.

A surgical fee of \$100 shall be the maximum for any major operation, including the assistant's fee and after-treatment.

The charge for medical and surgical attention at an uncomplicated confinement case shall be \$25.00; and for an instrumental case, \$35.00.

Vie recommend that this schedule be worked one in greater detail during the next year; and that conferences be arranged with the Economics Committees of adjoining counties, with a view to evolving a schedule of charges which will be uniform for the counties of Orange, Sullivan, Ulster, and Rockland.

WILLIAM J. HICKS, Chairman, EARL C. WATERBURY, J. EMERSON NOLL, T. D. MCMENAMIN, W. W. DAVIS.

COLUMBIA COUNTY

The Board of Supervisors of Columbia County met on December 21, 1932, and voted to establish a County Department of Health, for the entire county, including the City of Hudson. Columbia therefore follows the lead of Suffolk and Cortland Counties in including all the area of the county in its department; while the other two counties Westchester and Cattaraugus—exclude some of the cities.

The physicians of Columbia County have supported the county department plan and have made constructive suggestions for its organization and administration; and it was the attitude of the county society that led the Board of Supervisors to investigate the plans and establish the department.

The movement for a county health department may be traced back to October 1, 1929, when the

County Medical Society voted to approve the employment by the Board of Supervisors of two public licalth nurses under section 2b of the law providing state and

On December 15, 1930, the medical county appointed a committee to urge the Board of Supervisors to give due consideration to the wishes of the society in regard to the personnel of the nurs-

ing committee

On May 6, 1931, a committee of the County Society was authorized to analyze conditions in the county in regard to the feasibility of forming a county licalth department. After a lengthy discussion concerning the cost, requirements, personnel and duties of such a County Health Department, the following motion was adopted

Moved, that this County Society go on record as in favor of the establishment of a County Health Department, to include the entire County, under the provisions of the present State Aid Law applying thereto, on the condition that four of

the members of the County Board of Health be appointed from a list of its members, selected by the County Medical Society, and also that the County's share of the expense shall not exceed the present cost of administration of Health activities in the County

On October 7, 1931, the Society discussed the method of selecting the physician members of the proposed Board of Health. It was finally decided that the Medical Society should mominate eight physicians from whom the Board of Supervisors should choose four to be members of the Board of Health if the County Health Department should be established

For over a year the physicians quietly asserted their influence in favor of a county health department, and their efforts were rewarded on December 21, 1932 with a favorable vote by the Board of Supervisors

111 NRY C GAISTLE Secretary

JEFFERSON COUNTY

Abstract of a paper on Dr. Samuel Guthrie 1782 1848 read before the Jessesson County Medical Society by Charles C. K. Phelps, M.D., Sacket Harbor, N. Y. on December 15, 1932

Dr Samuel Guthrie, who practiced medicine in Sacket Harbor for thirty years was an outstanding physician, inventor, and manufacturer, such as one associated with a great city The Guthries were Scotch Covenanters, one of whom suffered martyrdom in 1661, while others emigrated to New England At the time of the Revolution a Guthrie and his two sons practiced medicine in Lenox, where a grandson, Dr Samuel Guthrie, was born in 1782 This Dr Guthrie studied medicine with his father and later in the College of Physicians and Surgeons in New York, and in the University of Pennsylvania He served in the War of 1812, and began private practice in Chenango County, New York, but in 1817 he moved to Sacket Harbor and was extensively engaged in the manufacture of vinegar and alcohol by processes which he invented and developed He made sugar from potato starch, and induced a friend Captain Potter to manufacture it on a large scale, not knowing that the product was glucose

He manufactured chlorate of potash, and apphed it in the manufacture of a priming powder which he demonstrated by firing a eaninon in Madison Barracks, using a fiammer to ignite it the sarcastic remark of an officer that soldiers cannot earry hammers to war, led him to invent a percussion lock A representation of Dr Guthne firing the cannon appears on the seal of the Jefferson County Historical Society

Dr Guthrie was as original and praetical in medicine as in the manufacture of chemical prod uets He was the first to use vaccination in Jef ferson County, and gained great fame by his success in preventing smallpo. He was one of the carliest persons to experiment with anesthetics. In a letter writen to his daughter on February 9, 1848, he says.

"I could have made a fortune if 1 had gone to New York as 1 was urged last fall, by making sweet whisky which you remember taking when suffocated with chareoal. You see it is called chloroform and the papers are beginning to give me the credit of discovering it. I made the first particle that was ever made and you are the first lauman being that ever used it in sickness. This likely to prove the greatest discovery in medicane the world ever siw. By breathing it a few seconds the person falls apparently into a sweet sleep, when breasts, legs and arms may be cut away, painful labors ended and all without pam or injury."

In this same letter to his daughter he tells of the death of his son, an officer in our army serving with troops in Mexico who was wounded in the knee and after two amputations of the leg without an ane-thetic lingered a month and died. When hearing of the musthetic properties of the medicine he tried it on a cat which succumbed. The second cat lived. He then tried it on his colored servant which was very nearly fatal. The first actual use of chloroform as an anesthetic was upon a soldier at Madison Barracks who hild a leg amputated by Dr Guthrie.

9

THE DAILY PRESS



A UNIVERSAL LANGUAGE

Doctors are popularly supposed to understand Latin and to converse in it. That was the universal language of physicians and all other educated persons up to a century or two ago, the result being that a student could wander all over Europe understanding the teaching in all the Universities. High School students spend time enough on Latin to be able to speak and understand simple Latin, if it were taught as a living tongue.

Many attempts have been made to invent a simple language, but none have succeeded; but English is being spoken by more and more people, and seems likely to become a world-wide language.

One difficulty with English is its great richness in synonyms. The large dictionaries contain hundreds of thousands of words, but less than one thousand are sufficient for a child of six or eight years.

The New York Herald Tribune of January 3, describes what Professor C. K. Ogden, of Cambridge University, England, calls a "Basic English" which he proposes as a universal language, whose value is that its roots are already understood by millions of people all over the world. The article says:

"Basic English was formulated in 1928, Mr. Ogden said, and is now in the state of being adapted to different countries, since each nation must be taught in its own language, and the grammars made 'foolproof.'

"He and a group of scholars, who are working with him throughout the world believe it will become 'the universal language of radio, the talkies, commerce and science.' There are already phono-

graph records, sketches, and even novels in basic English.

"'Basic English,' he said, and added that he was now using Basic English, 'is an attempt to give to every one a second or international language which will take as little of the learner's time as possible. It is a system in which everything may be said for all the purposes of everyday existence; the common interests of men and women, general talk, news, trade and science. To the eye and ear it will not seem in any way different from normal English, which is now the language of 500,000,000 persons.

"It is an English in which 850 words do all the work of 200,000, and has been formed by taking out everything which is not necessary to the sense. "Disembark," for example, is broken up into "get off a ship." "I am able" takes the place of "I can"; "shape" is covered by the more general word "form"; and "difficult" by the use of "hard." By putting together the names of simple operations—such as "get," "give," "come," "go," "put," "take"—with the words for directions like "in," "over," "through" and the rest, two or three thousand complex ideas, like "insert," which becomes "put in," are made part of the learner's store."

"Mr. Ogden divides his 850 words into four main groups—names of operations, names of things, names of directions, and names of qualities. There are 600 names of things, 400 general, such as 'adjustments,' 'experience,' 'month,' and 200 picturable, such as 'boat,' 'potato' and 'street.' Then there are 150 words for qualities—the adjectives. The vocabulary includes cats and dogs. but no giraffes."

FOUNDATIONS

The New York Herald Tribune of December 28 has an editorial on "Foundations," inspired by a report of the Twentieth Century Foundation on the 206 other known endowments which are organized for administrative purposes and which control funds amounting to over seven hundred and seventy millions of dollars. The editorial says:

"Foundation grants have declined 23.7 per cent in 1931 as compared with 1930. This is almost exactly in the same proportion as the decline in national income. But more important is the shift noted in the flow of their largesse. Though medicine and public health continued to receive much the largest proportion of donations, or 31.4 per cent of the grand total, with education in second place (24.9 per cent), the disbursements for social welfare showed a gain of from \$1,861,450 in 1930 to \$3,367,399 in 1931. 'This charge,' says the report, 'was undoubtedly due to the immense increase in the demand for immediate relief because of the depression.'

"Other increases are attributed to the same influence. Grants in the field of social sciences showed a gain of 45.1 per cent, in that of economics 28.8 per cent. Unfortunately, or so the Twentieth Century Fund views it, the amounts involved in the latter case were negligible.

"Only eighteen of the 102 foundations supplying adequate data showed an interest in economics. Only eight displayed an interest in government. The grants in these fields amounted to 1.5 and 1.6 per cent of the total respectively. Other fields of interest which show a surprisingly small percentage of the whole are child welfare, with 2.3 per cent of the total; individual assistance, with 3.4 per cent; the lumanities, with 1.5 per cent; and, most surprising of all, social welfare, which, in a year when relief measures are headlined in the newspaper's every day, reached only 6.4 per cent of the total of all fields put totogether."

"This is salutary comment. No doubt in many if not most instances the deeds of gift establishing these trusts render them relatively powerless to change the objects of their benefaction. However, an effort to do so might discover a greater elasticity than seems at first apparent. In the meantime the public will continue to regard the great good they do with the gratitude it deserves."

The New York Sun of December 27 supplies the following additional information:

"The Twentieth Century Fund was created in 1919 by Edward A. Filene to furnish a medium through which he might make his public gifts most effective by submitting their distribution to the balanced judgment of a group rather than the personal decision of an individual." The activities of the Twentieth Century Fund are centered almost entirely in the field of economic progress.

"The Carnegie Corporation heads the list of the twenty largest foundations with a capital of \$161,000,000. The Rockefeller Foundation is second with assets of \$143,000,000. Together these two organizations represent about 40 per cent of the total capital of all reporting foundations report-

ing to the Twentieth Century Fund.

"The largest sum given away by any foundation was contributed by the General Education Board, one of the Rockefeller group. It disbursed \$16,-000,000. The next largest sum was \$13,000,000, given away by the Rockefeller Foundation.

"The Carnegie Corporation was third with \$5,-000,000. These three foundations contributed about two-thirds of the total paid out by the 102

foundations.

"The General Education Board at that gave away 47 per cent less than it did the year previous. The Rockefeller Foundation's decrease was 19 per cent, while the Carnegie Corporation increased its gifts by 19 per cent. It was one of four to show increases in disbursements."

THE FAMILY DOCTOR

The *New York Times* of December 19 has the following comment on the relation of the family doctor to the Costs of Medical Care:

"In his annual report to President Butler, Dean Rappleye of Columbia's School of Medicine adresses himself to medical economics—a question recently considered by the Committee on Medical Costs. He warns against adopting any program that endeavors to reduce professional services to mere terms of economics and organization. Physicians have always insisted that the practice of medicine is not only a science but an art. It follows that the 'art' must suffer if a patient is treated as if he were merely a living machine.

"Medical art finds expression in the personal relationship between physician and patient as well as in skill and knowledge. Hence the pleas recently heard on behalf of the old-fashioned family physician. He knew the whims of Aunt Sarah and the aches of Uncle Joe. What he lacked in special knowledge he more than made up by his personality and the confidence that he inspired.

He embodied 'the attributes of friend, priest and physician,' as Dr. Squier aptly put it in his recent presidential address before the American College of Surgeons. Contrast human sympathy in sickness with the mechanical routine inseparable from rigid organization and economics, and we grasp the implications of that 'art' which we are in danger of losing.

"Both the majority and minority reports of the Committee on Medical Costs advocate restoring the general practitioner to his old position. If the ratio of physicians to population were in the United States what it is in France or Germany, we should have some 75,000, Dean Rappleye tells us. Actually we have about 156,000 concentrated for the most part in cities. Solve the problem of finding practice for this oversupply, and we not only solve the problem of medical costs, without resorting to the kind of organization that Dean Rappleye fears, but also enable the old-fashioned family doctor to demonstrate what the Hippocratic oath really means."



BOOK REVIEWS



THE INTERNATIONAL MEDICAL ANNUAL. A Year Book of Treatment and Practioner's Index. Year, 1932. Edited by CAREY F. COOMBS, M.D., and A. RENDLE SHORT, M.D. Octavo of 658 pages, illustrated. New York, William Wood & Company, 1932. Cloth, \$6.00.

While this issue of the Medical Annual reflects intense activity in all branches of medicine it can hardly be said that the past year has revealed outstanding dcvelopments. Medical literature is to a large extent controversial and so a good deal of it is devoted to discarding methods originally advocated in the heat of enthusiasm. For example,

1. Scarlet fever antitoxin is now recommended with extreme caution as it causes serum sickness in 25% of cases. Whatever good is supposed to accrue from its use is largely problematical.

2. The maggot treatment for osteomyelitis is also in for a fatal attack. The retreating statement reads-"this treatment may be effectual, but it seems unlikely to become popular."

3. Certain tests for diagnosing cancer such as the Bendien test have won ephemeral popularity. The reader may gain an insight into the variety of these tests from

this condensed section of the annual.

4. The subject of focal infection, especially as regards teeth, is in for some heated criticism. Even Rosenow of the Mayo Clinic has become conservative when he now states that "not too much should be expected from the removal of a focus, especially in chronic conditions.

5. The enlarged thymus seems to be losing its momentum as a basis for x-ray therapy. H. K. Pancoast tells us that abnormal width of the thymus shadow on the x-ray is of no particular significance. His statements are well supported by those of other observers.

6. We are also fold that status thymico-lymphaticus has no existence as a pathological entity, and that unexplained sudden deaths should never be attributed to that vague term.

7. Even lysol, so largely relied on as an antiscptic, is now being discarded as a useless and ineffcetive chemical. EMANUEL KRIMSKY.

MANUAL OF CLINICAL AND LABORATORY TECHNIC. BY HIRAM B. WEISS, A.B., M.D., F.A.C.P., and RAPHAEL ISAACS, A.M., M.D., F.A.C.P. Fourth edition. 12mo of 117 pages. Philadelphia, W. B. Saunders Company, 1932. Cloth, \$1.50.

For the busy physician who is in a hurry to find a eomprehensive description of any of the routine clinical or laboratory diagnostic procedures a ready reference guide is invaluable. This condensed handbook describes and interprets these various tests in sixty pages in such a way that the reader is never disappointed. Besides there are some additional pages devoted to height and weight charts, to food values and to other matters to which we must often refer. A book of this type should be within easy reach of the family physician at all times. EMANUEL KRIMSKY.

ORTHOFEDICS IN CHILDHOOD. By WILLIAM L. SNEED, M.D. 12mo of 318 pages, illustrated. Philadelphia, J. B. Lippineott Company, 1931. Fabrikoid, \$5.00.

Pediatrists are constantly confronted with orthopedic problems, in fact they are often the first line of defense in the detection of bone or joint lesions. Treatises on pediatries must of necessity deal with such subjects in a perfunctory manner, and textbooks on orthopedic surgery

offer too much detail for the average physician's need. This volume in the Everyday Practice Series affords a precise clinical picture sufficient for guidance in arriving at a diagnosis of such diseases and deformities as fall within the ever increasing seope of orthopedie surgery. Methods of treatment are plainly stated, and suggestions for office management are practical. Surgical procedures are mentioned and sufficiently outlined to make one's advice to the parent regarding the more serious lesions accurate and authoritative.

The author's aim was to stress simple methods which eould be carried out by the family physician. This he has succeded in doing. It is a good book-worth reading, and full of clinical suggestions which the general surgeon will welcome as well. D. E. McKenna.

PRINCIPLES OF PREOPERATIVE AND POSTOPERATIVE TREAT-MENT. By REGINALD ALEX CUTTING, M.D., C.M., M.A., Ph.D. Quarto of 812 pages, illustrated. New York, Paul B. Hocber, Inc., 1932. Cloth, \$10.00. (Hoeber's Surgical Monographs.)

There is a constant need for a comprehensive survey of nicthods of preoperative and postoperative therapy. With this need in mind, the author has attacked the problem.

In this pursuit, he has covered the general principle, the specific accidents common to any case and the pitfalls of special operations.

The student of surgery is often at a loss to put a true value on various specific procedures. In this treatise these procedures are given a fair value based on experience of the author and the reports in the medical literature. The conclusions often relegate to the diseard many commonly employed procedures or agents.

For the student who is to meet his troubles and for the surgeon who has met them all too often, the text will be of great value. As a textbook to give immediate help to either in his problems, it will be found filled with resourceful measures. It helps one to feel that he has covered all the really useful things that one might do in the presence of vital preoperative conditions and postoperative accidents. In short, it is the latest word on the subject and a book well worth possessing.

ROBERT F. BARBER.

ELECTROSURGERY. By HOWARD A. KELLY, M.D., LL.D., and GRANT E. WARD, M.D. Quarto of 305 pages, illustrated. Philadelphia, W. B. Saunders Company, 1932. Cloth, \$7.00.

This is a well printed book of 276 pages of text with generous Bibliography, satisfactory index and 382 illus-

trations,—original and very well done.

In the preface, reviewing the advancement of surgery by "leaps and bounds, both in the number of operations done daily, and in the boldness and precision of our technic," Howard Atwood Kelly, who has been in the foremost rank of surgeons since the late sixties, sayselectrosurgery is "destined in no small measure to replace scalpel, ligature and hand contacts with wounds, as well as notably to pare down the number of those listed as the 'inoperables' by skilled surgeons.'

The history of electrosurgery is recounted very faithfully, giving one the real significance of the marvelous progress attained through, not alone medical and surgical works, but by the aid of physicists. Kelly emphasizes the "gratuitous labors" and gives recognition of the elaims of the pioneer. The physics of high frequency currents are probably very thoroughly given in a chapter under that heading. The collaboration of three men,

physicists, assures a very accurate and detailed description.

Clinical and laboratory observations on Histological changes are presented clearly with thorough discussions on electrodeogualation and acusection. Under a sub-title of Laboratory Studies, such worthwhile observations as the following are made: "Metastatic nodules in the intestinal walls or mesentery can be exploded out of existence, the sterilized tissue coagulum disappearing to be replaced by scar tissue;" liver resection by electrosurgery without hemorrhage.

Very valuable are the general principles laid down, covering primary and secondary operations, showing in detail choice of and reason for method applied to soft tissues or bone—biopsy—grafting, etc.

Various chapters cover skin, mouth, ear, throat, thyroid, thorax, breast, abdomen, gynecology, urology, proctology and the central nervous system.

Anesthesia and post-operative care are given much consideration. A chapter is given up to a discussion of irradiation and electrosurgery, contrasting the advantages and the disadvantages. This chapter alone makes possession of this book worth while.

To those of us who read assiduously the works of Howard A. Kelly, this book is again an example of the thoroughness of the author.

JOHN L. BAUER.

THE USE OF LIPIODOL IN DIAGNOSIS AND TREATMENT. By J. A. SICARN and J. FORESTIER. Octavo of 235 pages, illustrated. New York, Oxford University Press, 1932. 'Cloth, \$4.00.

This is a book of 192 pages, profusely illustrated in excellent manner and presenting a very extensive bibliography. This bibliography is probably the most complete on the subject in existence. The work as a while is a most comprehensive study of the use of lipiodol as an aid to diagnosis and as a therapeutic measure. The work starts off with a study of lipiodol itself—its nature, chemical properties, etc.—followed by a most scientific study of the rate of elimination from the tissues or from the body cavities. It is of interest that, according to the authors, lipiodol may remain present up to two years after an injection and is seldont eliminated within one year. The indications and contra-indications of the use of lipiodol as a diagnostic measure in conjunction with radiography are clearly given. The technique of examinations of the spinal canal, sinuscs, male and female generative systems and the broncho-pulmonary system, together with a full description of the instruments used, is set forth in detail.

A discussion of the therapeutic value of lipiodol as an analgesic in painful conditions of the nerves and joints is most completely provided. The workmanship of the book, both as to type used and the quality of the illustrations, is beyond criticism. This book is of value not only to the roentgenologist but also to the various specialists who may use this method of examination to marked advantage.

CHARLES EASTMOND.

Accidents, Neuroses and Compensation. By James H. Huddleson, M.D. Octavo of 256 pages. Baltimore, The Williams & Wilkins Company, 1932. Cloth, \$4.00.

This timely work attempts to analgamate the views of the several neurologists who have interested themselves in the many and varied nervous and mental disorders that frequently follow trauma. The author's own wide experience places him in a unique position to clarify the terms applied by others to the several combinations of symptoms that may follow injury and which are frequently alleged to be the result of the trauma. These mental twists, so closely linked with trauma and therefore in many instances compensable, have been very difficult problems not only for the physician but also for the

lawyers, the ingurance carriers, and the compensation boards.

In this work consideration has been given to the effects of structural trauma, but the author's chief concern has been to bring some order and understanding out of the claotic state in which he finds the present knowledge of the psychogenic disorders associated with or following physical trauma. The subject has been dealt with by chapters on the etiologies, symptomatology, structural pathology, the post-traumatic psychosis, malingering, differential diagnosis, and the prognosis. About one-third of the 216 page treatise has to do with treatment, compensation and prophylaxis. This last mentioned part could be studied in detail to great advantage, particuarly the chapter on treatment.

Every physician who treats injured workingmen should find this book an invaluable aid toward a better understanding of patients whose complaints cannot be explained on a structural basis. JEFFERSON BROWDER.

Human Cancer, By Arthur Purdy Stout, M.D. Octavo of 1907 pages, illustrated. Philadelphia, Lea & Febiger, 1932. Cloth, \$10.00.

In presenting his book, "Human Cancer," the author gives a comprehensive discussion of the development and growth of all types of cancer in the human body. It would be impossible to limit this treatise to one volume if the author had gone into his subject in great detail, and for this reason he has covered the general subject of cancer only. Because of this general treatment, the book is particularly well adapted for the general practitioner and student.

The subject is discussed with great clarity and simplieity, and the result should make a wide appeal not only to the surgeon and surgical pathologist, but also to the general practitioner and the student, as well as to the roentgenologist and radiotherapist. The subject is presented in a particularly well organized and authoritative manner.

It is illustrated with 331 engravings, and includes an appendix by Dr. George F. Laidlaw, covering the Silver Staining of Reticulin and the Differentiation of Cells in Tumors.

FREDERIC DAMEAU.

FUNCTIONAL DISORDERS OF THE LARGE INTESTINE AND THEIR TREATMENT. By JACOB BUCKSTEIN, M.D. 16mo of 265 pages, illustrated. New York, Harper & Brothers, 1932. Fabrikoid, \$3.00. (Harper's Medical Monographs.)

This work, one of a series of books edited by Doctor Harlow Brooks, has been written for the general prac-titioner. The author, who realizes that a dissertation on functional gastrointestinal disorders would hardly fill even a small volume, has taken the opportunity to present much of value in other directions. In Part One he gives a brief, yet comprehensive survey of gastrointestinal physiology and goes at length into the important question of history taking and physical examination. In all the discussions of the so-called gastrointestinal neuroses, the author is very careful to emphasize that a diagnosis of a functional disorder must be made only after the most complete study of the patient has disclosed no lesion accounting for the symptoms. The book is replete with reports of cases treated by the author in accordance with his recommendations, and a careful study of his findings often reveals that an organic condition was the cause of trouble. Part Three, on "Motor-Sensory Neuroses of the Intestine" consists largely of a discussion of organic lesions such as duodenitis, colitis and proctitis with some mention of vagotonia as a cause of colonic disorders. The chapter on constipation is excellent, that on visceroptosis rather poor. As a whole, the book is apt to be misleading to a general practitioner, even though the case histories are illuminating.

January 15, 1933



OUR NEIGHBORS



INDUSTRIAL EXAMINING CLINIC IN WISCONSIN

A proposed clinic for the examination of industrial workmen is described in the Wisconsin Medical Journal for December, as follows:

"A so-called Examining Clinic which will give pre-employment and periodic examinations to potentially upwards of 7,000 employees in the metal trades in Milwaukee, established and financed by the Employers Mutual Liability Insurance Company of Wausau, met with the active opposition of the Council of the State Medical Society of Wisconsin following an all-day special meeting on November sixth.

"The 'Wausau Mutual' is the same company that caused the introduction of a bill in the 1931 legislature providing that nurses in industrial plants should be exempt from the provisions of laws establishing standards for treating the sick and that such nurses might administer not only first aid and apply dressings but might prescribe 'family remedies and medicines allowed by law to be sold without a prescription, for injured or sick employees or to their immediate families.' The bill was killed.

"Under the newly formed Examining Clinic sponsored by the same insurance company, it is the announced intent to form a corporation of employers to hire a physician or physicians who conduct pre-employment and subsequent examinations under the direction of the lay group. Obviously if laymen can group together to hire a physician whose services for diagnostic purposes are to be re-sold, it will likewise be possible for the same group or corporation, or any other group of laymen to enlarge the plan to comprehend other services in treating the sick and injured.
"The announced purpose of the clinic is to

protect employers and the insurance company from the very large bills resulting from an increased number of silicosis claims and to protect the workingmen from silicosis. The clinic is modeled after a somewhat similar organization at Picher, Oklahoma, presently run by mine operators, at which the costs per examination, including blood Wassermann and one 11 by 14 flat x-ray film, have been reduced to under two dollars.

"A long effort by the Council to secure a change in the announced policy of the insurance company so as to permit of the use of local facilities and local physicians capable and willing, under conditions that would not provide for direct control of their work, met with no success. Representatives of the insurance company declared that operation of the clinic would only be successful from the point of view of the information desired by the employer and cheapness of medical service. under the plans announced by them. That the service so organized might be extended to other

cities was admitted to be a possibility.

"Advocates of the plan stated that interested employers insured with the Wausau Company constitute the members of a corporation. This corporation, acting under the financial backing of the insurance company, will sell examinations of em ployees for \$3 each to employers insured with the Wausau Company and at \$5 each to employers not so insured. No information will be given to the employee by the examining physician other than that, when he finds conditions warranting medical service he will state, without disclosing what has been found, that he will be glad to give his findings to the family physician. Employers, on the other hand, will receive a code indicating whether the employee is a desirable physical risk in his present occupation. It was contended that where physical examinations indicated the advisability of the procedure, the man would not be discharged, but his occupation would be 'shifted' to one less hazardous. It was admitted, on the other hand, that comparatively little shifting of employment to avoid dust could be accomplished in most foundries under their present set-up. It was suggested that the plan might actually work out not only to deprive a men of his trade, but to do so with all employers thing advantage of the clinic plan, and upon the result of what might prove to be but a partial physical examination by but one physician. In other words, the usual relationship between physician and patient would be ignored and disregarded for the purposes of the clinic.

"After an all-day session, representatives of the insurance company indicated their willingness to meet with a committee of the Council to iron out basic differences. The Committee found, however, that the company was adamant and as a result the Council voted to support the Medical Society of Milwaukee County and actively oppose the clinic.

"That it was anticipated that the proposed setup of the clinic would bring disapproval of the medical profession was admitted by a representative of the insurance company who stated that the plan had been kept a secret for the better part of a year until it could be announced as being under way. The company had further secured an advisory committee of physicians but in terms of one representative, the main purpose of this committee was 'to sell the profession.'

"To make its opposition effective, the Council (Continued on page 122-adv. xii)

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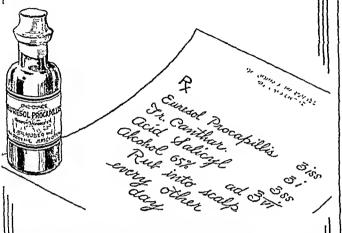
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Maltcao is easy to mix with milk or water. Children and grown-ups alike enjoy it with meals or at bed-time. Especially during winter months, when diets are heavier and vegetables less plentiful, Maltcao is a valuable adjunct to the daily diet.

8 oz. sample can to physicians on request Merckens Chocolate Co., Inc., Buffalo, N. Y.

Maltao

(Continued from page 120)

has directed certain officers to bring the positic of the profession to the attention of all affecte including the Surgeon General, the Industri Commission of Wisconsin, and others."

The President of the Wisconsin State Societ Dr. R. H. Jackson, writing on the President Page, says:

"Neither at this conference nor at a later of held in Milwaukee at which were present it President and certain other officers of the insurance company, representatives of the employer and the Council of the State Medical Society, wit possible to convince those promoting the projet that it would be inimical to the best interests the public and especially labor to carry out to plan as outlined to us. Nor were we able to persuade them that among the 850 practitioners medicine in Milwaukee County there were may who were both willing and capable, and equipped with proper facilities to render the desired serving a satisfactory manner.

"When informed that all the facilities of me cine were at their command if they would but them, the reply was, they would not.

"Aside from the question of how such a prest plan affects the public interest and especially t interest of labor, we are here concerned with direct professional problem as to the legal right this proposed corporation of laymen to practi medicine. Even though in this instance such pratice consist solely in the making of a diagnos our tacit consent at this time to the slightest devtion from the basic fundamental principles unda lying what statutory provisions govern the pratice of medicine in this state may well be the etering wedge which will permit the entrance other factors inimical to the public interest and destructive of the ideals of organized medicine

WORKMEN'S COMPENSATION IN UTAH

The relation of the Medical Society to administration of the workmen's compensation in Utah is set forth in the following abstration the December issue of Colorado Medicin

"The malpractice suit assumes an importa place in Industrial Medicine, because in all the States the injured workman has had taken from him by law, the right to bring an action in couragainst his employer, be this employer a minarial railroad, or a manufacturing plant. Now this a very important right. This law is justified by society upon the theory that the remedy law is uncertain, expensive, and hampered lourt delays, while working men's compensation is certain. It is immediate in reaching the injured worker or his family in case of death at the time when it is most needed and at little or no

(Continued on page 123-adv. xiii)

(Continued from page 122-adv. xii)

expense to him, and further he gets it all. But he can and does sue his doctor. The law is silent here.

"It was in 1917 that the working men's compensation law was enacted in Utah. The schedtile of fees paid the doctor at that time together with other restrictions imposed, worked a decided injustice to our medical men. Some of the most experienced physicians refused to care for these cases. The injured men complained to the Commission. They also asked to be allowed to choose their doctor. The Commission employed a physician to serve as a referee. He was a political apointec.

"Various committees from the State Medical Society met with the Industrial Commission and Insurance Carriers from time to time and after much deliberation, extending over a period of years, our present arrangement was brought about.

"The Insurance Carriers and the Commission agreed to an increase in the fees paid physicians provided they could get our best men to serve and at the same time be protected from the unscrupulous doctor who might perchance pad his bill, and also be assured against incompetent services. Here are a few of the listings:

> Old Fee New Fee Schedule Schedule

	acticult	Scucant
Office dressing	\$1.00	\$2.00
House visit, day	2.00	3.00
House visit, night	3.00	5.00
Fracture forearm, one hone.	15.00	35.00
Fracture forearm, both bones	20,00	50.00
Fracture femur	30.00	100.00
Amputation thigh	. , 40.00	100,00
Laparotomy	40.00	150.00
Herniotomy		100.00
Enucleation of eyeball	35.00	60.00

"To take care of this situation, the Utah State Medical Association now furnishes a committee of three experienced physicians which meets with the Commission at the State Capitol every Friday morning. This committee assists the Commission in rating the disability, both temporary and total, of the injured man and in adjusting the doctor's fee which might be in dispute. They also are consulted regarding the contention of the Insurance Carrier.

"This committee of doctors makes a careful investigation in the presence of all parties concerned. They systematically examine the injured man with his clothing removed. He is weighed and measured and given a thorough physical examination. They listen to his story and study the history of the case including x-ray and laboratory findings furnished by the doctor on the case. They discuss the problem with the patient's physician. The Insurance Carrier presents his side of the case, and after all parties concerned

(Continued on page 124-adv, xiv)



tempting, nourishing drink for convalescents

To provide the extra nourishment so essential during convalescence — Coconalt with milk is suggested, at meals and between meals-daily.

Cocomalt is a delicious chocolate flavor food drinkeasily digested, readily assimilated, and palatable even to the very sick. It provides substantial nourisliment at little cost; and is especially useful post-operatively and during convalescence.

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Not only during convalescence, but whenever a high-calone diet is indicated, Cocomalt will be found useful. It is recommended for expectant and nursing mothers, for run-down men and women, for under-nourished children. Comes in 1/2-lh. and 1-lb sizes, at grocers and drug stores. Also in 5-lb. can for hospital use at special price.

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KNOX is the real GELATINE

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(Continued from page 123-adv. xiii)

have had their say in the presence of each other, they all withdraw, after which each doctor on the advisory committee gives his conclusions to the Industrial Commission who then make the final decision which is their duty as provided by law.

"This committee of doctors serves without any remuneration whatsoever, and as a result their individual findings are not influenced by private fees. They work as a purely unbiased, scientific body, and their services do not cost the injured man, the Carrier, the Commission, nor the State of Utah, one cent. This service is competent, scientific, and confidential. It is strictly professional and is even better than money can buy.

"To ease the burden on the profession, this service rotates; each doctor is on duty six months. The oldest man in point of service retires, and a new man goes on every two months. A competent x-ray man is included in

this rotating committee.

"Flagrant or unusual cases are appealed to the Council of the State Medical Association, which Council consists of the President, President-elect, and three councillors elected by the House of Delegates. These five men hold a special meeting with the Carrier, the doctor, and the Commission and in like manner iron out the difficulties. So pleased have the state officials been with this service that it has been suggested that the doctors be paid. The profession is of the opinion that if this were done, the service would degenerate into politics and develop a lot of political doctors who would contend for this work as ward-healers do, and the high ideals of our profession be trailed in the dust."

DISTRIBUTION OF MEDICAL SER-VICES IN WISCONSIN

The State Society of Wisconsin has conducted a study of the distribution of Medical services along lines similar to that made by the Committee on the Cost of Medical Care, and the report of the Committee to the House of Delegates fills twenty-six pages of a supplement to the December Wisconsin Medical Journal, the supplement being devoted to the proceedings of the House of Delegates on September 13-15, 1932. The report contains masses of statistics, but the following recommendations are of special interest to physicians in private practice:

"We recommend that the Society disapprove any system which provides a single practitioner to care for the indigent, except such as may be in institutions, for the reason that such a system is not conducive to securing a proper public service."

"We recommend that such component Society

(Continued on page 126-adv. xvi)

4 New Concentrated Vitamin Products



Vitamin A alone

Name SmacoCaritol Product Nn 505

Description: Catitol 15 a 0 3% solution of carorene in bland oil, providing a safe, palatable and convenient concentration of vitamin A for therapeutic use

Taste: Entire absence of all fishy taste makes it accept able to your patients

Color: Deep red, due to Carotene

Potency: Ten drops contain one thnusand International Units of vitamin A

Dorage Three to five drops daily for infants and young children live to ten drops 'daily for adults

Package: 15 c.c. dtoppet top, protectively-colored bottles, in special cartons to shield it from the light

Cast. Because of its high po tency and the small doses required, it is an inexpen sive source of vitamin A, in spite of the fact that it is the only product contain ing vitamin A alone

Indications. For conditions caused by vitamin A defi-ciency and cured or pte vented by adequate vita min A or carotene dosage

Vitamin D alone

Name: Smaco Concentrared Viramin D Product No 515

Description: This product is Natural Vitamin D, being a highly potent extract of the antitachitic principle of cod liver oil

Taste Palatable and free from objectinnable taste,

Color: Nearly colorless.

Potency: Ten drops are equal tn vitamin D potency to three teaspoons of standard potent cod liver oil

Dosage: Average prophylac no dose, ten drops datly Average curative dose, fif teen to thirty drops daily, depending on severity of case

Package 5c.c and 50c c pto tectively-colored botrles.

Cost: Approximately the same as that current for equivalent vitamin D dos ages of plain cod liver oil.

Indications: For the preven tion of cure of rickets and spasmophilia, and where ever vitamin D thetapy is required, such as tetany and osteomalacia

Vitamins A and D Smaco Cod Liver Oil together

Name Smaco Vitamins Aand D Product No 525.

Description: Smaco Caritol and Smaco Concentrated Vitamin D are combined en this product, providing both vitamins A and D to concentrated form for therapeutic use

Taste Palatable and free from objectionable taste

Color. Red, due to carotene.

Potency. Ten dtops ate equi valent to one thousand International Units of vita min A plus the vitamin D potency of three teaspoons of standard potent cod fiver oil

Dosage: Ten drops or more datly, depending upon in dividual requirements

Package Sc c and 50 c.c pto tectively coloted bottles

Cost: Approximately the same as cutrent ptices for equal dosages of other vitamin concentrates

Indications: Wherever vita-mins A and D are required together in palarable form and small dosage

Name *Smaco Cod Liver Oil (with Carotene and Con centrated Vitamin D) Prod uct No 510

Description, A high grade cod liver oil fortified with vita min A of vegetable origin (carotene) and natural vita min D described in the second column

Faste: Although carotene is not a flavoring agent, never-the less the addition of carotene noticeably tm proves the flavor

Color: Deep red, due to carotene it contains

Potency; One teaspoon is equivalent in vitamin D potency to three teaspoons of standard potent cod livet oil plus 1,000 Inter-national Units of vitamin A per teaspoon in addition to the original vitamin A potency of the oil

Dosage. One terspoon daily for average individual needing vitamins A and D

Package, Four ounce pro rectively-colored bottles packaged in special cartons to shield from light

Cost. Apptnximately one half as much as the equivalent amounts of vitamins A and D when purchased as plain cod liver oil

Indications Wherevera more palatable, concentrated cod liver oil is indicated (Only one-third as much is re quired as plain cod liver oil)

* This product is the Smaco Cod Livet Oil with Carotene announced in September further improved by the addition of the new Columbia Zucker natural vitamin D

New Vitamin Therapy Possible

Up to this time it has not been possible to prescribe vitamin A plane as in cases where vitamin D as not required or is already supplied by sunshine, ultra wielet light, viosterol, etc. Smaco Carrol makes possible the administration of Primary Vitamin A in drop doses, thus permitting the physician to regulate the dosage to meet individual requirements

Smaco Vitamin D is natural vitamin D It is not an irradiated oil and not a cod liver oil concentrate but rather a highly potent extract of the antirachine principle of cod liver oil. It is produced for therapeuric use by methods (Zucker Process) developed in the department of Pathology of the College of Physicians and Surgeons of Columbia University

It now becomes possible with these new Smaco concentrated vitamin products in prescribe vitamin A slone, vitamin D alone, or vitamin A and D together, in drop dosages and palariable form, thus permitting the physician to prescribe any desired potency of these vitamins and any desired combination

Smaco Cod Liver Oil, fortified with primary vitamin A and natural vitamin D, is available for those physicians who prefer to prescribe cod liver oil This Smaco product has two outstanding advan tages, namely - the cost is approximately one-balf as much as the same vitamin content of plain cod liver oil and only one third the dosage is requited

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(Continued from page 124-adv. xiv)

investigate in the light of its own peculiar requirements, those plans and suggestions advanced to provide a better service for the indigent sick. In this investigative work we shall continue our own efforts and pledge to the several counties our cor-

dial cooperation.

"We recommend to the Society that it enunciate the principle that the care of the indigent is a community obligation; that the physician should receive a reasonable compensation therefor; and that the charitable work that will always characterize the profession of medicine should be continued to the class of individuals who are endeavoring, under great handicaps, to maintain their independent financial status.

"In such organizations as may employ a fiscal agent for the purposes of assessment and collection of fees, our attention is called to the fact that such individuals frequently are the products of commercial schools and sometimes are primarily interested in the showing of income over expenditures." . . . "We earnestly recommend that this Society voice the principle that under the conditions cited some physician of the group be selected as an immediate advisor of the fiscal agent and be consulted in the matter of assessment and collection of all fees."

"From our studies and those of the Committee on Costs of Medical Care it is evident that the public itself is responsible for a considerable proportion of present costs of illness through the purchase of ill advised and worse than useless remedies and the services of the improperly or wholly uneducated. That self-diagnosis by the individual which leads him to purchase drugs on the basis of extravagant advertising claims of the manufacturer and without competent advice, is a pure economic extravagance which so frequently brings to our attention the tragic result of a disease far progressed which might have been controlled when the individual first sought a cheap relief. We mention this here only to point out that the greatest cost of self-diagnosis, the purchase of useless and sometimes dangerous drugs or the purchase of the services of the uneducated is not the monetary waste for the time that is lost.

"To those essentially rural communities which are unable to secure resident medical service by reason of inadequate income for the practitioner, we commend as an experiment the plan advanced by the State Health Officer of paying such resident physician a reasonable base income as Health Officer. The family physician is ever the first line of defense and offense in all public health

(Continued on page 127-adv. xvii)

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CLARENCE A. POTTER, M.D., Res. Phy.



(Continued from page 126-adv. xvi)

endeavor and such suggestion is made wholly in the interest of conservation of health and of better medical service."

The Committee also made a supplemental report of 16 pages on Contract and Panel Practice, and quotes extensively from the report of a study made by the Milwaukee County Medical Society, which contains valuable statistics and especially descriptions of Sick Benefit associations of Milwaukee.

DISTRICT MEETINGS IN IOWA

The December issue of the Journal of the Iowa State Medical Society praises a county society "meeting of worth," as follows:

"It is the plan of the Speakers Bureau to publish from time to time the report of the outstanding medical society meeting of that month. Many points may be taken into consideration in judging 'the meeting of merit of the month'—originality of program, type of program, percentage of members present, and other features which tend to build up an active medical society and contribute to the development of the medical profession. Secretaries are urged to send in reports of their medical meetings and include these little details which may win distinction for one of their meetings.

"The 'meeting of merit' for November was the meeting of the second district of the Iowa State Medical Society at Mason City on November 15. The distinctive feature of this meeting was the use of local men for the program. Three of the four speakers were local doctors of the district and the other speaker was from the State University. This plan is in definite contrast to the growing practice of using outside talent, often from outside the state, for any medical meetings larger than a single county medical society meeting. Many counties, even, use men from outside their locality on all or most of their programs, thinking it enhances the interest. The enthusiasm manifested in the program of the second district meeting refutes this idea. This plan of a local talent program is making a real contribution to medical progress in Iowa; it is developing medical leaders in our own state, from among our own members.'

Commenting on the District Meetings, the Journal says:

"These meetings are heading in the right direction Not only are good, practical scientific programs given, but incorporated in them we find much information given that comes directly from the main office, giving the members an up-to-date insight into the general management and policies of the State Medical Society. This is significant. It more clearly sets forth our ideals and keeps afresh any changes that take place or are anticipated in the state organization.

(Continued on page 128-adv vent)

Ź

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Plullips' Milk of Magnesia has been the physician's standby as an effective antacid regulator for over 60 years—a given quantity neutralizes almost three times as much acid as a saturated solution of sodium bicarbonate and nearly fifty times as much acid as lime water.

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(Continued from page 127-adv. xvii)

"Nearly all papers or clinical reports are given by local members of the district in which the meeting is held.

"The programs are of a practical nature and the discussions are timely and high class in every way. And why should they not be? We have in each district many good men who are capable of constructive work. How can they be developed? The district meeting is the answer. These men belong to it. They are able and should be responsible for the meetings. Many young men are entering the practice of medicine. The district meeting is the forum in which they may develop and thus help to cement a true loyalty among all the members of our Medical Society throughout the State."

BUREAU OF CORRELATED ACTIVI-TIES IN WISCONSIN

The State Medical Society of Wisconsin has a custom that the President-Elect, as well as the other officers, shall make a report to the House of Delegates. President-Elect Jackson reported to the House of Delegates on September 13 as follows:

"Many of our problems and perplexities are associated with the activities society resorts to in its humanitarian efforts to relieve physical suffering. There is at times on the part of society and its agents a fundamental lack of understanding of the motives which actuate us in our attitude towards some of these activities. Doubtless, at times, our profession also fails to sympathetically comprehend the problems and motives of some of the agencies engaged in public preventive medicine and other fields.

"I should like to see established in this state a far closer liaison than exists at present between the private practitioner of medicine and all other organizations, public or philanthropic, which have to do with any phase of health.

"There already exist in this state all the physical requirements and personnel essential to care

for the health problems of the population in a satisfactory way. To insure harmonious co-operation there should be an annual meeting of minds of those interested in the various phases—a voluntary Bureau of Correlated Health Activitiescomposed of the permanent secretaries, the active and past presidents, and the councilors of all the existing present agencies, a forum at which many perplexing questions could be presented and in telligently solved to the mutual advantage of society and organized medicine. Unless organized medicine occupies a central position and serves as a socially sympathetic guiding influence in moulding the pattern of things medical, the medical profession of this state will inevitably be come steadily more subserviant to lay supervision under political domination.

"To put into effect this suggestion will place an additional burden upon the shoulders of ou Secretary. Based upon my personal observation during the past year, I should like to pay a sincer tribute to his work and personality. If I had been asked two years ago what I thought of him, would probably have replied, 'Oh, George is good fellow,' and let it go at that, thus betraying my own delinquency in failing to keep in touch with the many problems which are always on him.

desk pressing for solution.

"Today, I say he is an exceptionally capabl man in the right place. I feel that our Societ is singularly fortunate in having a man of hi training and ability constantly occupying the ke

position in our organization.

"The majority of us are too busy as practition ers to note in the ever-changing current of passin events those things which concern us as physician until they are accomplished facts. I believe that in the future there will arise many situation where foreknowledge on our part of propose activities by others will provide opportunity for tratual consideration and compromise adjustment and that a Bureau of Correlated Health Activitie with George Crownhart as one of our liaison of ficers is worth our consideration and effort."

This suggestion was adopted by the House o

Delegates.



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POST-GRADUATE MEETING IN TEXAS

The Texas State Journal of Medicine for December has the following description of a graduate course in Texas:

"The Fifth District Medical Society will promote for the benefit of the medical profession of Texas, a three-day post-graduate medical meeting, to be held in San Antonio, January 10, 11, 12, 1933.

"The program will consist of morning and afternoon general meetings, with an extended noonhour round-table discussion, immediately following lunch. There will be two night sessions, one of them open to the general public, the latter to be addressed by Dr. E. H. Cary of Dallas, President of the American Medical Association. There will be no discussions of lectures delivered at the morning and afternoon meetings, and none at the round-table discussions except as directed by those leading in the discussion. In other words, if we get the idea, it is intended that a post-graduate course more or less progressive in nature, will be directed by those in charge, with no disconcerting intervention, not even entertainment. The

round-table meetings will be group meetings, and will take the place of the usual scientific sections. One group each day will be devoted to lectures in Spanish. Several of the distinguished guests for this occasion will be from Mexico, which gives the occasion an international air. Many of the addresses in Spanish will be abstracted in English, and vice versa, both at the round-table discussions and in the general meetings.

"There will be seventeen teachers and lecturers in all, many of them well known to the medical profession of Texas, among the latter of whom we might mention Dr. Rudolph Matas of New Orleans; Dr. Francisco de P. Miranda, Mexico City; Dr. W. F. Braasch, Mayo Clinic; Dr. Eugene Dyer of Washington, and Dr. Ernest Sachs of St. Louis.

"The program, on the whole, is very similar to that af the original International Post-Graduate Assembly. There will be no special entertainment features, and no commercial exhibits. The Woman's Auxiliary will see that visiting women are taken care of."

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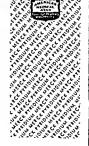
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DIGITALIS IN HEART FAILURE

In Maine M.J., Sept. 1931, Dr. Paul D. White of Boston asserts that life ean certainly be prolonged and made more useful and happy by restoring and maintaining with digitalis the tone of the heart musele which has begun to fail, whether or not the heart rhythm is normal. It is a wonderful drug, and even without rest, may restore normal heart function. Of course it must be given in the proper dosage.

"The administration of digitalis is still the most important measure of all in the treatment of moderate and marked degrees of congestive heart failure. It can be given rapidly by mouth or intravenously or intramuscularly. If there is not extreme urgency, a satisfactory plan for rapid digitalization is to give two pills or tablets, of 1½ grains of digitalis leaf each, three times a day for two or three days, or three such tablets three times a day for one and one-half to two days (that is, for five or six doses).

Sometimes proper rest and digitalis are not sufficiently effective to dispel congestive failure and edema. It is then that one should turn to diuretics. The salts, like ammonium and calcium chloride, are hardly worth using, except infrequently as adjuvants to more potent diuretics. The purine diuretics, theobromine and its allies, are often effective. The most satisfactory member of this series I have found to be theobromine-calcium salicylate or Theocalcin, given in the dosage of 15 grains

(two 7½ grain tablets) two or three times a day for a few days at a time or longer."

Literature and samples of Theocalein may be had upon request to BIL-HUBER-KNOLL CORP., 154 Ogden Ave., Jersey City, N. J. See page xii.—Adv.

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The Westport Sanitarium

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See page xii.—Adv.

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THE TREATMENT OF RHEUMATIC FEVER*

By W. W. HERRICK, M.D., NEW YORK, N. Y.

THE treatment of any disease of which the cause is not definitely known must be along empirical lines. Although often unsatisfactory, such treatment may be important and with real influence upon the disease. It is from this viewpoint we may profitably discuss the treatment of rheumatic fever. Measures at our command are local, general and specific. Rheumatic fever is an acute, usually self-limited but very painful disease. A primary object is the com-fort of the patient. This can be furthered by intelligent nursing care. Owing to the profuse sweating, patients are more comfortable between light woolen blankets and clad in cotton flannel. The joints should be immobilized in a comfortable position by pillows, by wrapping in layers of cotton batting, or by well fitting padded splints of wood or light plaster. The local application of methyl salicylate, magnesium sulphate and other substances in solution is probably without value.

The general treatment includes a diet which need not be strict. A simple diet of soft materials in the early stages, gradually increased during convalescence is in order. It should contain ample calories to prevent excessive loss of weight. To replace the fluid lost by excessive sweating and by the use of coal tar products, fluids must be freely given. Because of the large amount of waste material which escapes through the pores of the skin, the patient should be sponged frequently. This must be done without undue manipulation. The drugs which are useful in the management of rheumatic fever are the narcotics, the analgesies and the antipyreties.

In the acute stages, the patient is entitled to an amount of narcotics sufficient to control pain. For this codein or even morphine need not be spared. Nights with good rest thus secured in the early stages of the disease do much to relieve the painful muscular spasm which probably contributes to the discomfort of the arthritis. While the salicylates are of undoubted value, the best evidence available indicates that the disease is not shortened or its complications lessened in number or severity by the use of this drug.

'Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

However, under these products of coal tar, the discomforts of the disease are greatly mitigated; pain is lessened, fever is diminished and the general comfort and well-being of the patient are furthered. The margin between the therapentic and toxic doses of the salicylates is narrow. To attain a satisfactory therapeutic effect, it is therefore necessary to approximate the toxic effect. The average toxic dose of sodium salicylate for adults is about ten to twelve grams (grains 150 to 180) in twenty-four hours; of aspirin, ten grams (grains 150); of methyl salicylate or oil of wintergreen, eight cc. An accepted method is the administration of one to two grains of sodium salicylate or one to one and one-half grams of aspirin every hour for eight to ten doses or until toxic symptoms appear. These symptoms are those of einchonism; tinnitus, nausea, voiniting, loss of appetite, delirium; or those of shock; eyanosis, dyspnoea, low blood pressure. pallor, faintness, even collapse; or those of hypersensitiveness; largely dermatoses. At any hint of these evidences of toxic action, the drug should be stopped for from twelve to twentyfour hours and then one-half the former dosage resumed, gradually lessening until the manifestations of the disease are no longer present. Such gradual withdrawal seems wiser than sudden withdrawal and is thought to result in less frequent relapses. In the event of marked gastric disturbance following the oral administration of the salicylates, the drug may be given in solution by rectum in doses about 50 per cent greater than those suggested for oral use. Auother compound of salicylate acid used in treating this disease is pyramidon. In average doses of from two to four grams per day, this does not cause the toxic symptoms so often seen with sodium salicylate and is to be recommended when these are feared.

The cinchoninic acid compounds, atophan, tolysin, neo-cincophen, act very much as do the salicylates. Their use, however, is probably unwise because of the occasional toxic influence upon the liver. Numerous examples of icterus followed by necrosis of the liver, some with fatality, are on record following the use of even small amounts. In addition to this danger these compounds are expensive. It is probable that their use should be abandoned.

The use of such non-specific protein substances as typhoid bacilli, cascin, or scrums of miscellancous origin is often followed by benefit. Their subcutancous, intravenous, or intramuscular injection may lead to a reaction marked by chill, fever, lecuocytosis, to be followed by a subsidence of the fever, and of the manifestations of arthritis which may be temporary or more enduring. In some cases this improvement is dramatic, striking and almost convincing. At the present time, however, those most experienced are hesitant to advise and employ this somewhat drastic measure in a disease which has such serious visceral complications. While a conservative attitude does not necessarily condemn this form of treatment, its routine use cannot be advised unreservedly.

Until the cause of rheumatic fever has been definitely established, it may seem futile to discuss specific therapy. However, so many of the manifestations of acute rheumatic fever resemble those of hypersenitiveness to streptococci, that the use of streptococcic anti-serum or of streptococcic vaccines is suggested. The results of such attempted specific therapy are still a matter of experimentation and debate. With our present knowledge treatment with streptococcic anti-serum seems to fall into the same category as that of non-specific therapy and need not be separately discussed.

Recently much experimental work has been done upon the intravenous vaccination of patients with strains of streptococci isolated from the throats of patients with or convalescent from acute rheumatic fever. Apparently this method is a two-edged sword. In the acute stages of rheumatic fever, patients are very sensitive to such vaccines and their administration may be followed by an exacerbation of the disease. When the patient is at a stationary or sub-acute stage of the disease, the judicious administration of this vaccine may give an added impetus toward recovery, and it is possible that relapses may be prevented by such vaccination. There is experimental evidence pointing toward a state of hypersensitiveness to the streptococcus as a result of vaccination, a state followed by one of

hyposensitiveness which is again replaced by a hypersensitiveness. A therapeutic measure thus complicated and with the possibility of harm is one not to be undertaken at random and one the value of which is sub judice.

A point of great importance in the management of acute rheumatic fever is the elimination of foci of infection. It is apparent that infected tonsils, infected teeth, infected sinuses and possibly similar foci elsewhere in the body contribute to the prolongation or recurrence of an attack of this disease. The removal of such foci during the acute attack is often attended with For example, after tonsillectomy the danger. blood culture may become positive and the entire clinical picture change for the worse. general it seems best to wait until the acute manifestations of the disease have subsided before making a surgical attack upon local infectious. However, in the prolonged and recurrent cases a different attitude may be taken with advantage.

Of paramount importance in the management of this disease is the proper care of certain of its complications. Pericarditis and pleurisy with effusion are best treated by rest and aspiration as indicated. Most important of all are the cardiac complications. For these prolonged avoidance of bodily activity is essential. A good clinical rule is to enforce complete rest until all evidences of cardiac enlargement have disappeared and until the pulse rate and the response of the heart to exercise are normal. For this even one or two years may be needed. Following any other course exposes the patient to the risk of chronic invalidism. In the management of long continued cases or of cases with tendency to relapse methods found helpful in the treatment of other chronic infections such as tuberculosis offer much. Sunshine, fresh air, liberal diet with excess of vitamins are most helpful. Advantage may be taken of the observation that rheumatic fever is almost unknown in tropical and subtropical climates. In the persistent or recurrent case, a prolonged stay in Florida, the American southwest, Bermuda, Cuba or Porto Rico may be undertaken with profit.

Note: For a complete discussion of Rheumatic Fever with references to recent literature the reader is referred to the monograph of Homer F. Swift in the Nelson Loose-Leaf Medicine.

THE CARE OF COMA FROM UNKNOWN CAUSE*

By E. D. FRIEDMAN, M.D., NEW YORK, N. Y.

THE physician frequently encounters patients in coma or stupor. The determination of the causes of the varying degrees of unconsciousness is the important factor since treatment is

dependent on it. I shall therefore discuss our problem according to the dictum laid down many years ago by the famous clinician Gerhardt: first examine, then diagnosticate, and finally, treat.

* Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

The history is extremely important in every case, especially as to (1) the incidence of previous

iliness (otitis, sinus disease, diribetes, nephritis);
(2) the presence of injury, (3) the mode of onset (sudden in apoplexy and subarachnoid bleeding, gradinal in subdirial hematoma, uremia, diabetes), and (4) the associated symptoms, such as convulsious, headriche, dizziness and vomiting

In all cases the head should be examined for cyidences of local injury or bleeding from the various orifices. The examiner should be on the lookout for the odor of alcohol in the breath and the blood pressure should be determined (high in urenua and advancing compression of the brain) The urme, which should be obtained by catheteriation, must be examined for the presence of sugar, acctone, albumin and casts. In this connec tion it is important to remember that sugar may appear in the urine after epileptic and apoplectic seizures. In such instances the glycosuria rarely persists for more than twenty-four hours, it has been ascribed to disturbances in the Claude Bernard center in the fourth ventricle The blood must also be examined for evidence of nitrogen retention and hyperglycenna

In many of the cases we find conjugate deviation of the eyes—in cases of profound apoples, the patient "looks at his lesion". Foerster and others have described a number of oculogyric centers in the brain, frontal, parietal and temporal in location. When these centers are irritated they cause cephilo and oculogyric movements to the opposite side, when they are paralyzed, the head and eyes are turned toward the side of the de-

structive lesion The facies must be examined for evidence of asymmetry, the evegrounds looked at (after mydriasis) for signs of albuminurie or diabetic retinitis and choked disc. The superficial and deep refleves must be carefully gone over. In profound coma all the reflexes are abolished but in most cases of apoplexy the superficial reflexes are diminished on the side of the hemiplegia. I have found that the unilateral abolition of the corneal reflex is an important sign of coma due to vascular lesions of the brain 1 It is frequently associated with loss of the abdominal reflexes and diminution of the plantar response on the same side deep reflexes are usually diminished or absent in all cases of increased intracranial pressure and, currously enough, this is more often the ease with the knee jerk than with the Achilles reflex. The deep reflexes may also be diminished as a result of diabetic "pseudo tabes". The presence of a The presence of a positive Babinski sign is of great significance. In the early stages of apoplexy and in subarachnoid hemorrhage this sign is usually present bilaterally

The state of muscle tone must also be determined In coma there is, as a rule, general flacedity of the limbs except in cases of intraventricular bleeding in which we find generalized rigidity Lumbar punetures must also be carried out. It is extremely important for the detection of the various forms of meningitis and subaraclinoid bleeding. In some of the cases of skull injury the intrathecal pressure is very low. In my experience this is a bad prognostic sign. A ray examination of the skull injust also be performed in order to determine the presence of fracture of the skull or convolutional markings due to increased intracramial pressure.

Causes of Coma

- I General (such as alcoholism, urema, dia betes, optum and gas poisoning, and hypoglycenne states)
- II Lpilepsy
- III Intracramal lesions with or without focal signs
 - (a) Apoplexy
 - (b) Meningitis
 - (c) Abseess of the brain (d) Tumor of the brain
 - (a) Tumor of the brain
 - (f) Spontaneous subarachnoid hemoirhage

IV Trauma

- (a) Concussion of the brain
- (b) Gross hemorrhige with or without fracture

1 General Causes

Alcoholic come is recognized by the odor of alcohol in the breath, the incidence of vomiting dehrum and restlessness

In the tremic cases we find evidence of nephritis, characteristic changes in the finidility pertension, edema of the limbs, high introgen figures in the blood and transitory homplegias or monoplegias. The onset of coma in these cases is usually gradual and is preceded by headache, vomiting and other evidences of infoxication.

Opum poisoning can be identified by the small pupils the relatively good pulse and the shallow breathing. In cases of gas poisoning there is a lustory of exposure, at times, one may detect a characteristic odor in the breath, and the spectroscopic test is positive. The patient usually presents marked cyanosis with a peculiar redness of the skin.

In diabetic coma we find the "soft eyeball' (due to low infraocular tension), elevation of the blood sugar level and signs of acidosis, including low CO, combining power in the blood. There is frequently a listory of preceding nausea, vomiting and epigastric pain. Physical examination reveals the characteristic Kussmaul breathing, low temperature, and dryness of the skin (due to dessication of the tissues).

Hypoglycenic shock is usually the result of liverinsulmism. I recall two instances of this

¹ Unilateral Anestlesia of the Critica and Conjunctiva A Diagnostic Sign of Comp Due to Hemplegia E D Treelman M fl Journal of the A M A June 21 1919 Vol 72 p 1812

type of stupor. One was a case of suprasellar cyst with hypoglycemic crises, the other proved to be a tumor of the third ventricle. The hypoglycemic states were temporarily relieved by the intravenous administration of glucose.

II. Epilepsy.

Post-epileptic stupor is identified by the history, evidence of tongue bite, and the usually rapid recovery.

III. Intracranial Lesions.

- (a) Apoplexy. Apoplexy is one of the most common causes of coma and is due to either hemorrhage or thrombosis. The latter is more apt to occur slowly, especially during sleep, while the onset of hemorrhage is usually sudden. the typical case the face of the patient is flushed and cyanotic, the breathing is stertorous, the blood pressure is elevated, the pulse is slow and full, and there is general flaccidity of the limbs, more pronounced on the paralyzed side. As a rule, we find conjugate deviation of the eyes and head, either away from the lesion in cases of irritation of the oculogyric centers, or towards the lesion owing to paralysis of the oculogyric mechanism on the affected side. The pupils are dilated and fixed unless the hemorrhage is pontine in localization. The deep reflexes are at first diminished but the Babinski sign is positive. The corneal reflex is lost on the hemiplegic side (v.s.). The temperature rises and in the fatal cases the scene ends with a terminal hypostatic pneumonia. these individuals one usually obtains a history of nephritis and hypertension and, frequently, a history of preliminary small "insults" with dizziness and defects in memory, antedating the major attack.
- (b) Meningitis. Meningitis may be a cause of coma or stupor. It may be primary (tuberculous. meningococcic, or influenzal in type), or secondary, following or accompanying otitis and sinusitis.

In the tuberculous type, one may frequently elicit a history of bone or joint tuberculosis or there may be evidence of the primary infection in the lungs or kidneys. It may follow in the wake of Pott's disease of the spine. It may be accompanied by miliary tuberculosis in the lungs. The lesion in the brain is, as a rule, most marked in the interpeduncular space, hence the frequency of oculomotor palsies. At first the meningeal signs are only suggestive but later on one can demonstrate distinct rigidity of the neck and the positive Kernig sign. The spinal fluid is characteristic: it is fairly clear and colorless but may be xanthochromic. There is a definite lymphocytosis which rises as the disease process advances; the protein is increased and the sugar content falls progressively; after a few hours, a pellicle forms in which the tubercle bacilli can frequently be demonstrated.

The meningococcus infections are as a rule

more fulminating, there is more constitutional disturbance and the meningitic phenomena are more pronounced. Herpes is frequently present. The spinal fluid is purulent and usually the gram negative meningococci can be found in it; its sugar is reduced in amount or entirely absent.

The secondary meningitides usually accompany otitic or sinusitic disease and may be either abacterial (sympathetic) or bacterial in nature. In the sympathetic forms one finds either a polynticleosis or lymphocytosis in the spinal fluid but no organisms in the smear or culture; the sugar content is not seriously altered, and the meningeal signs are not pronounced. I have seen relief in such instances from the eradication of mastoid disease, or the clearing out of infective matter from the involved sinus. The secondary bacterial meningitides prove almost uniformly fatal.

(c) Abscess of the Brain. Brain abscess is another cause of stupor or coma. It may be otogenic, in which case it involves either the temporal lobe or the cerebellum. It may also accompany sinus disease, especially disease of the frontals and sphenoids. I have seen one case of temporal lobe abscess as a sequel of an intranasal operation for a sinus affection. Brain abscess may be metastatic in origin, secondary to a primary focus in the lung; in such instances it is usually a terminal event. It is important to remember that brain abscess may also be found as part of the picture of general sepsis.

As a rule, the patient is mentally torpid, the pulse is slow, and the temperature is only slightly elevated. In most instances there are focal signs pointing either to the temporal lobe (speech and field defects) or to the cerebellum (mystagmus and cerebellar phenomena).

- (d) Tumor of the Brain. Occasionally, hemorrhage into a tumor (a latent glioma, especially of the right hemisphere) may be ushered in by an attack of stuporousness. In such instances the presence of focal signs and changes in the fundi lielps to identify the lesion.
- (e) Encephalitis. Encephalitis as a cause of coma may be a primary process, when it occurs in epidemic form, or as part of the syndrome of Heine Medin's disease (poliomyelitis). It may be secondary, when it follows in the wake of measles, vaccination, varicella, or other infectious dis-

It may also be the result of salvarsan intoxication. In such instances it is hemorrhagic in type and usually fatal. There is nothing in cases of this group to suggest either a vascular accident or an otitic complication and the spinal fluid is usually normal.

There is another type of encephalitis described by Wernicke as polio-encephalitis superior alcoholica. It occurs in chronic alcoholics. lesions are largely peri-aqueductal in location, as in epidemic encephalitis, hence the frequency of nystagmus, ocular muscle palsies, somnolence, and bladder retention. The spinal fluid may be nanthochromic. I have seen one individual who presented this syndrome in association with widespread alcoholic polyneuritis and a typical Korsakoff psychosis.

(1) Spontaneous Subarachnoid Hemorrhage. Spontaneous subarachnoid hemorrhage is a frequent cause of coma. It may occur at all ages. Its onset is usually abrupt, with pain at the nape of the neck, headache, and voniting. Stupor rapidly supervenes. Very soon thereafter, the patient exhibits fever, leucocytosis, and slowing in the julse. Physical examination reveals the signs of meningitis and lumbar puncture reveals a characteristic spinal fluid. It is uniformly bloody but does not coagulate; if the test tube is allowed to stand, the supernatant fluid is usually xanthochromic. Later on, there may be a reactive lymphocytosis in the spinal fluid (foreign body reaction).

The most frequent cause of spontaneous subarachnoid bleeding is rupture of a miliary aneurysm at the base of the brain involving one of the branches of the circle of Willis. There may be a history of diplopia and trigeminal pain and occasionally nne may demonstrate evidence of a third nerve lesion (ptosis, dilatation of the

pupil).

These aneurysms may be congenital, in which case the patient may exhibit the external evidences of the so-called thymolymphatic constitution (horizontal pubic hair, scant heard and body hair in the male, hypoplastic cardiovascular system). They may also be encountered in adults with hypertensive disease and in children suffering from subacute infectious endocarditis, who develop mycotic aneurysms in the cerebral vessels. Many of the patients recover and give a history of a number of episodes of meningeal irritation. Some of the cases, however, prove rapidly fatal. The prognosis depends entirely on the size of the rent in the vessel.

I have seen a number of cases of subarachuoid bemorrhage which presented, in addition to the meningeal symptoms, signs of a hemisphere lesion and papilloedema. These gradually disappeared. Such cases are important because they may simulate cerebral neoplasm. In these instances aerographic studies may become necessary for final differential diagnosis.

IV. Trauma.

Trauma may give rise to either concussion of

the brain or gross hemorrhage.

Concussion differs only quantitatively from contusion of the brain. In these cases there are local signs of injury and the stupor follows the trauma immediately. Concussion was at one time ascribed to an acute compression of the brain with cerebral anemia; we now believe that it is

due to minute perivascular hemorrhages in the cortex, basal gauglia and midbrain. The blood pressure in these cases is usually low.

Gross hemorrhage may be either epidural (from laceration of the middle meningeal artery), subdural, subaraclmoid or intracerebral.

- (a) Epidural hemorrhage follows soon after trauma. In most instances there is a brief free interval but this is not always the case. At first there are signs of cerebral irritation, later increasing stupor. The diagnosis of the lesion is extremely difficult and many of the cases are overlooked only to be discovered at the post norten examination. X-ray examination of the skull may be of assistance, especially if the fracture involves the temporal bone. In such cases the diagnosis of laceration of the middle meningeal artery can be entertained.
- (b) Subdural hemorrhage occurs outside the subarachnoid space; it varies only in degree from the condition described as pachymeningitis hemorrhagica interna. It may be encountered in cases of general paresis and chronic alcoholism. It is especially apt to occur in the wake of a relatively slight trauma. The bleeding is ascribed to rupture of the veins which enter the longitudinal sinus almost at a right angle; the oozing continues until a fairly large clot forms on the surface of the brain. These subdural clots are usually extensive in the antero-posterior diameter of the skull and are frequently bilateral.

There is, as a rule, a considerable free interval after the injury (thus differing from middle meningeal bleeding). Often the patient has completely forgotten the tranna. He may resume his work, although he appears to be retarded and not quite himself. Later, he develops headache, dizziness, vomiting and signs of increased intraeranial pressure (slow pulse and choked disc). At first there is drowsiness which later deepens to coma. Periodically, the patient emerges from and relapses into stupor. Lumbar puncture usually reveals no abnormalities aside from increased intrathecal pressure (the subdural sac being distinct from the subarachnoid space). At times, however, the fluid may be xanthochromic.

In most cases of subdural hematoma there are focal sigus pointing to a lesion in one hemisphere, and in a number of instances homolateral dilatation of the pupil has been found. In many of our cases the hematoma was looked for over the apparently involved hemisphere but it was not found there. Exploration of the other side was then carried out and the hematoma located. This anomalous situation has been ascribed to a contre coup mechanism, the hematoma on one side displacing the entire brain to the opposite side or jamming the brain stem against the tentural incisure of the opposite side, thus giving rise to ipsolateral pyramidal tract signs.

(c) Subarachnoid bleeding may accompany

fracture of the skull but it is frequently non-

traumatic in origin.

(d) Trauma may also give rise to intracerebral bleeding without fracture of the skull or subarachnoid hemorrhage. I have observed at least three instances of this syndrome following trauma. They all presented signs of a focal lesion in the brain. Exploration failed to reveal the presence of either epi- or subdural bleeding but aspiration of the brain yielded bloody fluid. Two of the cases terminated fatally, the third is still alive but presents clinical evidence of a residual lesion in the right hemisphere. These cases deserve further study.

Intraventricular hemorrhage usually accompanies the apoplexies in which the bleeding plows its way through the brain substance and reaches the ventricle. Patients with this condition exhibit convulsions, generalized muscular rigidity, meningeal signs, bradycardia and bloody spinal fluid.

These cases prove rapidly fatal.

TREATMENT

General Considerations in the Treatment of Skull Injury and Increased Intracranial Pressure²

It is our practice not to employ morphine. It often has an irritating effect on the patient, raises intracranial pressure, and masks the symptoms.

Lumbar puncture is carried out both as a diagnostic and a therapeutic measure. Hypertonic dextrose solution is employed for the purpose of dehydrating the brain. We usually administer 100 cc. of 50% dextrose solution intravenously three times a day. This is given directly from the ampule, if possible, in order to forestall chills. Caffeine sodium benzoate is administered by hypodermic injection in doses of 7½ grains (0.5 gm.) every four hours. By means of rectal instillation or a rectal drip, 100 cc. of 25% dextrose solution is given every four hours.

The head of the bed is elevated from 30 to 60 degrees. In cases of suspected epidemic meningitis, anti-meningococcus serum is administered. Ventricular puncture is carried out only if these measures prove inadequate.

Operative procedures are necessary in compound fractures of the skull and in cases in which the presence of middle meningeal hemorrhage or subdural bleeding is suspected. In both of the latter conditions a bilateral trephine exploration is carried out for reasons already mentioned. Uncomplicated depressed fractures of the vault may be elevated after the stage of acute shock has passed. Surgical interference in all such individuals may be safely postponed for a time. Right sub-temporal decompression is resorted to only in comatose patients who exhibit papilloedema and who do not respond to the regime out-

lined. The treatment of simple fracture of the skull is expectant.

Treatment of Other Conditions

In cases of morphine poisoning the Drinker apparatus is made use of in order to assist the embarrassed respiration. In the cases of alcohol and morphine poisoning, gastric lavage and supportive therapy are employed.

For cases of gas poisoning a mixture of 95% oxygen and 5% CO₂ is administered by inhalation. Venesection followed by transfusion of normal blood or the intravenous administration of physiological saline solution is also helpful.

In the cases of subarachnoid bleeding, lumbar puncture is carried out at first for diagnostic and later for therapeutic reasons (if there are signs of increased intracranial pressure). It should not be performed too frequently, however, in order to permit local clotting at the site of aneurysmal rupture and to forestall further bleeding.

For primary meningococcus meningitis, lumbar puncture is performed daily; serum is administered both intravenously and intraspinously until the constitutional symptoms disappear and the cerebrospinal fluid clears up. For the secondary meningitides, especially the sympathetic forms, mastoidectomy, surgical removal of foci of petrositis and evacuation of purulent material from the sinuses should be carried out. The secondary bacterial meningitides usually prove fatal although I have seen recoveries in isolated cases of pneumococcus, staphylococcus and influenzal meningitis following repeated lumbar puncture.

In cases of brain abscess it is advisable to make a trephine exploration over the suspected zone and evacuate the pus. This, however, should not be done until a period of four to six weeks has elapsed in order to permit capsule formation and thorough localization.

In the cases of apoplexy the patient is placed in a lateral prone position, with the tongue held forward. Bromides and chloral are administered for restlessness. In the plethoric, hypertensive cases, venesection with removal of 250-500 cc. of blood is carried out; the patient's posture should be changed at intervals to forestall hypostatic congestion of the lungs. The best treatment in the early phase of this condition is judicious negligence.

In cases of uremia venesection is practiced (up to 500 cc. of blood being withdrawn). This is followed by the injection of physiological salt solution to dilute the toxins. We also make use of intravenous injections of magnesium sulphate and dextrose solutions. In cases with pronounced disc changes suggestive of increased intracranial pressure, lumbar puncture is performed.

² "Modern Treatment of Increased Intracranial Pressure," F. Kennedy, M.D., and S. B. Wortis. M.D., The Journal of the A. M. A., Apr. 18, 1931, Vol. 96, p. 1284.

Cases of diabetic coma are put to bed; local heat is applied; insulin injections are given in the proportion of one unit for each two grams of sugar in the urine; and large quantities of fluid along with orange juice are administered. Sodium chloride and bicarbonate of soda solutions

are also given by rectum and by vein to combat the dehydration and the acidosis.

The treatment of hyperinsulinism and hypoglycemic crises in general consists of the intravenous administration of glucose.

The treatment of brain tumor is surgical.

TREATMENT OF THE COMMON LEUCORRHEAS* By JAMES E. KING, M.D., BUFFALO, N. Y.

If the general practitioner should aequaint himself with the causes and treatment of backache and leucorrhea the gynecologist would be deprived of a large part of his office practice. A half hour's thoughtful consideration of the common leucorrheas would clear up all misconceptions as to their cause and treatment. I shall attempt to give the basic principles in twelve minutes.

There are only three possible sources of the common lencorrheas: the endometrium, cervix, and vagina. The endometrium was formerly believed a frequent source. It is now known that the endometrium rarely produces discharge except in acute specific or non-specific infections. For the purposes of this discussion, therefore, discharge from the endometrium may be ignored.

There remain for consideration two sources of lencorrheal discharge, the cervix and vagina. Inasunuch as the type of discharge from each has well-defined characteristics, they should be distinguished as cervical leucorrlica and vaginal lencorrhea. In those instances in which both types co-exist the term cervico-vaginal leucorrhea is suggested. It must ever be borne in mind, however, that leucorrhea is but the clinical expression of an underlying pathology and it is only by understanding that pathology that the physician may hope to appreciate the true significance of leucorrhea and to adopt rational procedures in treatment.

The size of the cervix and length of its canal vary in different women. The canal is lined by a membrane which is generously provided with deeply branching racemons glands whose secretion consists of a thick, tenacions, glary mucons. A normal secretion provides a mucous plug for the cervix. Hypersecretion is evidenced by an increased elaboration of this same characteristic mucous and which when present at once declares its source.

Etiologically there are two general headings under which the cervical lencorrheas may be classified: those which are not the result of infection and those which are the result of infection. The non-infected group is not uncommon. It is encountered in virgins, the nulliparons and the parons. In this group the cause of such

* Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. V., May 25, 1912.

hypersecretion is not always clear. It is frequently present in tall, stoop-shouldered, constipated, acne-marked, ill-nourished 'shop girls—a fact which suggests, in some instances at least, a constitutional cause.

The cervical leueorrheas due to infection constitute by far the larger and more important They naturally divide themselves into those caused by a non-specific infection and those due to so-called specific or gonorrheal infection. In the non-specific infections the less virulent strains of the staphylococcus and streptococcus are the chief offenders. Such infections most commonly follow abortion and labor. At that time there may have been no clinical manifestations suggesting infection but later a yellowish tenacious discharge indicates the presence of Frequently associated with an endocervicitis. the endocervicitis are varying degrees of cervieitis evidenced by enlargement, erosions and cervical eysts. Chronic gonorrheal endocervicitis may clinically be indistinguishable from the non-They both have the yellowish specific group. tenacious mucous draining from the os. History and bacteriological study only will differentiate

The treatment of endocervicitis and its attendant cervical leurorrhea is clear cut and rational. The misconceptions prevailing in the past resulted in a misdirected therapy. Curetage, douches, and medicinal treatment of the cervical canal cannot be and are not curative. The real cause of the mucous discharge lies in the hypertrophy and consequent hypersecretion of the glands. The remedy, therefore, consists in removing or destroying, in whole or in part, these glands.

The treatment of cervical lencorrheas in virgins often presents a difficult problem. It is important here to give the general condition of the patient due consideration. Unfortunately those measures best calculated to improve the patient's constitutional state 'are often economically beyond her reach. In those whose cervix is accessible general measures may be supplemented by modified gland destruction.

After the true significance of cervical lencorrhea became understood and the necessity for removing the glands became clear, amputation of the cervix was frequently resorted to. This is a mutilating operation that today seldom finds place. Removing the glands by coning out the cervix and infolding the cervical shell as proposed by Sturmdorf is an improvement over amputation.

Destruction of the glands by other than surgical means can be accomplished effectively in three ways: the nasal loop cautery, surgical diathermy, and electro-coagulation. The nasal loop cautery requires the least outlay for apparatus and with a little experience its use is highly satisfactory. A number of treatments are required as only a part of the canal is cauterized at a treatment. The loop is introduced cold into the canal as far as the internal os. The loop being heated is slowly withdrawn, pressing its side against the part of the canal chosen for cauterization. Two or three of these lines of cauterization are made at a treatment. Other treatments follow at three or four week intervals until a sufficient number of the glands have been de-The treatment causes but little pain. The beginner should acquire his experience by first using his cautery on cervical lacerations. In this way he becomes familiar with the proper degree of heat to use and how best to gauge the depth of cauterization.

Surgical diathermy is in some respects an improvement over the cautery. It is more positive in action and somewhat better controlled. The applicator consists of a wire an inch and a half in length, one end of which is attached to the end of the electrode and the other to its side so that the wire lies parallel to and raised about 1/8 of an inch above its surface. This applicator introduced into the canal and the current applied will cut its way into the mucous membrane destroying the glands in its path. By the use of a special applicator the entire gland bearing surface of the canal can be quickly and neatly could This may be done as an office procedure under local anæsthesia as advocated by Hyams. In three or four weeks the surface of the canal becomes relined by an ingrowth of squamous epithelium from the surface of the cervix. plan accomplishes more simply the same result as the Sturmdorf operation.

The third method is by electro-coagulation. This is a still more simple procedure. A bipolar applicator designed for the purpose is inserted into the canal, the current applied, and the applicator rotated. The amount of current and length of application will determine the depth of coagulation. In a few days the slough separates and the surface is left clean for epithelization.

Douches in cervical leucorrheas, while in no sense curative, do contribute to the patient's comfort. An alkaline douche aids in clearing the vagina of collected mucous.

The foregoing epitomizes the treatment of

cervical leucorrheas. The method employed will depend upon whether the physician wishes to make an initial outlay of \$50 or equip himself with a more expensive electrical appliance.

Passing now to a consideration of the vaginal leucorrheas it becomes at once apparent that one is dealing with an entirely different underlying pathology based upon a very different histological structure. The vaginal walls and cervix are covered by a squamous epithelium comparable to that of the skin. The vagina, however, differs from the skin in the important particular that it contains no glands. A discharge, therefore, originating in the vagina cannot be the result of glandular hypersecretion but must be due to some condition which produces a serous exudation. A vaginal leucorrhea is therefore in the nature of a serous discharge lacking the thick, tenacious qualities of cervical discharge.

A physician who proposes to treat vaginal leucorrhea should familiarize himself with the appearance of the healthy vagina and the amount and character of secretion normally present. The secretion under normal conditions varies somewhat as to amount and character depending upon when the observation is made. Just prior to or just following menstruation it is often increased. Some women have a small amount of pearly gray fluid constantly in the vaginal vault but not sufficient to cause unpleasantness. Some, too, seem to desquamate the vaginal epithelium more freely than others. In women in whom the abundant

The principles underlying vaginal leucorrhea are not difficult to understand. To discuss in detail the clinical features of the various types would require more time than is at our disposal.

desquamation takes place the vaginal vault may

show collections of epithelial cells in masses

which in color and consistency resemble cottage

cheese. Such is not in strict sense pathologic.

It may be said that infection is a cause or a secondary factor in all chronic vaginal leucorrheas. The vaginal wall, by virtue of its natural defenses, is reasonably resistant to infection but when once seated, an infection tends to become chronic. It is not known under what conditions infections become possible. They are seen in the married, in virgins, and in those less discrect.

Inasmuch as the appearance of the vagina is essentially the same in the various types of vaginitis, one broad, general description will suffice. Based upon appearance it is possible to recognize, first, those cases where the vaginal walls are not the normal pink but a uniform brighter red; second, cases which will show upon careful inspection small punctate bright red areas on the generally reddened surface and third, a reddened granular surface which is but a more advanced stage of the last.

The cause of this reddened appearance is the reaction of the superficial epithelium to infection.

The punctate areas denote a desquamation of the epithelium in spots from which serum exudes. Every vaginal leucorrhea, therefore, has as its background a vaginitis. It is impossible to define sharply the type of infection in all cases, as sooner or later all become mixed infections. While not entirely accurate, vaginitis may be classified etiologically under three headings: vaginitis due to a mixed infection of the more common organisms; vaginitis due to the trichomona; and finally, the so-called senile or atrophie vaginitis. The saphrophytes are almost never the primary cause of vaginitis and play a part only as a secondary infection. They are the camp followers whose presence accounts for the offensive odor often noted in these discharges. In the mixed infection, pure and simple, the discharge is vellowish in color and sero-purulent in character. Without treatment it tends to persist but with a rational therapy it may be promptly cured.

The most important and most common vaginitis is one due to a specific organism, the trichomona. In 1836 this organism was described as a cause of vaginitis and in a few years a number of observers had confirmed the original observations. It is a curious fact that it then became forgotten until a few years ago when it was re-discovered and now it occupies an important place in any discussion of vaginal leucorrhea.

The trichomona is an amoeba-like organism belonging to the group of flagellates. Its source is still in dispute. It does not take the ordinary stains readily and can best be seen under the

microscope in the hanging drop.

Clinically it is associated with certain well-defined features. It may effect almost any age, the child-bearing period being the most common. The parous, nulliparous, and the virgin may all be victims and very frequently it is encountered in pregnancy. It may develop gradually or the onset may be acute. Once established a trichomona vaginitis is marked by well-defined symptoms and by fairly constant physical findings. The chief complaint is a profuse sero-purulent discharge which is accompanied by itching or burning about the vulva. With the presence of saphrophytes the odor may be very offensive. Upon examination the vulva is seen to be reddened. A speculum will disclose, puddled in the vaginal vault, a creamy sero-purulent collection on the surface of which are small bubbles. Even though apparently there may be no saphrophytic infection the discharge very often assumes a peculiarly sickening odor. Cotton readily removes the discharge. The vaginal wall is then seen to be reddened with a certain lack-lustre appearance. Closer inspection will reveal the punctate areas of desquamation upon the cervix and vaginal wall. In well-marked instances the vaginal wall and cervix may resemble a scarletina raslı. The above symptoms and findings are classical and in themselves justify a diagnosis of trichomona vaginitis.

The atrophic or senile vaginitis is the plague of the postmenopausal period of life. atrophy which takes place in the vaginal and cervical epithelium lessens the vitality of the cells. In consequence of this, exfoliation of cells easily occurs leaving small exposed areas unprotected. Such surfaces exude serum and this serum affords a natural culture medium for bacteria which only too soon find their way into the vagina. With infection present and under the influence of the purulent discharge the atrophic squamous cells are macerated and shed leaving other fresh surfaces to exude still more serum. This purulent discharge bathing a vulva whose atrophy affords poor protection, soon produces an intolerable itching and burning which torture these patients by day and by night. While in many instances infection may follow the desquamation of atrophic cells, in other instances an infection may be primary in the atrophic vagina. In either case the result is the same and practically it makes little difference which factor initiates the process.

The treatment of all forms of vaginitis has certain general principles applicable to all. The patient's complaint is of a discharge and vulval itching. The physician rightly assuming infection to be the underlying cause proceeds to institute measures to eliminate it. While he sees clearly the indication he usually errs in his choice of a method. He fails to visualize the irritated vaginal walls and the denuded areas, and prescribes a douche that is irritating. Iodine, lysol, or some donche powder is often his choice. Following their use there is an increase in discharge as such agents by irritation promote further exudate. Any value such agents have as antiseptics is but transitory for by their irritation they increase the serum upon which the infection feeds. What then are the correct indications in the treatment of any vaginitis? Recognizing that the vaginal walls are irritated and the cells macerated by the presence of the infected discharge, which itself is the result of a serous exudate, the first indication is clearly to reduce exudation. The inflammed vaginal walls being in contact favors further maceration and obstructs free The second indication, therefore, would be to keep, in so far as possible, the vaginal walls from contact by the use of some material that will absorb the exudate.

To meet the first indication one would choose a douche that is non-irritating and that possesses astringent and antiseptic properties. Such an agent is found in zinc chloride. The patient is given a solution containing 30 to 45 grams of zinc chloride in 240 cc. of distilled water. To this is added 1 cc. of hydrochloric acid to aid

solution. Of this 8 cc. are used in a quart of water at night just before retiring. In severe cases a morning douche may also be taken.

The second indication is met by the liberal use of a powder in the vagina and the insertion of an elongated absorbent tampon. The powder aids in keeping the vagina dry and the tampon separates the vaginal walls and absorbs any exudate. The tampon remains 12 to 24 hours, its removal being followed by a douche. These treatments may be given every 3 or 4 days. Many powders have been used but the writer prefers one composed of equal parts of calomel, boric acid and bismuth subnitrate. Where itching is a prominent feature an elongated cotton pleget is placed between the labia after a generous application of talcum powder. This keeps the labial surfaces from contact and absorbs any discharge. Such treatment will invariably give relief and in the cases of mixed infection or atrophic vaginitis, will soon cure. In the case of trichomona vaginitis, however, one is dealing with a most persistent infection and the douche must be continued for a long period after the discharge has apparently completely disappeared. Neglect to do this is the most common cause of failure to Many other methods have been tried in the search for some means that will promptly and completely eliminate the organism. Among the methods in favor are scrubbing the vagina with green soap under anæsthesia. Bichloride douches have found favor with some. The fact remains, however, that in many instances like the proverbial cat, the organism returns to discourage the patient and exasperate the physician.

The foregoing embrace the etiologic, the pathologic, and the therapeutic principles concerned in the common leucorrheas. Such a presentation necessarily lacks much in completeness; but after all, with the aid of well-grounded principles one is enabled to think straight and with an enlarged experience to interpret correctly the frequent variations in the clinical manifestations of these common conditions.

GONORRHOEA IN THE MALE*

By FREDERICK J. PARMENTER, M.D., BUFFALO, N. Y.

General practitioners will find the following outline to be helpful in recalling the procedures that are standard on the modern treatment of gonorrhoea in the male.

SYMPTOMS

- 1. Acute urethral discharge with positive
- 2. Normal frequency in voiding. Glass one, cloudy. Glass two, clear.

TREATMENT

1. Hygienic

Food handlers cease their occupation. Place all soiled dressings in paper bag and burn.

Thoroughly wash hands after handling genitals.

Have own soap and towel.

Reduce physical exertion to the minimum. No sexual excitement or contact.

No indulgence in alcoholics.

Plenty of rest, sleep, and fresh air.

A mild morning saline to insure a bowel movement.

Omit the following foods because of their oxalate content:

Pepper

Spices Tomatoes and their products

*Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

Milk and its products except butter Spinach

Asparagus Rhubarb

Mushrooms

Vinegar Chocolate

Cocoa

Strawberries

Peaches Gooseberries in any form

All soft drinks except oranges and lemons

Cream in tea or coffee allowed.

2. Medicinal

Water. A glassful every hour to keep urethra clean.

Urine very acid. Soda bicarb or any citrate. Urine very alkaline. Acid soda phos., Calcium chloride, ammonium chloride.

Urine to be kept neutral, i.c., slightly alkaline.

Urine burns. Oil Sandalwood caps. 60 E.

Drugs rarely necessary if sufficient water is drunk.

3. Local

Syringe. ¼oz. Becton & Dickinson. Injection. Amount 4-6 C.C.

Drugs. 5% of Silver nucleanate, silvol. 1/4% Protargol. 10% Neosilvol.

Technic. Patient voids. Draws 8 C.C. of solution in syringe. Places tip against mentus and gently injects NEARLY ALL in urethra. Leaving some in syringe so air will not drive solution to post urethra. Pinch meatus and hold solution for 5 minutes.

Time. Every 8 hours.

Irrigation. Not recommended. Il desired. Patient voids, Container with solution not higher than patient's shoul-Compress urethra just behind glans. Irrigate then release compression and irrigate urethra just touching tip against meatus and quickly withdrawing repeating each motion quickly. Pelouse method.

Solutions used. Potassium permanganate

1-6000. Neutral acriflavine 1-1000. Dressing. Sanitary bag. Gauze, NEVER cotton in bag.

When discharge stops give injections at 12 then 24 hour intervals. Then stop. Resume if discharge reappears.

Disease very acute and penis edematous. No local treatment. Paint penis with Tr. Metaphen. Soak in hot Sat. Sol. Boric acid. Resume treatment when better. Niazo tabs 2 T.I.D. P.C. as antisentic.

Causes of relapse. Alcoholic indulgence, sexual excitement, nocturnal emission,

lapses in diet.

Tests of cure. No discharge for 6 weeks. G. 1 and G. 2 clear. Secretion from prostate-vesicles normal. No discharge after passing 24 Fr. catheter, filling bladder with 1-10,000 sol, silver nitrate. removing catheter, patient voiding naturally, examining next day for discharge containing gonococci.

Causes of relapse bring no return of discharge. Repeat examination in a

Time of marriage. Has remained well for 6 months. Repeat examination and examine condom sample.

Complications. Acute post urethritis-

prostatitis-vesiculitis.

Sudden frequency - urgency -Symptoms. dysuria. Perineal discomfort. Voidings small. G. I and G. 2 cloudy. DIFFICULTY due to acute follicular

prostatitis, may result in abscess.

Treatment. Patient in bed. No local treatment. Keep bowels open. Push fluids. Hot sitz baths and rectal irrigations. Morphine-codeine or O & B suppos for pain. Indwelling catheter for acute retention. Perineal incision for abscess. Continue Niazo tabs. Resume injections when symptoms abate. No instrumentation or massage for a month.

Acute epididymitis

Symptoms. Perineal pain, crossing pelvis, down vas to epididymus. Chills, fever, prostration. Epididymus swollen, tender, very painful. Cessation of discharge,

Treatment. As for acute post urethritisprostatitis - vesiculitis with support to the scrotum. Apply moist heat or guiacol 4 C.C. in sweet oil, 60 C.C. with camels hair brush and cover with cotton. If abscess develops drain.

Peri-urethral abscess

Swelling upon the under surface of urethra.

Treatment. Paint with Tr. Metaphen and remove all pressure (suspensary). abscess forms, incisc skin only to avoid

Chordce indicates deep seated infection.

Stricture is apt to follow.

Treatment. Patient voids several times during the night. Sedatives if necessary.

DONT'S

Use any solution which irritates.

Cause pain in administering treatment or be rough.

Use sounds, etc., only after all acute symptoms have been absent 4 weeks.

Never use same finger cot on another patient. Rectal Gonorrhoea.

Be patient and take time.

THE ACCESSORY NASAL SINUSES IN SCARLET FEVER By DONALD SMYTHE CHILDS, M.D., SYRACUSE, N. Y.

From Department of Radiology, Syracuse University, Syracuse, N. Y. Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

LER says that scarlet fever is "an infectious disease characterized by a diffuse exanthem and an angina of variable intensity." While Anders and Boston say that the

same disease is "an acute infectious disease characterized by high fever, marked angina and a diffuse erythematous dermatitis." These authors do not class sinusitis among the complications, nor solution. Of this 8 cc. are used in a quart of water at night just before retiring. In severe cases a morning douche may also be taken.

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No sexual excitement or contact.

No indulgence in alcoholics.

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A mild morning saline to insure a bowel movement.

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Rhubarb Mushrooms

Vinegar Chocolate

Cocoa

Strawberries Peaches.

Gooseberries in any form

All soft drinks except oranges and

lemons

Cream in tea or coffee allowed.

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Water. A glassful every hour to keep urethra clean.

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Drugs rarely necessary if sufficient water is drunk.

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do they mention it as a condition which accompanies scarlet fever. In fact, very few references to these two conditions considered together have been found.

Believing that sinusitis accompanies scarlet fever, a study done under the auspices of the Hendricks Research Fund of the College of Medicine, Syracuse University, in conjunction with the Nose and Throat and Pediatric Departments of the College as well as the Bureau of Communicable Diseases of the Syracuse Department of Health was undertaken. At this time, thanks and appreciation are given to each. Our study is not completed but is being continued. Several very interesting things have developed which seem worthy of recording at this time. A portion of our cases were reported at the meeting of the American Public Health Association in the Epidemiological Section, September 14, 1931, by Dr. A. C. Silverman, and to whom I am indebted for certain information incorporated in this report.

The study to this time consists of 383 cases of scarlet fever who were admitted to the City Hospital and examined there by each department participating in the study. The roentgenograms were made during the first week of the disease. A group of these were re-examined at a later date, having their study at about the twenty-eighth day of the disease. Double screens, 80 kvp, 25 inch target film distance, with 20 ma through the tube were used, and the patients exposed in the chinnose, nose-forehead and lateral positions. We did not attempt to take the sphenoids into consideration. The cases were first grouped as clear, hazed, dense, and opaque, but realizing that the shading of hazed and dense were perhaps a little too fine, these were combined. Study began in February. 1930, and still continues.

In but 9% of our cases were the sinuses found to be clear. 79% showed hazing and 12% opaque. These findings were not expected. We found that the frontals were not developed in 69 cases, or 18%; while there was unilateral development of the frontals in but 6 cases. The frontals were found to be clear in 110 cases. The most frequent lesion was found to be bilateral hazing of the maxillaries and ethmoids, which occurred in 30% or 123 cases. The next in frequency was bilateral hazing of the maxillaries - present in 27% or 104 cases. Pan sinusitis was present in 9% or 34 cases. The remaining cases were scattered through various combinations of sinus involvement. It is to be noted that maxillary invasion was present in well over two-thirds of all cases.

Ninety cases have been restudied, and in but

12% have we been able to find any roentgenographic evidence of improvement. 36% show no improvement and in over 50% there is definite evidence of progression or extension of the radiographic evidence.

Children in the 3-4 year old group had no clear sinuses, but it was noted in the 5-14 year old group that over 8% were clear; while in the older group the percentage of clear sinuses increased to 11-14%. Baulmer, quoted by Silverman, "concludes that the younger the clild the greater the likelihood that the sinuses will be pathologically involved in scarlet fever." The disease was almost evenly divided between boys and girls.

Thirty-three cases developed mastoiditis shown by roentgenograms and confirmed by surgery. In each of these cases there was roentgenographic evidence of sinusitis on the side of the mastoiditis, and in no case with clear sinuses did mastoiditis develop. Mastoiditis was found in the ratio of four to three in boys as compared with girls.

Quoting from Silverman-"Actual exploration of the sinuses would be of unquestioned value in diagnosis. This was done in only one instance and in this instance it diverged widely from the x-ray interpretation. A seven year old boy whose onset of scarlet fever occurred May 29th had his sinuses x-rayed five days later and the left antrum was reported dense. His was a very mild case, the temperature becoming normal on the fifth day. On the twenty-ninth day his nose culture was negative for hemolytic streptococci and aside from slight reddening of the nasal mucosa, no discharge was present. This was confirmed by the rhinologist. Two days later the x-ray was repeated and the left maxillary found still dense. Permission was obtained to puncture the antrum but no pus was obtained."

-We have had four cases who had roentgenographic evidence of pathology of the sinuses when released from the hospital, and from five to thirteen days later, either a brother or sister came down with scarlet fever.

Note is made of the fact that in this study there has been no crossing of infection. In view of the many difficulties in making the films, great credit must be given to the contagious disease technique and to the care used by the technician and nurses.

While it is appreciated that this study is not complete and the control groups of the various age periods are still too small to be of any great value, we believe that sinusitis is a very frequent pathological factor in scarlet fever, being present in 91% of our cases. Such sinusitis is not readily cleared, and when mastoiditis is a complication of scarlet fever, sinusitis will be found on the affected side.

EMPYEMA AS IT APPEARS TO THE INTERNIST* By JOHN J. ROONEY, M.D., ROCHESTER, N. Y.

MPYEMA is the collection of pus within the pleural cavity. It resembles peritonitis in that it usually results from direct extension of some neighboring infection. However, just as you may have a primary peritonitis, so is it conceivable empyema may occur, but these cases are relatively rare. The disease is uncommon in septicemias except as a terminal manifestation of an overwhelming infection. It occurs also from trauma, as in perforating wounds of the cliest wall during which infected material may be introduced into the plenral cavity, and particularly in those cases in which foreign bodies such as pieces of clothing, broken rib, bullets, etc., are left behind. Rupture of the resoplagus by fish-bone or other articles swallowed, or by instrumentation, direct extension of mediastinitis of whatever cause, rupture of a lung absecss, and extension of a purulent pericarditis are less common causes. Contignous suppurative processes in the abdominal cavity, such as sub-phrenic or liver abscess or perinephritie abscess, may spread through the diaphragm to invade the pleura. But by far the most common underlying condition disposing the individual to the development of empyema is pneumonia, lobar and bronchial,

The incidence of empyema varies greatly. It is more common during the late winter months, when pneumonia is more prevalent. It is more common when there is an increase of upper respiratory infections, especially during epidemics of these diseases. This was brought home with striking force during the Great War, when large numbers of eases of empyema occurred among the soldiers in the cantonments. This increase became so alarming that the Surgeon General sent out questionnaires to gather data concerning the causes and appointed a commission to study the question. They were of the opinion that outbreaks of measles and influenza, which in places reached epidemic proportions, had no direct causative bearing upon the incidence of empyema, but the relative presence of upper respiratory infections such as pharyngitis, tonsilitis, bronchitis, etc., ran parallel to the increase in occurrence of empyema. That is to say, the incidence of empyema following pneumonia increased where there was, in the same cantonment or group, a concomitant increase of acute upper respiratory diseases. Empyema occurs oftener in children than in adults, and in the negro oftener than in the white. As to the incidence of the various causative organisms, I shall say little, since the bacteriology is being discussed in another paper. The relative importance of the pneumococcus versus the streptococcus varies with the different sources of statistics and the different years. For example,

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Heuer reports 339 cases following pneumonia at the Johns Hopkins Hospital for the thirty-two years from 1889 to 1921. In 153 cases, or 45%, pucumococcus was the etiological agent; in 34 cases, or 10%, the streptococcus; in 23 cases, or 7%, the staphylococcus. Cook's series of 103 cases at the Cincinnati General Hospital for five vears from 1922 to 1927 shows 43% were caused by the streptococcus, 31% by the pneumococcus, and 22% by the staphylococcus. It is to be remembered these latter were from all causes, postmenmonic and otherwise. In 450 fatal cases occurring during the World War, the streptococcus was responsible in 81%, the pneumococcus in 17%, and the staphylococcus in 2%. None of these series reports mixed infections, but they do occasionally occur. I mean mixed pyogenic infections and not mixed tuberculous and pyogenic, which also occurs. It is perhaps not inappropriate to add here that although usually the organism causing the pneumonitis is the one responsible for the empyema, this is not always the case, for instances occur where the pneumonia may be due to a pneumococcus and the empyema to a streptococcus, and vice versa. I believe that a grouping of large series of cases from different sources over a long period of years will reveal the pneumococcus the most common organism. Of the pneumococci types I and IV predominate. Pneumonia due to type I is particularly likely to be complicated by empyema. The streptococcus comes second, and the staphyloeoccus third. Other pyogenic organisms that are found causing empyema, such as the influenza bacillus, typhoid bacillus, colou bacillus, gonococcus, streptothrix, amœbæ, trail along far in the rear.

No very definite figure can be given as to the incidence of empyena during and following pneumonia, but from immerous different sources the figure varies from 2% to 7%. That is to say, anywhere from 2% to 7% of cases of pneumonia develop a collection of pus in the pleural cavity. Not all of these come to operation. Some are found at autopsy, while others recover with siminary to the control of the control of

ple aspiration.

The diagnosis of a typical case occurring with lobar pneumonia is not difficult. The patient, on or about the seventh day of his illness, has his crisis, follows along from one to four days with normal or sub-normal temperature and slowed pulse rate, when his pulse and temperature rise again. Or his pneumonia may terminate by lysis, but the temperature and pulse do not quite approach the normal, and after a few days of reduction; start rising again. His appearance changes from that of an acutely ill patient to one chronically sick. He is not so uncomfortable as he was with his pneumonia, but he runs an irregular fever from 100 degrees to 103 degrees F.

with rather profuse sweats. Cyanosis and cough usually are not prominent, although in some cases the latter may be very annoying. His white blood count reveals a leucocytosis with an increase of the polymorphonuclears, but these increases are not so marked as they were during the pneumo-Physical signs change in that part of the chest under which the fluid has accumulated. Dullness changes to flatness; tactile fremitus, breath and voice sounds diminish in intensity, often to the point of being absent. There may be some edema of the chest wall and dilatation of the venules of the skin, lessened respiratory excursion of the involved side, a fullness of the intercostal spaces together with tenderness over the area of the fluid. If the fluid is sufficient in amount, particularly when located in the left chest, there is displacement of the heart to the opposite side, or when in the lower portion of the right chest, a downward shifting of the liver. There may be a thin area above the level of the fluid where the lung is partially compressed over which there will be dullness, perhaps with a tympanitic quality, together with breath and voice sounds of broncho-vesicular character. Above this will be signs of a normal lung. The other side of the chest will show a hyperresonance with exaggerated breath and voice sounds, due to its attempted compensation for reduced capacity of the lung on the involved side. Grocco's triangle may be demonstrated upon the sound side but I believe its presence or absence is unimportant. In these typical cases where the pneumococcus is found in the fluid, the pus develops late in the primary disease, accumulates slowly, and shows a marked tendency to encapsulate early.

The above cases rarely present a problem of diagnosis, although in some the location of the pus may not be found as readily as might be expected. But those cases due to the streptococcus may be very confusing. With the latter the pus accumulates very quickly and in large quantities early during the disease, which in the great majority of cases is a streptococcus broncho-pneu-This exudation may occur as early as the second or third day and often is present when the physician is first called in to see the patient. With many of these cases the symptoms of the pneumonia, except for the cough, oftentimes not very productive at first, are absent. The signs of fluid in the chest are very prominent, masking the signs of the underlying pneumonia, and the diagnosis of primary empyema is made. Usually, however, the opposite is true. The signs are those of consolidation, dullness, bronchial breath and voice, and sometimes even tactile fremitus over a large area in one, or not infrequently in both chests. These signs are particularly prominent if a few of the larger bronchii are temporarily plugged by mucus. Having the patient give a few hard coughs before the examination of the chest helps clear up this difficulty.

However, in many of these cases, the signs and x-ray films, although suspicious, are not convincing, and a diagnostic thoracentesis establishes the diagnosis.

There are no one or two physical signs that definitely are pathogpneumonic of fluid in the chest, whether it be an exudate or transudate. Displacement of the heart and other mediastinal structures, when it is present, is the most important, but absence of displacement does not rule out hydrothorax. As stated previously, the fluid must be rather large in amount, especially if in the right pleural cavity, since the heart does not shift so readily to the left as it does to the right. Absence of tactile fremitus and presence of absolute flatness in contradistinction to dullness are the next best guides of the physical signs. However, reliance should not be placed upon these for establishing the diagnosis. The important criteria in determining the underlying pathology is the relative consideration of all the signs together and particularly the changes in them that occur from one examination to the next.

Usually the diagnosis can be made without the use of the roentgenogram. The history of the primary illness, the physical signs, and thoracentesis are sufficient in the vast majority of cases. In some the x-ray is of little or no aid. These films are usually made with the patient flat on his back and frequently with a portable machine. This, together with the fact that it is difficult to get good respiratory cooperation of the patient, does not render the roentgenological diagnosis any too easy. The presence of a thickened pleura or a thin layer of fluid which when prone covers the whole posterior surface of the lung is difficult to interpret under these conditions. Also the presence of a relatively small amount in the lower inner posterior portion of the left chest may be totally obscured by the heart shadow unless lateral films are also taken. On the other hand, the x-ray may be of the greatest aid in discovering deep-seated lesions, for example in encapsulated interlobar empyema and in those collections along the mediastinum and those situated upon the dome of the diaphragm. It, too, is of assistance sometimes in determining whether the disease is above or just below the diaphragm.

In the differential diagnosis the history is very important. There are conditions occasionally occurring which may be confused with empyema. Echinococcus cyst of the lung is one. Although rare in our section, we had an instance of it two years ago in Rochester. In this disease the history of no recent acute respiratory infection or of the patient coming from a country where it is prevalent is a significant lead. The complement fixation test will usually establish the cause of the illness. If not, the aspirated fluid invariably will show hooklets. Actinomycosis and blastomycosis will usually give a history of and present signs of a similar infection in another part of the body.

or there may be a draining sinus in the chest wall from the fluid of which the organism can be demonstrated. Cases of chronically thickened plenra, serofibrinous plenrisy, and plenrisy with effusion can be distinguished by thoracentesis. Non-inflammatory diseases such as malignancy or malignant metastases of the lungs and pleura, which sometimes give signs of fluid in the plcural cavity, may be differentiated from empyema by the history, by the lack of febrile symptoms, absence of leucocytosis, and finally by the x-ray. In the conditions below the diaphragm, especially abscess of the liver, sub-phrenic abscess or perinephritic abscess, a careful history will usually elicit a previous recent attack of acute appendicitis or ruptured gastrie ulcer or an illness in the Tropics that was probably amorbic dysentery, or, as in the case of perinephritic abscess, some urinary symptoms and the finding of ous in the urine. In these conditions the a-ray will be a distinct help when the history is sufficient.

I have purposely left to the last the discussion of the most important aid in diagnosis, thoracentesis. This is a simple and in good hands a painless and harmless procedure. It can be done in the home. With good technique, no sterile gloves or drapes are necessary. A small syringe and needle for novocaine anæsthesia of the skin and intercostal space, a larger syringe and needle for the aspiration, some soap and water with alcohol or iodin for skin sterilization, are the only requirements. A sterile test tube for culture purposes should be handy. A hypodermic of morphine, one-half hour previously, renders it easier for the patient. The aspirating needle should be large gauge. The piston should fit tightly into the syringe, preferably with a seal of the water in which it was boiled. The spot chosen for needling should be where the signs and tenderness and x-ray, if done, show it most likely to be located, and not in the sixth interspace in the mid-axillary line, or the eighth space in the scapular line, simply because these are the sites most frequently used, although they should be chosen if there appears to be no definite choice. Sometimes it is difficult to determine whether the needle has become plugged or whether the point is free in the pleural cavity. This may be obviated by having a small amount of sterile water in the syringe, or by not having the piston fully pressed into the syringe, so that there is some air This will be sucked into the free contained. plenral cavity, due to the difference in pressure. It is always wise, after a dry tap, to see if the needle was plugged. Sometimes thick pus or fibrin will do it. Occasionally in introducing the needle the lumen will be plugged by a small piece of skin which it has gonged out during the introduction. The fluid obtained, even if it appears to be only a small amount of blood, should be examined microscopically and cultured. As soon as the diagnosis is established, the surgeon should be called into consultation to allow him to select the time of operation and the type of drainage he desires to institute.

If the general practitioner or internist regards every case of pneumonia as a possible subject of empyema, the diagnosis will be made oftener. Pneumonias existing longer than ten days should be regarded as suspicious. Hospital cases of undiagnosed empyema continue to come to autopsy, nucli to the embarrassment of the attending physician. Undoubtedly greater numbers occur in homes which never come to post-mortem examination. With careful histories and physical examination, together with the aid of the x-ray and judicious use of thoracentesis, less deaths will be attributed to so-called "unresolved pneumonia" and more people will be walking around with drainage scars in their chest wall.

THE CHOICE OF TREATMENT IN ACUTE EMPYEMA* By CARL EGGERS, M.D., NEW YORK, N. Y.

E MPYEMA usually complicates or follows pneumonia, but it may be secondary to a lung abscess, or it may result from external injury, or be part of a general septic process.

The pus may be situated anywhere within the pleural cavity, though it usually settles in the lower part of the chest. It may be thin or thick creamy in character. It may be present in very large quantity, filling one side and displacing the mediastinum to the opposite side, or it may form a small encapsulated pocket situated somewhere

between the lung and the chest wall, or in the mediastinum, or between the lung and the diaphragm or between two lobes. At times there may be an empyema in both pleural cavities at the same time. Occasionally it is associated with the presence of air, forming a pyopneumothorax.

The organisms usually found in the pus are pneumococci, streptococci, or staphylococci, but occasionally one finds colon bacilli, influenza bacilli, or a mixed infection.

Empyema may exist alone as a complication or sequella of pneumonia, or one or several other complications may be present at the same time,

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such as otitis media, pericarditis, joint affections, cellulitis, or abscess. At times a pneumonic process may still be active on the same or the opposite side.

If one bears in mind all these facts it will at once be apparent that the treatment may have to vary, or at any rate that it does not seem wise to make one method fit all the different conditions. If in addition to that one bears in mind that the course of empyema and its prognosis may vary not alone with the treatment employed but that it varies in different years and in different seasons, and that it depends largely on the age of the patients, the type of organism, the virulence of organisms, and whether it follows a primary or a secondary broncho pneumonia, then it becomes apparent that one must individualize and select not alone the proper procedure, but also the proper time to operate. Only in this way is it possible to attain the best results.

Some form of drainage to rid the body of pus and to allow the lung to re-expand is indicated. In other parts of the body such collections of pus are treated by simple incision and drainage without other considerations. In many empyema cases the conditions are almost as simple, but in others the rigidity of the thorax, and the effect on respiration and circulation of an open pneumothorax have to be considered and in many cases form an important problem. The consideration of these different points has led to the adoption of the various forms of treatment employed.

It may be said that as a rule empyema should not be looked upon as an emergency. There is usually ample time to await the laboratory report on the culture of the pus obtained on puncture. One should know all about the patient before deciding on the form of treatment to be employed.

METHODS OF TREATMENT 1. Aspiration

The simplest operative procedure is aspiration. By this is meant removing the pus either with a syringe or some form of aspirator, preferably the Potain, which removes the fluid by suction after a negative pressure chamber has been created in a bottle. No air is allowed to enter the cliest. The method is indicated when it becomes necessary to remove fluid while the pneumonia is still active. The object is to bridge over a critical period during which it is considered inadvisable to perform an operation. It is also of value during the early stages of bilateral empyema, or in any extensive exudate before the pus has become thick, and before adhesions have formed. If one understands its limitations, and does not prolong its use unduly, it is at times very valuable. Though one or several aspirations occasionally lead to a cure, even in the presence of a positive culture, the method should not be employed to attempt a cure, or even to use it as long as possible. A definite objective is followed, namely to rid the body of an infected fluid early in the course of a pneumonia until the process in the lungs has subsided and the fluid been walled off. As soon as this stage is reached, an operation should be performed.

There is a definite danger in continuing aspirations too long. The teaching that too early an operation in empyema is not advisable has led some men to carry out aspirations too long, thereby seriously endangering their patient's life from septic absorption. I want to warn against this. As soon as there is pus which on standing shows about 50% sediment, it should be evacuated by operation.

2. Closed Methods of Drainage

Closed drainage is considered more physiological than open drainage in that it maintains negative pressure within the empyema cavity and thereby least disturbs respiration. This is true and it therefore finds its greatest application in those septic cases in which, early in a pneumonia, the presence of the fluid itself is considered a menace to the patient. It is here used to bridge over the critical period until the pneumonia has subsided and adhesions have formed. Closed drainage is also valuable in all cases with extensive exudates, with bilateral empyema, and in patients with a pyopneumothorax.

Some surgeons prefer this method to all others and use it as a routine until healing results, while others use it only for a week or ten days and then convert the drainage into an open one.

The simplest procedure, and the one most often employed, is to insert a trocar into the eighth or ninth interspace after infiltrating the tissues with ½% Novocaine and making a small skin incision to facilitate its introduction. After withdrawing the obturator, the catheter or drainage tube with its outer end clamped, is quickly inserted and the trocar then removed. The soft tissues fit snugly around the tube and prevent the entrance of air. A small cuff of rubber tubing is fastened over the catheter close to the skin, and a safety pin passed through this. After that a small piece of gauze is placed under the pin and two narrow strips of adhesive plaster are fastened over it to prevent slipping.

The further treatment depends on whether one desires continuous or intermittent drainage. In large exudates it is advisable to evacuate slowly, perhaps 250 ce. at a time at intervals of several hours. The tube is therefore kept closed with a clamp or a clip, in the intervals. As soon as all the pus has been evacuated the drainage may be made continuous. A longer tube is therefore connected with the catheter and led into a drainage bottle under the bed with the end of the tube under the fluid level to insure closed drainage. The ease of performance, the minimum disturbance it causes the patient, the facility in irrigating the

cavity, and the avoidance of large pus soaked dressings, commend the method most highly.

Many surgeous have their own little pet device or appliance by means of which they attain good results, while in the hands of others these same devices frequently lead to failures. The result has been that innumerable methods of closed drainage have been proposed only to be later discarded. At any rate though elosed drainage has been used for years, it has not been universally adopted as a routine operation. The reason for this is that it has failed in certain important respeets, the elife of which are inadequate drainage and inability to dispose of large fibrin clots. Owing to the small ealibre of drainage tube it is a common experience to have blocking of the tube, with retention. A great deal of attention is required to insure a constant flow. Damming back of pus leading to reinfection of the cavity is the To overcome this one may add an irrigating system to the drainage system in the form of the simple apparatus shown in Fig. 1. One limb of a Y tube is attached to the catheter emerging from the chest, while the other connects with the tube of an irrigating bottle elevated above the The stem of the Y connects with the tube leading to the drainage bottle under the bed. By clamping the lower tube, fluid in any desired amount may be allowed to run into the empyenia eavity, and kept there a few minutes to aid in sterilization. The clamp on the lower tube is then removed and placed on the upper one, which results in prompt evacuation of the empyema eavity. If one uses Dakin solution in this way every two or three hours, fibrin clots will be dissolved and gradual sterilization of the cavity brought about.

The narrow intercostal space in some patients, and especially in children, does not permit of the introduction of a large trocar, If, therefore, closed drainage by means of a larger tube is desired one or two methods are available. One may make an intereostal incision, insert any size tube desired, or a mushroom catheter, close the soft tissues around it and then connect the tube with the irrigating and drainage tubes as shown in Fig. 1, or one may resect a small piece of rib and insert the tube through the floor of the rib bed. This has the advantage that large open drainage may be established by simply reopening the wound after the need for closed drainage no longer exists.

With any of these procedures real closed drainage may be maintained for from five to ten days. After that a little infection along the drainage tube may loosen it somewhat and although one continues to speak of closed drainage because the pus is evacuated through a tube into a container there is no longer any actual negative pressure in the empyema cavity. By this time the need for negative pressure is over anyway and one may

easily convert the wound into an open one, without discomfort or danger to the patient.

3. Open Metitods of Drainage.

By this is meant incision and drainage as it is practiced for pus collections in other parts of the body. If one visualizes an empyema as an abscess of the plenra surrounded by an abscess wall which covers the lung, lines the chest wall and forms a protective barrier against the unmvolved portions of the plenra, this method of treatment appeals to one as the ideal one, for it gives free exit to the pus and enables the compressed lung to re-expand. The methods of approach vary

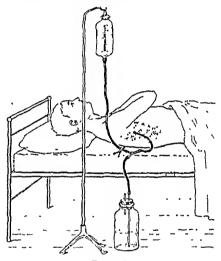


FIGURE 1.

from an intereostal incision, or the resection of a small portion of one or two ribs, to the wide open incision with packing of the eavity advocated by Dr. John F. Connors. In all of these operations pus is given free exit, perhaps supplemented by irrigations with antiseptic solutions depending on the operator. The operation is easily performed under local anaesthesia and may be done at the hospital or at home. Little or no embarrassment of respiration results, on the contrary, breathing becomes easier with free drainage of the infected material and subsequent diminished absorption. The patient may be out of bed as soon as his general condition permits, and his position in bed may be changed as desired and as is compatible with his confort.

No special appliance or apparatus is required, for a drainage tube is easily procured or improvised. The after treatment is usually very sim-

ple. Drainage is continuous and easily maintained. With an empyema drained at the proper place, early healing is favored by keeping the cavity empty, sterilizing it, and preventing damning back of pus. The lung will gradually expand, the formation of a thick disabling pleura will be prevented, and as a result the danger of recurrence and chronicity is minimized.

From what has been said it is apparent that this type of operation is indicated in all those cases of empyema in which the pneumonia has subsided, and in which the pus, whether large or small in amount, has become encapsulated by surrounding adhesions. There is no danger connected with the operation if ordinary surgical principles are observed. All steps are performed under guidance of the eye, bleeding is easily controlled, and pus and fibrin clots can be evacuated. There is no danger of an open pneumothorax because the lung is prevented from collapsing by the adhesions holding it to the cliest wall.

SUMMARY

There exists at present some confusion regarding the best routine method of procedure in acute empyema. The proper treatment of empyema, in all its phases, requires a knowledge and an appreciation of the physiology of normal respiration and also of the variations in the presence of disease. No one method will always give uniformly good results, and no attempt should be made to make a case fit a given method of treatment. On the contrary, that treatment which will most likely restore the patient to health in the shortest time should be adpoted in each case. Individualization is the keynote of the successful treatment of emnyema. Experience has shown that there is such a thing as a common type of empyema, following pnemococcus pneumonia, in which the pus collects in the lower part of the chest. It becomes walled off early and the costopleural angle becomes obliterated by adhesion of the diaphragm to the chest wall. Intercostal incision in the eighth or ninth space or the resection of a portion of the eighth or ninth rib will place the drainage at the dependent part of the cavity.

Simple open drainage or the addition of irrigations, preferably with surgical solution of chlorinated soda (Dakin solution), constitutes the after treatment. By far the larger number of all

empyema cases conform to this type.

Taking this as a basis, one may modify the treatment as indicated in a given case. If there is an unusually large amount of fluid, as is so often found in the septic streptococcus cases, and it is felt that the presence and absorption of this fluid itself, regardless of the stage of the pneumonia, is dangerous to the patient, one of two courses may be followed:

- 1. The fluid may be aspirated, and this may be repeated as often as the thorax refills, until the pneumonia has subsided. Coincident with resolution, the fluid has usually become pus and has become walled off. A simple drainage opening may then be made, as advocated above, and the case treated the same as a pneumococcus empyema.
- 2. If more urgent treatment is demanded one may establish closed drainage as described above, either by means of the trocar catheter method, or by the insertion of a tube through an intercostal incision. Irrigations may be added by making use of the apparatus shown in Fig. 1. One may continue this method until a cure results or only sufficiently long to bridge over the period of emergency and then convert the drainage into an open one.

The aim is to keep the cavity empty and to bring about sterility, for this is the secret of healing. This sterility is best obtained by open drainage, perhaps favored by irrigation with antiseptic solutions. I believe that the only safe healing for an empyema is by obliteration of the cavity. The two opposing layers should adhere, and they will adhere just as soon as the surfaces are sterile. Such an obliteration is the best guarantee against recurrence and chronicity.

AVOIDANCE OF CHRONIC EMPYEMA

No consideration of the treatment of acute empyema is complete which does not visualize and try to avoid the development of chronic empyema. In spite of all that has been written and taught patients with chronic empyema present themselves for treatment. In some of these the condition was unavoidable in that factors operated which were beyond the surgeon's control, but in the large majority the development of a chronic state was due to lack of recognition of the causes leading to chronicity. The most common of these is imperfect or inadequate drainage through a narrow sinus, allowing damming back of pus, repeated re-infection of the cavity, and the development of a thick unyielding pleura. The next most frequent cause is an improperly placed drainage opening, one not at the dependent part of the cavity. Another common cause is too early operation, allowing the lung to collapse at a time when no or only a few thin adhesions have formed. All these causes argue for delay in operating until the pneumonia has subsided and the fluid has been walled off. Once this stage is reached, which usually coincides with the development of thick pus, good drainage should be established and maintained. These are the most important points in bringing about an early cure and in preventing recurrences and chronic cavities.

FURTHER EXPERIENCES IN THE TREATMENT OF EMPYEMA THORACIS BY PACKING*

By JOHN F CONNORS, M D, NEW YORK, N Y

IN July, 1931, we published a new method of treatment of pleural suppuration and presented reports of 35 cases. We are now presenting the results in 23 cases of empreina thoracis and in 11 cases of other types of pleural suppuration which have been operated

upon since the first report Pre-operative Preparation of the Patient Prior to the World War the procedure m empyema was to operate as soon as pus was discovered Since the war the dictum has been to wait until the pus becomes thick However we have carried the procedure one step further and, unless there are signs of rapid downward progression, operation is postponed until the time when the patient's condition is improved. We wait, therefore, not only until the pus is thick but until the patient's resistance is strengthened by daily pleural taps, by allowing time for the subsidence of any possible underlying pulmonary infection, by forcing nourishment and fluids, and, if necessary, by transfusion of blood We have found anemia, dessication, and malnutrition almost constant when cases are brought to us for operation Pre operative preparation cannot be stressed too much for it is one of the most important factors in the determination of operative mortality. Another important factor in the reduction of our operative mortality is that all cases of empyema at the Harlem Hospital are cared for by a special group rather than being disseminated among several surgical groups as they were formerly This makes for standardization of treatment. greater interest and expertness in care as would be expected when any special type of case is cared for by one group of men

The Operative Procedure -The procedure is essentially the same as described in our first report, although several minor changes have been made. The patient is placed in the recumbent position with the unaffected side npon the table The incision is made according to the position and extent of the empyema Usually it is placed at a dependent portion About two and one-half inches of two adia cent ribs are removed subperiosteally intervening muscles and vessels are now grasped with artery clamps and are removed en masse The severed ends are ligated close to the severed ends of ribs

When pus is located with an aspirating syringe, the opening produced by the needle is made larger gradually and slowly. A grooved

director is inserted beside the needle an open mg is made large enough to admit the nozzle of an aspirating apparatus and as far as possible pus is removed. The orifice in the pleural cavity is then slowly opened widely but great care is taken to cover the orifice if the patient experiences distress with the sudden entrance of air into the pleural cavity. The hole in the chest wall which is finally obtained is approxi mately two mehes in diameter. Through it, with the aid of the Cameron light, the greater part of the pleural cavity may be investigated, adlications between pockets of pus may be broken down and fibrin and pus may be removed If the empyema is not complete, care is taken not to invade the uncontaminated portion of pleura by breaking down the wall of the cavity

In packing the pleural cavity plain gauze is used It is prepared from the wide bandage roll by folding it longitudinally until it is about two inches wide. The amount of gauze used varies with the size of the cavity some cases we have used thirty yards of packing. We have abandoned the use of iodoform gauze because in a few cases it seemed to produce toxic symptoms, was more expensive and proved no more efficacious than plain gauze With a curved sponge forceps, the gauze is introduced into the cavity, particular attention being paid to the region of the apex of the lung and to the sulci formed by the lung and the chest wall More and more gauze is introduced, filling the entire cavity and by digit-al pressure is firinly packed. The edges of the skin wound are held apart by gauze and the cut surfaces are protected by vaselinized A dry dressing completes the proced ure During the operation there is a continu ous intravenous drip of physiological saline solution which is continued as the individual requires

Post-operative Care—Patients are well covered and so placed in the wards as to avoid undue exposure when returned from the operating room. Those who are dyspnoeic or cyanotic are placed in the oxygen chamber or in an oxygen tent where they are kept until they are out of danger. We have found oxygen, when properly administered in tent or chamber a valuable aid. Forced fluids and nourishment and transfusion of blood are continued after operation, as before. Whiskey is given—one or two offices three times daily—especially to those who are accustomed to it Gradually we have been getting the patients out of bed curier and earher, frequently as

^{*} Read at the Annual Meeting of the Medical Society of the State of New York at Buffalo N Y May 24, 1932

soon as the second day post-operative. Those patients who are not markedly prostrated or febrile, shorten their convalescence when they move about and are able to take advantage of outdoor sunshine and air. We urge our patients to blow into Wolf bottles and balloons and to cough and exercise, though little cooperation is obtained in this respect. In spite of this, however, the expansion of the lunch has been excellent as a rule.

The packing was removed in two days and in each case (except one) of our new series of 23 cases was not replaced with fresh packing. In several instances we removed the packing one day after operation in order to demonstrate to visiting surgeons the condition of the lung and pleura. In every case, except one, the parietal and visceral pleuras were clean and of pink or light red color. The one exception required a second packing. Packing acts by debriding the pleura of pus and fibrin by means of pressure and absorption. rule the lung expanded freely, coming up to, or nearly to, the hole in the chest wall after coughing or with vigorous respiration. Thereafter the purulent discharge was minimal, being no more than is expected in a case of a large clean granulating surface. No tubes and no irrigation are ever introduced into the pleural cavity. Not only are these not necessary but we have found them irritating and capable of maintaining a high fever over a long period of time. Superficial gauze dressings are applied every day or every other day, and our only care is the maintenance of the hole in the chest wall at a diameter of approximately three-quarters of an inch until the lung This is accomhas completely expanded. plished by the introduction of the finger through the orifice down to the pleural cavity.

COMMENT UPON STATISTICAL DATA

Deaths.—The first death was of extraordinary interest and in our series, unique. The patient, Albert C., 24 years old, was admitted to the hospital May 6, 1931, with a diagnosis of pleurisy with effusion, left chest. On account of the large amount of fluid in the pleural cavity, the possibility of an underlying pulmonary infection could not be determined. The fluid became more purulent and in six days after admission he was operated upon in the typical fashion which we have described. For three days post-operative he had an elevation of temperature and then for seven days further he had a normal temperature; he felt very well, the pleural cavity was quite clean, the lung was almost completely expanded and he was about ready for discharge. On the 10th day post-operative he developed an upper respiratory infection which rapidly spread to

his right lung and pleura. He became markedly prostrated with high fever, rapid pulse. and dyspnoea. Here was a case of an overwhelming infection invading the lung and pleura opposite to the side upon which operation had been performed. On May 22, 775 c.c. of thin purulent fluid was aspirated from the right pleural cavity and on the following day 500 c.c. of fluid was removed. Early on Mav 24, the patient died. The culture of the pus from the left side which had been operated upon showed staphylococcus albus, while the smear of fluid aspirated from the right chest revealed streptococci in short chains. sidering the circumstances, this is hardly an operative death but it is included as such.

The second patient was admitted to the hospital March 4, 1932, on account of a miscarriage. Three days later she developed pneumonia followed by empyema. She was operated upon May 13, 1932, and died the same day. Just prior to operation her condition was fair in spite of the long standing infection and a cardiac valvular disease. Operation was performed under local anesthesia. An empyema occupying about half the pleural cavity was found. Before operation a hemoglobin determination was made. It was 50%. Immediately after the operation the patient's condition continued fair but her pulse was more rapid and weaker. On account of the anemia and operative shock an immediate blood transfusion was ordered. Unfortunately this order was not carried out and the patient died five hours later.

Tuberculous Pyopneumothorax.—Both patients who were operated upon died. We have decided to abandon the packing procedure for cases of tuberculosis. The sudden disturbance of the infected lung of a very sick patient with dissemination of infection has been too apparent in this series, and in the series already published, to allow continuance of the packing.

Ruptured Lung Abscess.—The two cases of ruptured lung abscess reached the thoracic service long after rupture and were in extremis. One patient was being observed for a lung abscess which occurred after operation for appendicitis at another hospital. days after rupture of the abscess she was transferred for operation, was operated upon, and died the same day. The other patient was one who was admitted March 13, 1931, with a bullet wound in the neck and in the floor of the mouth. She developed an ill-smelling gangrene in the region of the wound with crepitation on palpation, and later a diffuse pulmonary suppuration. Two days before she was operated upon there was rupture of the pulmonary suppuration into the pleural cavity. Aspiration revealed diffuse foul smelling pusThe patient died on the same day Rupture of such pulmonary supportation into the pleural cavity is at any time a serious condition but when operated upon late presents a rather hopeless prognosis

Chronic Infected Pleural Carty—Of the seven cases which were treated with packing, three were cases of infected hemothorax following penetrating stab wound of the chest, two were cases of chronic infected cavity following operation in our first series in which the uncontaminated pleura was entered, one case had been operated upon at another hospital one year prior to admission to the Harlem Hospital and in which the pleural cavity had failed to close due to a piece of rubber drain which we found at operation, and one case of pyopicumothorax with thickened walls and several bronchial fistulae. The case which did not respond to treatment was the last

One of the cases of infected hemothorax showed a really remarkable response to packing. The patient was stabbed in the left chest February 8, 1931, developed a hemothorax which soon became infected. The pyothorax was then drained through a stab wound at a dependent portion of the pleural cavity spite of drainage and irrigation with Dakin's solution, the hing remained fixed close to the mediastinum for five months. At the end of this period decortication of the lung was de-A prehumary tight packing of eided upon the pleural cavity was performed with the sole idea of debriding the pleura of pus and fibrin In two days the packing was removed and to our amazement and satisfaction the lung was seen to expand for the first time in five months. and so rapidly continued to expand that in one month she was cured. No decortication was necessary The other cases ware not so startling in recovery but slowly and surely re sponded to treatment

Post operative Complications In general the post operative course is extremely unevent-One convalescence was marred by a diphtheretic wound infection. The patient was a child operated upon in the routine way. Two days afterwards the packing was removed and none was reinserted. The wound appeared clean and light red in color Five days postoperative the temperature rose to 103 degrees and the patient was markedly prostrated Careful physical evamination revealed no abnormalities except for the condition of the wound which was dull grev in appearance, quite in contrast to the clean pink or red color we are accustomed to see The condition suggested diphtheria and a culture confirmed this diagnosis Antitoxin was administered and the pseudo membrane cleared up, though the culture was positive for three days. The

source of the diphtheria bacilli was not iscer tained although cultures were made from the nose and throat of the patient and of each in dividual who had come in contact with her Convalescence from that time was slower than usual

In the cases of broneho cutaneous fistula one was allowed to close after three months of dramage, while in the other, dramage is still maintained five months post operative be cause of cavitation in the lung still demonstrated by the state of the lung still demonstrated.

strated by hipsodol injection

The statisties concerning age incidence, the type of empyema, and the bacteriology merely serve to emphasize the fact that in cises in which the patient receives meticulous pre- and post-operative care, the procedure of packing the pleural cavity in empyema takes no cognizance of any differences in age, type, or bacteria but produces excellent results in practically any case

The length of stay in the hospital has been greatly shortened. Most of our eases are ready for discharge in two weeks after operation, although, of course, further dressings are required. Patients frequently leave our control after discharge from the hospital and for this reason we have frequently kept them longer than otherwise necessary in order to make sure they are eared for properly. No ease is discharged until we are sure that there is no change for complication.

The incidence of post-operative fever is striking Thirteen of our 23 eases were afrebile within a week after operation and within two weeks 18 were afrebile. This compares very favorably with other methods of treatment with tube drainage and irrigation in which a daily rise in temperature may be expected for a month or six weeks and occasionally for two or more months. The tight packing reduces fever by successfully removing the causes and the products of pleural inflammation.

The operative procedure as at present carried out has no objectionable features. If it appears to be an extensive operation, one must remember that no operation should be considered extensive that produces a rapid restoration of function. Its advantages are many and in naming them we quote from our former communication.

The Advantages of the Packing Method

1 The pleural cavity is cleaned within twenty four hours and remains grossly clean until the cure is effected. This phenomenon is so striking that it is difficult for the uninitiated to believe it possible until it is seen

2 The ease of management post-operatively by the surgeon By the old method change of dressings daily or twice daily was necessary or else extensive apparatuses were employed

N. Y. State J. M. February 1, 1933

Even with the simpler procedures close attention to details was necessary. By this method dressings are changed at comparatively infrequent intervals and may even be forgotten for

several days.

3. The introduction of tubes is unnecessary, and therefore, a source of pleural irritation is removed. It is well known that drainage will continue as long as a tube is allowed to remain in a sinus. It is also noteworthy that no case of osteomyelitis of the rib developed in the cases since there was no tube to rub for days against a rib adjacent to the thoracotomy wound.

4. It prevents the discomfort which may be due to a mobile mediastinum by fixing it. In several cases when the tight packing was removed discomfort was experienced which was relieved by the re-insertion of the packing.

5. The large thoracotomy wound with the help of the Cameron light permits a perfect inspection of the pleural cavity and allows the operator to remove all fibrin and break up the necessary adhesions and pockets. And not least interesting it has allowed a clear view of the mechanism of the cure of the empyema cavity and has helped improve the methods directed toward cure.

STATISTICAL SUMMARY OF SECOND SERIES OF EMPYEMA

23 cases of true empyema with 2 deaths one death of operative shock one death of intercurrent disease

2 cases of tuberculous pyopneumothorax, 2 deaths

2 cases of ruptured lung abscess, 2 deaths 7 cases of so called chronic empyema cavities with 6 cures

Post-operative Complication:

1 case of wound diphtheria

2 cases of lung necrosis with bronchocutaneous fistula

Disease Preceding the Empyema:

18 cases of pneumonia 1 case of acute brouchitis 1 case of plenrisy with effusion

3 cases of pulmonary infection following abdominal operation

(It is possible that all were cases of pnenmonia, though variously diagnosed.)

Age Incidence:

Up to 5 years	ses
6-105	"
11-201	
21-308	44
31-405	"
41-50	
51-60	44
J1-00	

Bacteriology of Pus from Empyema:

Pneumococcus in 13 cases Hemolytic Strep. in 6 cases Staphylococcus alb. in 1 case Mixed infection in 1 case Unidentified bacteria in 2 cases

Length of Stay in Hospital:

	J	~ · · · · · · · · · · · · · · · · · · ·		,,	•	
2	cases	less than	1	wee	k	
2	cases	between	1	and	2	weeks
4	"	"	2	"	3	. (
5	"	"	3	"	4	
4	46	"	4	c.	5	• 6
3	**	"	6	"	7	4.4
1	**	**	8	"	9	••
2	paties	nts died				

Incidence of Post-operative Fever:

In	3	cases	there	was n	o fe	ever
"				lasted		
"	2	"	"	"		days
44	3	"	"	••	3	
"	3	u	••	"	5	44
46	1	case	"	"	8	
Lt	1	**	46	"	12	
"	3	cases		*1	14	"
"		case	u	• 6	18	"
"	2	cases	**	"	35	"

(In no case was fever over 103°, and the average was approximately 101°.)

THE PROPHYLACTIC USE OF THE PESSARY IN THE PUERPERIUM* By LOUIS A. SIEGEL, M.D., BUFFALO, N. Y.

REAT advances have been made in obstetrics in the past twenty-five years. This has led to the introduction of many new ideas regarding care during the prenatal and

* Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

labor periods. The expectant mother receives prenatal care early. This affords an opportunity for studying the general physical condition, the kidney and heart functions, so that the complications of the latter half of pregnancy may be avoided or so managed as to avert serious consequences. This care is available to all women, as every practitioner realizes its importance and almost every hospital conducts its prenatal elinic.

Attention directed toward the labor itself has developed many methods for the relief of pain, and procedures in delivery which leave the patient in much better physical condition. And also, after the first two weeks of the puerperium the patient receives, while at the hospital, the most

approved scientific care.

Notwithstanding the greatly improved management of the prenatal period, labor, and the two weeks immediately post partum, there is a most surprising neglect of the remaining part of the puerperium. The puerperium is usually interpreted as the two-week period immediately following delivery. As a matter of fact, however, the puerperium extends over a period of approximately eight weeks. The return to normal of the generative organs is a gradual process requiring the full eight weeks to bring it about. It would. therefore, appear that following the first two weeks there still remains an important part of the puerperium which demands intelligent care. and lack of it often lays the foundation for the future development of birth canal pathology.

As a result of the incomplete involution of the puerperal period the uterus is still enlarged and its supports relaxed. This will often lead to backache, bearing-down, heaviness in the pelvis. dragging sensations, discharge and weakness, all of which are frequently regarded as necessary accompaniments of elildbearing. If these patients are examined when their symptoms appear, it may be found that the uterns is large, in anterior position, but sagging. With such symptoms, a retroversion is usually suspected which, however, is not found. These symptoms are often not reported to the physician as the patient also regards them as a natural consequence of childbirth. If they are reported, the attending physician, in the absence of retroversion may ignore them. At the end of eight weeks, if the symptoms still persist, he may give them consideration and institute measures for their relief. But, by this time, four to six weeks of the most important part of the puerperium have passed without proper attention. With conscientions prenatal supervision, skillful delivery and most approved hospital care directly following labor, it seems very unreasonable and illogical that the remaining four to six weeks which are so iniportant should be almost entirely neglected.

In recognition of this fact, there has been some attempt by various clinics to correct it by advocating certain procedures to aid involution. Polak, in his clinic, used the "monkey walk," a procedure which requires the patient to walk on "all fours" for a stated period morning and night. This maneuver tends to put the uterus temporarily in the normal position but does not prevent it from again sagging when the patient is

erect. Others have advised the knee-chest position, or lying on the abdomen, both of which, in the same way, are of limited value. These procedures are advised not only during the hospital period but patients are instructed to continue them at home. Unfortunately, however, the patient after returning home, in assuming her household duties usually neglects these exercises and such little value as they may have, is lost. If it is desirable to adopt such measures which are of only temporary benefit, it would appear that any plan by which the interns may be continuously supported is both advisable and logical. This can be accomplished most simply and effectively by the use of the Smith-Hodge type of pessary.

The pessary, unfortunately, is not well understood. Its purpose and mechanism by which it acts are not familiar to many, and this in part accounts for its having fallen, more or less, into disuse. It is usually regarded only as an aid in the treatment of retroversion and this indication is generally accepted. Even in this condition, however, the real value of the pessary is little appreciated although it has been before the profession since its introduction in 1863. In view of this lack of appreciation it is not surprising that it has been neglected for other conditions in

which it has a definite place.

It is true that the pessary is occasionally used at the end of the puerperal period when subinvolution or retroversion is actually present. It is now proposed that the pessary he used during the pnerperium for the relief of symptoms due to relaxation, sub-involution and retroversion. All patients, therefore, should be examined during the third week of the puerperium. Those patients showing evidence of poor involution with a large, sagging, hoggy uterus accompanied by backache and bearing-down, can be treated and relieved by the use of a properly fitting pessary. The selection of the proper size for the individual patient is of the greatest importance. At this time of the puerperium a number three or four narrow Smith-Hodge pessary is inserted and allowed to remain two weeks. This is then replaced by a smaller size to allow for the progressive change of involu-The second pessary is removed at the seventh or eighth week when involution should be complete. While wearing the pessary a simple, cleansing douche is used once daily for obvious reasons. The pessary used in this way is a simple and effective procedure. It acts as a continuons support to the uterus and prevents siib-involution, relaxation and displacements without requiring the cooperation of the patient.

My own experience, for the past two years in the use of the pessary in this manner, has proved most gratifying. It has convinced me of the importance of careful observation during a period which has been almost entirely neglected. The complete relief of symptoms by the use of the

pessary justifies its continued use.

Several objections may be raised to the use of the pessary as a prophylactic measure in the puerperium. First, it may be urged that by its presence it actually retards involution. Second, that it may predispose to infection; and third, that perineal lacerations may make its use undesirable or impossible.

In answer to the first, judgment must naturally be used in selecting the proper size, and good judgment can only come through experience. The birth canal is still relaxed in the third week of the puerperium and one may introduce a pessary which is too large and which may prevent the structures from involuting properly. however, by experience one has acquired skill in selecting a pessary of the proper size so that the uterus is maintained in position, the birth canal is not over-stretched and there should be no interference with involution. To fit properly the pessary should be movable in the vagina, and upon straining, only a small part of the anterior bar should be visible. The patient should be entirely unconscious of its presence.

In answer to the second objection: In the third

week of a normal puerperium, the birth canal is not susceptible to infection. The canal between the vagina and the body of the uterus is now distinct. By the third week, as recently shown by Williams, the endometrium is completely regenerated, which in itself is a natural barrier to infection. If there be temperature indicating a morbid puerperium, the insertion of a pessary is naturally contra-indicated.

In answer to the third objection: Tears of the perineal body either as a result of episiotomy or delivery, are usually well healed by the third week. If the tear has been extensive and healing delayed, the pessary can not be used. The narrower types are more desirable as they avoid overstretching and possible damage.

In conclusion, it is emphasized that the puerperium extends over a period of eight weeks; that, during this time, conditions may exist which result in relaxation, sub-involution, and retroversion; that the resulting symptoms of bearing-down and backache at this time are preventable, or may be relieved and displacements prevented by the prophylactic use of the pessary.

THE PRACTICE OF MEDICINE IN 1950

By H. SHERIDAN BAKETEL, M.D., JERSEY CITY, N. J.

An address before the Ocean Medical Society, Brooklyn, January 16, 1933.

UERY: What will be the status of the practice of medicine in 1950? This portentious question, an answer to which your membership desires, should receive the consideration of a prophet, of the seventh son of a seventh son, or of a gazer into the crystal ball, in the middle of which is said to be writ all that is to transpire in the future.

But may not observation and deduction come to our assistance in reaching a conclusion?

1. Immediately after the beginning of the Great Depression, back in 1929, we found that there was no lack of men eager to make forecasts about returning prosperity.

We heard that prosperity would return in a few weeks. Then the date was postponed a few months. Some of the most prominent men in our country, including the President, made statements which a year or two later came to look rather foolish. Finally, no one could be found who would be willing to prophesy that prosperity would return within our own generation.

We now enter the fourth year of the depression, and face the fact that circumstances will move this way or that, irrespective of the prophecies of man. Therefore, we realize that one can make very few predictions with the confidence that they are accurate.

2. If we retrospectively regard the ages of progress, we discern many great changes which no man could possibly have foreseen, or had they been foreseen, people would not have believed.

But we are also aware that many things have not changed, things which have developed and grown, but which to a large degree remain as they have been for many hundreds of years.

Medicine is one—at least that part of medicine which concerns the spiritual relationship between patient and physician.

3. The desire to serve humanity, which has animated the healer for so many centuries, continues today.

Without it, very many of the great advances in scientific medicine which have distinguished our profession, particularly in the last quarter century, would mean far less, for there would be no one to interpret these progressive steps and apply them in a personal way, and accordingly the public would derive much less benefit from them.

4. We must remember carefully this ambition to serve when we consider what medicine will be like 25 or 50 years hence.

Arguments tending toward a revolution in medicine, no matter how logically they may be

prepared, or how well based on studies of medical care and service must be proved in the long run by human inclimations. Can the desire that has continued for so many centuries, on the part of the ill patient, to have a personal physician mini ster to his needs, be changed comparatively over mght?

5 To answer your question I have set out very brovely to prognosticate what medicine will be lile in 1950, and I have enjoyed permitting my imagination to run riot in observing all kinds of rudical changes, with our present system turned

upside down

All the things that physicians have communicated to me in conversations concerning the tuture of medicine, all that I have ever read, including the report of the Committee on the Costs of Medical Care, with the various newspaper editorials discussing it, came to my mind in review It seemed easy to paint an interesting picture based on all these somewhat wild predictions, and if I dated the picture sufficiently far ahead. I would never be called to account for my forecast, as were the men who made those prosperity predictions back in 1929

However, after deliberate reflection I reached the conclusion that the future could not actually hold such startling changes as some would wish us to believe The principal reason is that we

cannot easily change the nature of men

6 It is a human tendency for the ill potient to desire an humane physicion, who will immister to him in a personal, old-foshioned wov, even though the technique and odvantoges applied may be of the most modern sort

It is also inherent in the physician who is a true healer at heart to do his best under the old type

independent system

Of course, there ore changes ahead

Medical practice cannot remain at a standstill, and certainly when we look back 25 or 50 years. and recall the marked changes and improvements —the use of the automobile to increase the physician's radius of action-the telephone, practically placing him in the same room with his patient many nules away-the assembling of physicians in medical office buildings, with consequent closer cooperation, and a very great saving and con venicnce to the patient—the many improvements in diagnostic and therapeutic apparatus and ngents—and finally, the understanding on the part of the physician that he must, in all logic and fairness apply business principles to the practice of medicine in a reasonable degree-when we con sider all these things we realize that there are cert un to be just as striking changes ahead of us

8 One of the questions you expect me to answer tonight is, Will the general practitioner disappear?

I do not expect to be here 100 years hence and so I am not deliberately playing safe in making a

conservative prediction on this question. I think the general practitioner will be here 500 and 1,000 years from now We may not know him by that name, but his service and his relation to society will be the same

His rewards, let us hope, will be larger part, of course, is largely up to him for as the physician proceeds along a course in which he is already making so much progress discovering his economic problems and devising ways to meet them, he will adopt means to make his own particular kind of service more eagerly sought by the public. He will find that what business calls salesmanship can be applied along rational lines in medicine

We do not have to journey very far to find an illuminating example. I am acquainted with a physician in an adjoining state who, 20 years ago located in a comparatively small town, a dozen miles or so from the county seat. His medical preparation was no better and no poorer than that of thousands of his confreres But he possessed foresight and with it wisdom. He early recognized the necessity of giving to his patients a serv ice court to that which they would obtain if they were to consult a doctor in the county seat determined to do even better Consequently, as time went on, he placed in his office the various instruments of precision which are so necessary to enable one to arrive at a proper diagnosis

He kept abreast of the times in every way a result that young man attracted patients Those nationts and their children form part of his chentele today His office is always crowded assistant and two nurses aid in carrying on, and I do not know a more successful practitioner nor a man who is able to furnish definite service of The doctor makes no a more decided character claims to superior knowledge, but as an humane farseeing, wise and competent practitioner, he has applied to his daily endeavors the very best in the art, science, and economics of medicine

A few years ago we heard much more talk on the subject of specialism than today

Hen, not only the public but even many of the medical profession, seemed to feel that the only

good medical man was a specialist

We were alleged to have reached such a fine point of specialism that a patient who called upon an otologist for the treatment of an abscess in the right nostril was told that he must consult an other specialist, as he confined his efforts solely to the left nostril

There are indications that we are commencing to observe a trend away from specialism, and back to general practice. To be sure there are as yet no statistics to prove this, but it is nevertheless cle ii that such a change is being noted. I have been much interested in the opinion recently expressed by a dealer in surgical instruments and supplies, who has an intimate business acquaint

ance with doctors throughout a wide territory in the Southwest.

He had noticed, he tells us, a very marked diminishment in the public's preference for specialists. This was especially noticeable when listening to the comments of the patients coming to his orthopedic and truss-fitting department.

Some of these people have apparently reached the conclusion that the specialist is too likely to overlook pathological conditions in other parts of the body that may have a bearing upon the ailment with which they are afflicted. Of course we know that this complaint is not often justified. Furthermore we are convinced that every person should constantly be under the general survey of a competent practitioner, but the fact that the patients trouble themselves to reason this out is proof positive that they are giving intelligent thought to the matter.

10. I believe the future will see the general medical man occupying a position of great import.

As medical education is becoming better rounded, and our research work is bringing to us conclusive facts, and with better facilities for undertaking postgraduate work, there is no reason why the general man should remain secondary to the specialist.

He has the one great advantage, which patients are appreciating more than ever—namely, a broad perspective of the patient and the ability to include all parts of the body in his investigation. Not only should his sphere of activity include the majority of ill patients, but the well patient also will in the future require the general practitioner's attention more and more in the form of periodic health examinations.

We realize that certain physicians have outgrown the objections once held toward state medicine, and have concluded that there may be a solution to our difficulties in some such new form of medical service. It is not at all unlikely that by the year 1950, and perchance long before that time, we will have worked out a method to provide medical service for those who are unable or unwilling to pay for the services of a private physician.

In doing this, we will be following in the trail of most of the European countries which have long been utilizing a form of state medicine. When we are ready to consider such a plan, the lessons that these countries are learning will be so well known that, if we proceed slowly and cautiously, we may profit by their earlier mistakes.

11. For example, we shall not commit the error of assuming that physicians desire 100 per cent state medicine.

One hundred per cent state medicine would render the family doctor extinct. It would completely eliminate the personal relationship. The result would be fully as unsatisfactory as the public believes conditions are now, and probably very

much more. What we will have in 1950, instead, is undoubtedly a system of part state medicine and part private medicine, in more or less equal proportions.

That portion of the public now treated gratuitously by physicians, either in their private practices or in clinics, or whom physicians are now called upon to treat without charge as hospital ward cases, and all those patients who are so eager to obtain medical service in one form or another without paying for it—all these patients will be grouped together and cared for by the state, county or municipality. The physicians who care for the indigents will work on salary, while the other members of the medical profession in private practice will be automatically relieved of a very difficult burden.

The economic importance of such a change is decidedly obvious. The private physician can then devote himself exclusively to practice for which he is recompensed, to study and, if he is so inclined, to research work.

I regard the term "state medicine" as a misnomer, and utilize it at this moment only because it seems to be the popular term in lieu of something very much better. My preference is for "public medicine," because doctors working for the Government in any of its forms are really practising "public" medicine in contradistinction to the private practice of medicine, in which they are compensated by the individual, rather than through some form of taxation.

12. The very important point to be emphasized is that we must not permit the pendulum to swing too far in one direction.

There are some phases of public medicine which undoubtedly sound attractive in these days of de-

pression and every-man-for-himself.

However, the fact that we are temporarily experiencing difficulties does not mean that private medicine should disappear, and that all of us should shift to a government payroll. If we as physicians are to take an active interest in the coming developments of medical practice, and are to guide our political leaders, as well as the philanthropists, in putting changes into effect, we must advocate that this metamorphosis be effected conservatively. We must not ourselves, nor allow the others, to make us leap out of our present pool into a new one, the depth of which we know not.

13 This brings us to the question: "Who will, in 1950, be the private practitioners, and who the state's doctors?"

We know that there are men in the medical profession who are extremely well adapted to conditions of private practice. They possess every qualification to make the most successful types of private practitioners, either general or specialist.

There are, on the other hand, men who are scientifically quite as capable, but who for one rea-

son or another could employ their ability more effectively under salaried conditions. Then there are many between these two extremes, but it is very clear that we have one distinct class in the profession which could never be happy under anything but the private form of medicine, and another portion which could work very happily under governmental supervision.

14. Since we have these two graups, and two corresponding kinds of patients—it remains for the future to enact an odjustment. I believe it

will be un fait accompli by 1950.

15. Another question that is causing speculatian is the development of the private group clinic.

There are approximately 150 group clinics in the United States, whose staffs range from three or four, to thirty or forty men. Then there are very many medical partnerships, which are actually groups in the making, as a partnership often attracts a third and sometimes a fourth member until a full-fledged group evolves.

The majority of the groups are scattered through the Middle West, with particular concentration in Minnesota, Wisconsin, and Iowa. There are a considerable number on the West coast, some in the South, and a few have been developed

in the East.

Discussion among physicians, economists, and public health authorities would doubtless reach the conclusion that the group idea is due to spread rapidly and perhaps that eventually the largest part of private medical service will be so provided.

16. I have studied this question at close hand recently, and have come to the conclusion that here again we are running to extremes, and ex-

aggerating the future trend.

It would seem after all that we will have no such development as is frequently predicted, on the part of the private group clinic, though there is no question that under certain circumstances, in the right location, and under efficient management, the group clinic fills a decided need, and can serve a most useful purpose.

We are familiar with the arguments concerning the greater economy offered by the group—the fact that with one overhead, a mutually shared equipment, and subsidiary personnel—there can be some real saving in providing medical service, which saving can be passed on to the patient. It is claimed by some that in this form we have a final solution of the problem of the costs of medical care.

The group idea is excellent, but I seriously doubt that it will spread much more widely than at present, and particularly am I hesitant to believe that it offers any conclusive answer to the medical cost problem.

The outstanding reason for this belief is that only a certain proportion of cases can be most successfully handled in the group clinic. By that I mean the complicated cases which the general

practitioner must turn over for more thorough examination and diagnosis to some competent specialists. In addition to these cases, there are a certain number of patients who will go directly to the clinic for any sort of trouble, no matter how minor. These patients seem to be attracted either by the novelty of the clinic, or by the belief that they will get superior service at lower prices. Some of these patients appear to regard the general practitioner as a rather old-fashioned, somewhat incompetent type of individual, to be called only at three o'clock in the morning, to treat a pain in the epigastrium. But will the rank and file consult a group, instead of their own physician?

17. In certain cammunities, the group clinic con offer very warked advantages, both to the public

and to the physicious.

I know of a smallish city in Maryland where a group of specialists got together, took over what had been the Odd Fellows' Hall, and changed into an efficient professional building. In all there were about a dozen men in the group, and the specialists did all their work either in the building or in the nearby general hospital, allowing all the house calls to be handled by two general practitioners, who were partners in the group.

One excellent service offered by this organization was a complete and very thorough examination in which each of the specialists, when necessary, took part, the whole occupying but a few hours of the patient's time. The charge was \$25, which was pro-rated among the various members of the group according to the time employed by

each.

However, we need to understand that there are many factors which can interfere with the smooth working of such an arrangement, even such factors as the difficulty of cooperation between the doctors themselves, not an infrequent occurrence.

It seems to be almost axiomatic that a group clinic, in order to be really successful, must be headed by one dominant member as its chief, who surrounds himself with men who are professionally and scientifically competent, but who are not prone to place self-interest above the interest of the group as a whole. The germ of professional jealousy is one of the greatest hazards to the duration of the group clinic.

18. In 1950 I should expect to see many group clinics answering this description, but I doubt if the number will be largely in excess of those now in existence.

We will doubtless have a considerable number more than today due to the growth in population, and the building up of communities which are not large enough now to support such groups. But that would be simply a normal development, and it would not mean that the group idea had spread very rapidly beyond its present bounds.

As a matter of fact, some close observers feel

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was planued to drop the fee and Most of the doctors are not satisfiedn of the public now treated gratus are enjoying the luxnry of chronic mbjeians, either in their private prac and the government is doing the finalics, or whom physicians are now

treat without charge as hospita In England, annual sickness benefit & all those patients who are s from 41% of all panel patients in 1921, dical service in one form or an in 1927. In 1929, 410,903 cases were rong for it-all these patients wi special regional offices as chronic malifr and cared for by the state

Five-sixths of this enormous number dity. The physicians who car were found to be receiving benefits on fe work on salary, while th illness, but under the insurance scheme, these medical profession in pri nothing for the individual panel practition automatically relieved of do but to continue to treat their complaint a physician-member of Parliament said; stance of such a change is people are being converted into loafers and high private physician ca

choudriacs." oudriacs."

In Germany more than one million patient to study and, if he is were investigated by special medical officers ink. one year, and 56% were found to be malingering

21. Returning to the picture of medicine in medicine" as a mis 1950, we find still one other factor that we must term in lieu of some take into consideration—the subject of heaf term in lieu of some insurance. insurance.

If each one of our patients could be induced of its forms are reall take out an insurance policy on his health, articine in contradistinction pay the premiums regularly, so that in sick if medicine, in which the could call mon his family physician, with instance, in which the he could call upon his family physician, whe individual, rather that turn could call in specialists if necessary, and in

upon a surgeon to perform any required operation, and upon the hospital to take care of the patient during his period of sickness—the bill for all these things to be paid by insurance company

without any worry on our part-the situation would in leed be a happy one. Unfortunately the question arises, could pa-

tients be induced to take out such policies, and if so, would they pay the premiums regularly? It has not been too easy a task to sell the American public on the idea of life insurance. One great

argument in favor of life insurance is the certainty of death. Every man knows that someone is some day going to realize on his policy. sanges into effect, we

There is a difference with sickness. Mas metamorphosis be effected like to believe that their state of good, we must not ourselves, nor allow continue indefinitely. They is, to make us leap out of our present that, the average man does not a new one, the depth of which we know sary funds aside in a saving

his doctor for taking care this brings us to the question: "Who will Here we have the gist of be the private practitioners, and who the matter of health insurance doctors?"

tain income be protected

is to be effective in the solulknow that there are men in the medical medical care, it will requiresion who are extremely well adapted to sell it to the American pulons of private practice. They possess every salesmanship outmatching fation to make the most successful types of are aware. The only altere practitioners, either general or specialist pulsory form of health iere are, on the other hand, men who are

law requires that every ritifically quite as capable, but who for one rea

o is in a position to know, recently e has noticed a very definite tenart of some patients to turn away ric service. He says that too many ing back to physicians in individual

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r out of five groups that existed

ers have returned to individual

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a room for doubt. He says that patients are commencing to believe put themselves under the care of a me of its members is permitted to the fee. They therefore feel that e exorbitant.

ery strongly that radical changes pon us rapidly. doubtedly see developments in the jublic medicine, but they will not and there will still be plenty of the individual health counselor.

waste now associated with private actice will largely be eliminated by the state will remove the terrible nrity and semi-charity care which ips us, and by employing on salary

er of doctors who are well adapted der such conditions, the number of direct competition will be abbreally. At the same time, our educa-

es will, in the years to come, de-'methods so that men will not spend themselves for a profession in be no room for their services.

.. a partial system of public medirnment will have its difficulties. te a moment to glance at the expe-

ne of the other governments of the late medicine. de, taking the matter of costs, the ernment sickness insurance fund, for d a deficit of 200,000,000 marks.

erts have estimated that more than 30 gold marks must be raised if the brance system is to be placed on a lal basis. of the trouble the British governfor itself in the National Insurance practice) may be gained from the his-

rapitation fee—the fee paid the doctor a panel patient. In the beginning the set at 11 shillings, with something exin rural and semi-rural areas. In pitation fee was reduced from 11 shil-hillings sixpence. Two years later the offered 8 shillings. The offer was

1 90% of the panel physicians handed ignations. The government immeed their offer sixpense. Finally an inson or another termany and many other states effectively unders of insurance now, and we have are many betwlan does not work perfectly. It is very clear the liat the United States government or profession v different State governments will exanything buong these lines, and it remains to be another porer a more perfect form of health insurunder govie developed.

14. Signether we look at medicine in the year. corresponthe year 3000, we counot escape the foct ifc. the fututrue physicion will be as he has been since

he will be . 400 B. C. ia

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15. will not be the man who regards the patient tion is tving machine-a human robot. The de-Therents in psychiatry and mental hygiene will

nd by the Unuside the fact that we must have an essenor foersonal, almost priestlike confidence and unpatientery anding between patient and physiciali. There fficers Klymany cases, to be sure, which require this reingening ionship to a lesser extent, and the mass producdiring this idea will apply to them.

ar mn The true physician is not one who is driven by i heatle lash of a master, or a system of rules, but

traher one who seeks to aid mankind in times of

duct are ss and possesses the will to serve. 1. 31

somet if he is to have the opportunity to fulfill sid in thambition, he must possess another qualifica-Disor rather he must acquire one other trait-, wL ary, and Wthat is the ability to present his desire to asd opera. In a more favorable fashion. We might go e of the

ner and call this ability salesmanship. . When going obrood a couple of years ago t a man on the steamer who mode a very impression upon me, as I sat in the steamer and watched him taking his morning con-

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vas struck by the vigor of his stride, the inforce he seemed to possess and his all-round iness. He was obviously a Norseman but ughly Americanized in his bearing. I catad him as a successful business man in the , yet there was a something which hardly

someone ... in with the picture of the business man. Before we passed the Banks he introduced himself. He was a Scandinavian, and a physician, lad be her brought fad be her brought fad be her brought was merica when a year old, had grown up in ruinment diwest and graduated from one of the best is some tell suin hools. This man was an artist craftswish suing on didicine was his art and his craft. At which said said slicine was his art and me coungster is dained by the stell full of the fire of the youngster is dained by the stell full of the fire calling. He had is claimed by some is still full of the ure or the final solution of its discovered his true calling. He had final solution of the life far West after serving his interne-cal care.

The group idea is I cared for the ailments of a widedock that it will speciation. He assured me that while at present and spredation. He assured the earth. here that it and springers, they were the salt of the earth. here that it offers any going abroad to study, not to spended on the same of t medical cost problem.

cialize, merely to continue his study of general medicine, and then instead of going to some nearby city, after his return from Europe, he was going back to his own people in his little town, because he felt that those people were entitled to the very best which medicine could give. "Those people stood by me," he said, "when I needed their money, and now I shall show my appreciation by giving them whatever added skill may come to me through broader knowledge."

This man exemplifies the spirit of craftsmanship which is so observable in your profession and Craft, art, patience are of first impormine. tance! Where can you look and not see physicians who are putting aside the hope for great emolument in order to serve those whom they term as "their people." Those men are rich in those things which constitute the very best in life. They are heroes who die, unheralded and unsung, without worldwide honor, but not without the very deep and sincere kind of thanks of those whom they have served. And with such practical physicians as these the medical profession is replete.

24. It is absalutely necessary for us not only to recognize our croftsmanship, but to embellish

We should draw a more distinct line between medicine practiced as a craft and that practiced as an industry, so that the public will be attracted by the first type. Our course must be, as 1 have endeavored to demonstrate, to make the private medical man attractive to the public. No one suggests municipal movie companies or municipal movie honses. That is because private industry provides the type of craftsmanship which makes motion pictures attractive to those of the public who enjoy them.

25. Let us hope that by the year 1950 we, as a profession, will have mastered this new art af presenting our croftsmanship in the best light.

26. On the whole, and considering all the factors discussed, I think the pasition of the medical profession of 1950 will be much more favorable. and the lot of the average physician will be much happier than today.

We are now going through a period of transition, as indeed is the entire world. We are learning the comparatively new science of economies. and are applying it to our problems. When we emerge from this period, we will find medicine essentially as it was before. Human nature changes but little in the course of the centuries.

The surface aspects of medical practice in the future will be different, doubtless along the lines suggested, but the changes will not be nearly as extreme as some feel.

Then, as now, we will stand and serve.

The outstanding rea only a certain proportion successfully handled in t I mean the complicated

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Executive Officer-Joseph S. Lawrence, M.D., 100 State St., Albany. Telephone, Main 4-4214. For list of officers of County Medical Societies, see this issue, advertising page xxviii. Annual Meeting, April 3-5, in the Waldorf-Astoria, New York City.

MEDICAL SURVEYS

Three books of reports of Medical surveys that directly affect the physicians of New York State have been issued within a little over a year:

- 1. Report of the Governor's Health Commission of New York State.
- 2. Report of the National Committee on the Costs of Medical Care.
- 3. Report of the Commission of the Association of Medical Colleges on Medical Education.

Each volume considers three questions which are of vital interest to both the medical profession and the public:

1. The medical needs of the people;

- The extent to which the present system of the practice of medicine supplies those needs;
- Recommendations for changes in medical practice and administration so as to meet the health needs of the people.

Medical service cannot be considered alone, but it is interrelated with other basic needs of a community. Every person is subject to at least three basic conditions which affect his counfort and satisfaction. This trinity of conditions which are present in his mind daily and even hourly are:

- 1. Social status, or those conditions arising from his contact with his fellows;
- 2. Wealth, or his financial and economic status;
- 3. Health, or his physical condition.

The physician is concerned with health, and is insistent on the recognition of his leadership in that field for which he is specially trained. But the maintenance or correction of health conditions has an intimate connection with economic and social conditions; and these are fields in which the physician is not the leader. Economic and social conditions are the peculiar fields of government officials, churches, schools, business companies and social organizations. These leaders will not accept the domination of even the health segment of their field by doctors, any more than physicians will accept the domination of the business men in their own peculiar field of medicine. The administrative contact of the physician with other persons or organizations must be by conference and advice rather than by law and compulsion. When doctors sit down with officeholders and social workers, and discuss the medical phases of their economic and social work. both parties are usually able to reach satisfactory agreements.

Each of the three reports to which reference is made at the beginning of this editorial deals with medical service from the standpoint of either economics or social science. All agree that medical service must be given by a trained physician. It is only natural that office holders and business

men should assume that they can hire physicians to deliver the services on order from a central office; and that the people will accept those services on the sole ground of efficiency. It is also only natural that physicians should emphasize the value and necessity of the friendly contact of the individual doctor with the individual patient.

The major recommendation of the Governor's Health Commission was the establishment of official County Health Departments. While legislative bills for the compulsory establishment of the County Units have been proposed, their voluntary formation under the present law is still in force, and under it the Columbia County Medical Society has followed the example of Cortland and Sutfolk in advocating and securing the county-wide administration in public health. These three counties have shown the way by which the medical profession may reach agreements with governmental officials in health matters.

The report of the Committee on the Costs of Medical Care contains proposals for introducing the commercial methods of large business corporations into the distribution of medical services upon a large, impersonal scale. Physicians are now in a position to discuss the plans of the Committee, and to make intelligent suggestions for meeting the medical aspects of economic conditions which statisticians and business men seek to correct in their own way.

The report of the Commission on Medical Education is the official pronouncement of the Association of American Medical Colleges on the subject of the education of practitioners of medicine. It conforms to the opinions and attitude of practitioners of medicine more closely than do the two other reports; but yet the influence of the medical societies will be needed in carrying out its recommendations.

The leaders of the official organizations of physicians will give deep thought to the recommendations of the three committees, and will doubtless develop plans of cooperation which will be acceptable to the medical profession and to representatives of economic and social interests.

LOOKING BACKWARD

This Journal Twenty-five Years Ago

Group Meetings:—This Journal of February, 1908, contains two propositions for group meetings of the Medical Society of the State of New York in addition to the annual neeting and of those of the District Branches.

The first proposal was made by a special cominitie on annual meetings to the effect that the State Society hold a semi-annual meeting, under the auspices of four groups of District Branches. Each group shall sponsor a meeting and its program, one year in four. This plan was discussed in the House of Delegates, but no decision was reached.

The second plan was proposed by the American Medical Association that seven Branches be formed; that the North Atlantic Branch consist of the New England States, New York and New Jersey; and that a meeting be held in each once a year.

This plan was rejected by the House of Delegates on the ground that there are already a sufficient number of medical societies.



MEDICAL PROGRESS



Pock Diseases.—Enriques Paschen describes the so-called elementary bodies, discovered by Borrel in fowl-pox and sheep-pox and by himself in variola vaccine. These organisms are identical morphologically and culturally. They can be regularly demonstrated in cow-pox lymph, rabbit virus lymph and variola pustules. Proof that these bodies are the causative agents of pock diseases has been given by their morphological demonstration in the tissue cultures and vaccine culture in a medium free from cells. Vaccination with cultures from an infant lymph always produces the same type of reaction as the usual calf lymph. Starting from a common source the original pock (probably a human pock), by continuous passage through the same species of animal, developed three different strains, namely, human pox, fowl-pox and sheep-pox. In the transformation of human variola through the cow or horse into vaccinia, it is highly probable that the pock agent finds its way into the mucous membrane of the upper respiratory organs and sets up a thrombophlebitic process in the lungs with enormous increase of the Otherwise there is no explanation for the sudden and enormous inundation of the blood stream and for the occurrence of metastases in the skin and internal organs. Experimental work with neurolapine (neurovirus in rabbits) entirely supports this hypothesis. With vaccinia the agent circulates regularly in the blood, but there is only a bacteremia and we have a minus variant which can be removed, at least partially, by forcing vaccinia virus to accustom itself to a tissue which is strange to it. This neurovaccine is very similar to variola, its characteristics being the formation of metastases and the liability to necroses and hemorrhages. Vaccinia has an affinity not only for cells and tissues of epablastic origin, as has been thought by some investigators, but also for mesenchymal tissue. It seems that the socalled affinities are merely the result of acclimatization to a new environment. All investigators have found virulent small-pox complicated by the presence of pyogenic cocci and have supposed that the difference between alastrim and small-pox consists in the former being due to the pox virus alone, the latter to the pox virus combined with pyogenic cocci. The comparison is not quite adequate inasmuch as neurolapine regularly kills the rabbit without the cooperation of bacteria. Vaccinia attacks the cells of the three germinal layers. while fowl-pox attacks only ectodermal and

(to a less degree) entodermal epithelium. The inclusion bodies have without exception a lipoid component, which is never found in vaccine. The pustule produced by vaccinia on the skin or comb of the chick does not show the histological features of fowl-pox, but those of vaccinia or variola, without the formation of Guarnieri bodies. These the author claims are masses of Paschen bodies. Recent experiments show that variola is transformed into fowl-pox by insect vectors, such as Culex pipiens—British Medical Journal, November 26, 1932, ii, 3751.

Tissue Changes in Virus Diseases.--J. C. G. Ledingham, writing in the British Medical Journal, November 26, 1932, ii, 3751, shows that the types of tissue change met with in various virus infections do not differ in essence from those encountered in infections due to visible bacteria. Where they seem to differ, as in virus diseases associated with characteristic cell inclusions, the difference is probably not really of a fundamental nature, or one bearing the implication that viruses are essentially intracellular parasites. It is more probable that the penetration of epithelial cells which takes place in fowl-pox and vaccinia is an accidental occurrence. In the great group of pock diseases, including mammalian and avian pox, the essential lesions are in the skin, with only occasional evidence of gross changes in organs, but in the skin itself there are notable differences in the mode of attack and development of the lesions. In vaccinia and small-pox the skin lesion is essentially an inflammatory one. It is, however, well recognized that ordinary vaccination may be followed by definite splenomegaly, and in fatal cases of small-pox focal necroses in the liver have been observed. Yellow fever affords an example of a virus disease which apparently produces a pure necrosis of parenchymatous cells without any inflammatory change. The lesions consist essentially of fatty degenerations, necroses and necrobioses affecting liver, kidney, heart and spleen, with little or no trace of inflammatory response, except possibly in jaundiced conditions. Lesions of the nervous system fall into two classes: (a) those represented by herpes and vaccinia—the latter after cerebral inoculation only-which produce meningitis with little or no encephalitis, and (b) those represented by rabies, poliomyelitis, Borna disease and louping-ill, which attack mainly the neurons. The latter group also contains the postinfectional and post-viral encephalomyelitic

conditions which are accompanied by extensive demyelination. Pulmonary manifestations of virus diseases, such as are probably contracted by the respiratory route, are seen in psittacosis and influenza. In psittacosis the manifestations are essentially lobar, accompanied by fibrous exudate and hemorrhages in In virus diseases severely damaged areas. such as distemper, rinderpest, fowl plague, etc., there is a lack of obvious change in fatal cases. The outstanding example of proliferative lesions is seen in Rous sarcoma and those avian types which are capable of being induced by cell-free material. These seem to be gennine malignant neoplasms. Russell's finding of intranuclear bodies similar to Paschen bodies in 33 per cent of gliomatous tumors points to a virus as being the cause of these growths. It has become increasingly evident that a change of host or a change in the method of propagation of a virus in experimental work may profoundly alter the pathological picture and bring to light unexpected tissue affinities. Thus the virus of vaccinia, after serial propagation in the rabbit, acquires greatly enhanced power of propagation from whatever site it is introduced. It has also been shown that concomitant bacteria may participate in tissue changes ostensibly due to virus.

Is Disinfection Useful in the Campaign Against Contagious Diseases?—The view is taken by A. Roeliaix in the Journal de Médecine de Lyon of December 5, 1932, that disinfection, even when carried out meticulously, is in reality nothing more than an accessory prophylaetic measure, and that in certain affections it is entirely useless. It is the patient himself who is a source of danger, with his fresh secretions and excretions, and not the microbes which he cast off during the days or weeks just past, for in the majority of the contagious diseases these survive but the briefest time after they leave him, and are of such fragility that they disappear, as it were, as soon as they fall off into his environment. Such is the case with measles, epidemic cerebrospinal meningitis, rubella, acute anterior poliomyelitis, whooping cough, grip, and mumps. Likewise, in diseases transmitted exclusively by insects or rodents, such as yellow fever, malaria, encephalitis lethargica, typhus exanthematicus, etc., disinfection is completely useless. Here it is the intermediary carrier that must be got rid of. The only diseases calling for complete disinfection are smallpox, scarlet fever, diphtheria and tuberculosis, and even in these the importance of such measures should not be exaggerated. In most cases it is direct contagion from the patient himself that is responsible for the spread of a disease. fact is too often forgotten in the zeal with

which disinfecting measures are undertaken upon furniture, walls, clothing, etc. A child sent to the country contracts scarlet fever; he is removed and the whole premises are disinfeeted. A month later another child is sent to the same house; he comes down with scarlet fever; the blame is placed on the inadequate disinfection of the place, while in all probability it was the woman of the house who was a carrier, the disinfection of whose throat would have been more useful than that of the premises. It is the same with puerperal fever in maternity hospitals, where the streptococcus is at home in the throats of the personnel. from which it continually produces new infections. Examples might be multiplied ad in-Disinfection should be relegated to finitum. a secondary place among means of prophylaxis. To assign to it an excessive importance is to give a false sense of security and to divert the attention from more appropriate prophylactic measures which would be effective if applied in its stead.

Tobacco Smoking.-The question whether a brand of cigar or cigarette is to be rated a "inild" or "strong" depends chiefly, says Friedrich Müller, on the amount of its nicotine content. Thus a strong Virginia eigar contains an average of 3.5 per cent of nicotine, with various other kinds ranging from 2 to 5 per cent, while cigarettes vary from the relatively weak nicotine content of oriental tobacco (0.8-1.2 per cent) to the heavier content of the French product (2-3.5 per cent) or the American and English (1.1-2.9 per cent). The amount of nicotine content has been proved to have nothing to do with the color of the tobacco leaves. It is the aim of scientifically conducted manufacturing concerns to produce eigars and eigarettes with a fine aroma, which at the same time have a nicotine content that is not too high and that remains uniform. Since the amount of nicotine demonstrated in tobacco leaves would lead one to expect a much higher toxic effect than is actually discoverable in smokers, there has been reason to . suspect that only part of the nicotine contained in the leaves passes over into smoke and produces its characteristic effect, and that the rest is destroyed in the burning eigar as it passes into the air. It has been established experimentally that only about one-quarter of the nicotine passes into the mouth (30 per cent with eigars, 20 per cent with eigarettes), and that of the nicotine drawn into the month about two-thirds is again puffed out from the mouth into the air. If, however, the smoke is inhaled into the lungs, 5 to 7 times as much nicotine becomes effective in the body as is the ease with simple mouth smoking. Furthermore the nicotine in the second half of a

cigar is more available to the smoker than that in the butt of the cigarette. Since it is thus established that it is the individual mode of smoking that determines the amount of nicotime that becomes effective, all that remains is to make a quantitative determination of the amount of nicotine actually absorbed, which can be done very quickly by examining the urine. Many attempts have been made to solve the problem of manufacturing tobacco poor in nicotine. It is easy to soak out the nicotine content from the leaves, but so much of the aroma is lost in the process that no satisfactory products can be made from them. Austrian Board of Tobacco Control, however, by heating them to a given temperature, has succeeded in freeing them from their salts. which pass off in superheated steam. suitable care the nicotine content can be reduced to 0.5 per cent, and be maintained constant at this limit. From a medical point of view these tobacco products can be designated as harmless, but it remains to be seen whether they suit the taste of the smoking public. A number of other processes have been tried. such as that of binding the nicotine in the smoke, but have proved to be entirely useless when submitted to an exact test.-Münchener medizinische Wochenschrift, November 18, 1932.

A Million Volts Against Cancer.—Among the many sensational news items in recent times, says H. Holthusen, writing in the Deutsche medizinische Wochenschrift of December 2, 1932, was the announcement that the splitting of the atom, already achieved in the physical laboratory, had opened the way to the medical use of high voltage electricity, and that through such an increase of the energy of the individual process as had been made possible by the million-volt tensions the therapeutic effect of the rays had been cor-respondingly increased. This is a misunderstanding. It must not be overlooked that between the problem of splitting of the atom and the effect of rays upon cells fundamental differences exist, despite a certain internal relationship. They are related, in so far as the rays here too serve in the end to loosen the structure of the cell molecule and to "denature" it, whereupon the cell, in the event that it has received a sufficient amount of bombardment, will perish. But the decisive difference consists in the amount of the energy masses available for the individual elemental process. A clear distinction must be made between, on the one hand, the amount of the individual quantum corresponding to the energy which is available in the individual process, and which determines the quality-in absorption-and, on the other hand, the total energy of all the quanlums, through which the intensity of the ir-

radiation is determined. Now it happens that in roentgen rays of all qualities and in the gamma rays the elemental energies which become free after absorption of the rays are fully sufficient to introduce reactions of which the irradiation-degeneration of the cells is to be regarded as a secondary result. Hence one cannot expect a fundamental increase of therapeutic efficiency from an increase of elemental energies such as is produced by increasing the tension generated. The attempt to draw conclusions as to therapeutic possibilities from the extraordinary physical effects of rays generated on a million-volt apparatus is not well founded. Such an announcement in the daily press under sensational headlines can only produce an erroneous impression in the present stage of investigation, and is all the less justified in view of the lack of technical equipment presupposed for the practical accomplishment of therapeutic irradiations. The problem of cancer control with radiant energy lies today in the field of divided dosage measured on a time basis. What is needed is to determine for each carcinoma the most favorable conditions of distributing the dosage of rays, in terms of time.

The Vascular Tonus of the Lower Extremity after Lumbar Sympathectomy, Studied with the Aid of the Adrenalin Reaction.—A report is made by D. Danielopolu, A. Aslan and I. Marcou of studies with reference to the effect of lumbar sympathectomy upon the lower evtremities, following an earlier study (1926) of the effect produced upon the vasomotors of the left upper extremity by excision of the stellate ganglion. The authors conclude from their two series of researches that the vessels possess an automatism of their own which allows them to contract and dilate. When, however, a vessel is separated from its centers, the variation of its caliber, due to this automatism. is completely disequilibrated. Normal vasomotor oscillations are due to the fact that every vasoconstrictor movement calls into action a vasodilatation, and vice versa. The authors think that this regulatory mechanism is reflex, with a centripetal and a centrifugal tract. The vessels of a sympathectomized limb present two important modifications, namely. hypotonia and exaggeration of their automatism-phenomena due to interruption of the centrifugal or the centripetal tract, or of both these. Practically, the hypotonia represents an improvement in the circulation of the limb; but, on the other hand, the exaggeration of automatism predisposes the vessels of the limb to crises of vasoconstriction which are more energetic and more prolonged than in a normal limb, and which cannot but diminish the nutrition of the limb. But the clinical results show that after sympathectomy the trophic phenomena disappear, and that intermittent claudication improves or disappears, which proves that despite the energetic crises of vasoconstriction to which a sympathectomized limb may be subjected, the circulation of the limb is clearly improved. Sympathectomy is. therefore, a very useful operation in arterial obliteration in the limbs. The authors experi mental studies have demonstrated that the most important region, the one which it would be most logical, physiologically, to intercept in cases of obliterating arteritis of the lower limbs, is located at the promontory Physio logically an interlumbosacral sympathectomy including this region would be the most logical operation in this condition, and also in certain affections of other organs which receive their mnervation through these ganglions. The idea is based only on physiological research in the dog, and requires the confirmation of general surgical practice-Bulletin de l'Académie de Médecine de Paris, December 6, 1932

Stenosis of the Larynx and Glycosuria in Children -It has long been recognized, says Martin Strumpel, writing in the Deutsche medizimsche Wochenschrift of October 28, 1932, that diabetes mellitus may produce changes in the larvin. In this connection a case of the author's In this case a boy of 8 years. is of interest previously healthy, suddenly developed within the span of 6 hours a serious air hunger, with a loud laryngeal stridor, in which inhalations produced only transitory relief The laryngoscope reverled masses of mucous accumulations after removal of which the eniglottis, arytenoid region and vocal cords were all seen to be greatly reddened and swollen from inflammation ing the examination the urine was analyzed and found to contain a trace of albumin, and to be sugar positive (16 per cent) as well as positive for acetone and acetic acid. Intubation improved the breathing and caused the cyanosis to dis As it was evident however, that the child's affection was no transitory condition, a tracheotomy was performed, after which the res-piration was entirely free. The glycosuria was treated at once by administering daily 570 calo ries of food with 3 x 5 units of insulin. By the 9th day the laryngeal findings were negative and the cannula was removed, the insulin was stopped at the same time, on the 14th day the urine was normal and the boy was discharged cured. In judging this case 2 questions arise. (1) Was this an instance of diabetes mellitus which crused the changes in the larvnx, or (2) was it a gen eral infection which brought a glycosuria in its wake? The first view can not be upheld in view of the total absence of all other symptoms and sometic findings of diabetes mellitus. It seemed more reasonable to adopt the second view, and

this was also supported by the negative results of examination 5 months later, when the urine and blood sugar pictures were still found com pletch normal. Whether this was a case of injury to the kidues or of one to the panereas is difficult to determine The positive albumin test upon admission nuglit point to a lesion of the kidnes. On the other hand the prompt response to insulin and a carbolisdrate dict are against this view, since such response is not the rule in so called renal diabetes. It is therefore more reasonable to suppose that the cause of the illness by in an injury to the pancreas. That the in fectious attack makes itself felt at the same time in the mucous membrane of the larvax in the form of a severe swelling is a rare circumstance hardly to be found in the literature

The Beneficial Effect of Fatty Alimentation in States of Cachexia -The attention of M I Maignon was drawn to the rapidity with which protein denutration was arrested in diabetics in the cachectic stage by substitution of fats for glucides in the diet. The question arose whether fats do not intervene in protein metabolism by exerting a favorable action on the utilization of proteins, so that the latter do not simply supply energy but also serve as modifiers of the quality of nutrition, somewhat after the manner of vita-Maignon's experiments on white rats in 1918 had already shown that rations of ovalbumin-fat permitted longer survivals and longer perinds of fixity of weight than rations of oval bunun-glucide Repeating these experiments in 1928-1931 and adding vitamins A and B, he found the same advantage in favor of fats with regard to the utilization of proteins. His latest studies have led to the conclusion that with ra tions containing a medium quantity of protein the balance sheet is practically the same in the two cases but where the ration contains a large amount of protein there is a marked advantage in favor of fits. If the fact is taken into consideration that with ovalbumin-fat the destruction of an additional portion of protein occurs in view of the production of the minimum of car bohydrates necessary, which the fats are incapable of furnishing, we are forced to the conclusion that the balance sheet would always be better with ovalbumin glucide rations, in which this additional destruction does not take place. The fact that we find with fat a balance sheet equivalent and even better for rations very rich in proteins can be explained only by a better utilization of proteins when associated with fats by virtue of proteosynthesis. This view that fats serve as qualitative modifiers of nutrition has recently been confirmed by the work of Americans establishing the fact that fats exert an effect upon growth and that they also have a true sparing action -Bulleun de l'Académie de Médecine, November 15 1932



LEGAL



INSANITY AS A DEFENSE IN CRIMINAL CASES

By LORENZ J. BROSNAN, ESQ. Counsel, Medical Society of the State of New York.

It has for years been the rule that an act done by an insane person is not a crime and as a result in many notable cases of homicide insanity in one form or another has been availed of by the accused as the theory of his defense. In certain recent cases an attempt has been made to extend the defense so as to cover cases where the defendant is able to prove that he was of subnormal mentality. The courts have uniformly been cautious in their dealings with defenses of this character.

A recent first degree murder case which arose in a Western State shows the manner in which the courts handle such a defense. In that case the defendant sought to establish as a defense that although he was an adult he possessed only the intelligence of a child of from seven to nine years of age. The testimony showed that the defendant had in eight years of schooling never progressed further than the third grade; that subsequent to a kick in the head by a horse at the age of ten he had shown an almost complete lack of intelligence. Various of his relatives stated that they were of the opinion that the prisoner was insane. The court in affirming a conviction on the grounds that nothing in the testimony was sufficient to support the defense of insanity stated in part:

"But an adult with the intelligence of a child from 7 to 9 years of age would be mentally capable of committing a crime unless it were shown by a preponderance of the evidence that such person were insane under the tests laid down by the court ***. In other words where an adult person has the intelligence of a child from 7 to 9 years of age, that fact alone cannot be made the test as to whether he is insane and therefore not capable of committing a crime under the rules and tests announced by the court **."

In another similar situation that recently came up in New England, the defense sought to establish that the accused was "just above the feeble minded level" and of the mental age of about twelve years and that he was therefore not responsible for his criminal acts. The court in its opinion said:

"Criminal responsibility does not depend upon the mental age of the defendant nor upon the question whether the mind of the prisoner is above or below that of the ideal or of the average or of the normal man, but upon the question whether the defendant knows the difference between right and wrong, can understand the relation which he bears to others and which others bear to him, and has knowledge of the nature of his act so as to be able to perceive its true character and consequences to himself and to others."

As another court stated it the general rule seems to be substantially as follows:

"A subnormal mentality is not a defense, to a charge of crime unless the accused is by reason thereof unable to distinguish between right and wrong with respect to the particular act in question."

The said decisions seem to be in accord with the rule followed in this State. Our Penal Law contains a provision which specifically limits the defenses of insanity that may be interposed. Said section (1120) provides in part as follows:

"A person is not excused from criminal liability as an idiot, imbecile, lunatic, or insane person, except upon proof that, at the time of committing the alleged criminal act, he was laboring under such a defect of reason as:

"1. Not to know the nature and quality of the act he was doing; or,

"2. Not to know that the act was wrong."

Under the said provision it has been repeatedly held that the type of insanity that can be available as a defense in a criminal proceeding is the type that produces in the sufferer such a state of mind that when he commits the act, he does not know that it is unlawful and morally wrong, Evidence tending to show mere pecularities therefore has been ruled to be no evidence of insanity. Attempts have been made under the said provision of the law to obtain an interpretation of the law so as to excuse the type of "defect of reason" that was claimed to lead the accused to commit the acts believing in his own mind that he was right. An example of the said sort of case was one that arose some twenty years ago in which a defendant had admittedly shot and killed his mother. The insanity defense consisted of proof that his mother had for years before the killing neglected him, and he felt that he was not doing wrong in "removing" her as the person who had been responsible for his unfortunate condition in life. There was a failure to support the claimed insanity by any proof that the defendant was suffering from any such disease. The court in affirming a conviction stated the following in its opinion;

"No matter how firmly the defendant may have been convinced that it was not wrong for him to kill his mother, his convictions to that effect could avail nothing as a defense unless they were the outcome of mental derangement * * * a person is not excused from criminal liability as an insane person except upon proof that at the time of committing the alleged criminal act he was laboring under a defect of reason which, furthermore, must have been such as to render him either (1) ignorant of the nature and quality of the act he was doing, or (2) ignorant that the act was wrong * * * The phrase 'defect of reason' in the statute means disease of the mind, and a person who has committed an act otherwise unquestionably criminal may not be relieved from the consequences of that act where insanity is relied upon as the sole defense, unless at the time of the commission of the act he was suffering from some disease of the mind?

Another similar case involved the defense of insanity supported by the story that the defendant had heard the voice of God calling upon him to kill the victim as a sacrifice and atonement and that he had felt therefore that he was justified in taking life. In that case the accused was held to answer to the law if he knew the act was wrong in the sense that it was forbidden by law, regardless of his delusion

In some jurisdictions a rule has been adopted giving an interpretation to the instinty defense to include cases of so called "irresistable impulse" Such cases are cases where the defendant although he knows that the act he commits is wrong, does the act under some insane delusion which prevents him from choosing between right and wrong The law in this State, however, does not accept the said doctrine. It is expressly dealt with by Section 34 of the Penal Law which reads as follows

"A morbid propensity to commit prohibited acts, existing in the mind of a person who is not shown to have been incapable of knowing the wrongfulness of such acts, forms no defense to a prosecution therefor"

The propriety of the New York rule can well be appreciated in the light of the following state ment made by the Court of Appeals in one of the

leading cases on the subject

"We are asked in this case to introduce a new element into the rule of criminal responsibility in cases of alleged insanity, and to hold that the power of choosing right from wrong is as essen tial to legal responsibility as the capacity of dis tinguishing between them, and that the absence of the former is consistent with the presence of the latter. The argument proceeds upon the theory that there is a form of instinity in which the faculties are so disordered and deranged that a m in, though he perceives the moral quality of his acts, is unable to control them, and is urged by some mysterious pressure to the commission of acts, the consequences of which he inticipates but cannot avoid

"Whatever medical or scientific authority there may be for this view, it has not been accepted by courts of law. The vagueness and uncertainty of the inquiry which would be opened, and the manifest danger of introducing the limitation claimed into the rule of responsibility, in cases of crime, may well cluse courts to pause before assenting Indulgence in evil passions weakens the restraining power of the will and conscience, and the rule suggested would be the cover for the commission of crime and its justification doctrine that a criminal act may be excused upon the notion of an irresistible impulse to commit it, where the offender has the ability to discover his legal and moral duty in respect to it, has no place in the law"

The possibilities of unjust results from these general rules may at once be suggested, but the wisdom of these rules can hardly be questioned The courts too frequently encounter faked defenses of insamity, and must be equipped with harsh remedies to apply when required juries are in the final analysis the triers of the facts, and, it is safe to say, very few truly instine persons are impustly caused to suffer for crimes committed by reason of their insanity

ALLEGED NEGLIGENT OPERATION FOR HEMORRHOID

\ doctor specializing in surgery was consulted by a middle aged man, who stated to the doctor that he was suffering from a hemorrhoid and that he wished the doctor to operate upon him im-

The doctor put him in a saintarium prepared lum for the operation by enem is and shaving, and the same afternoon sent him to the operating room Examination had shown that one large hemorrhoid protruded from the right side of the anus and that two smaller hemorrhouls were also present The patient however, requested the doctor to simply remove the largest one

The doctor undertook the operation under local anasthesia injecting the area with one per cent novocame The patient however, was too nervous and musted that he be given a general an esthetic, so consequently he was put under a gas oxygen ether anæsthetic The doctor stretched the anal sphincter enough to turn out the hemorrhoid, applying an electrical hemorrhoidal clamp consisting of two jaws that seized the hemorrhoid and clasped it tightly, after which electric current was turned on to coagulate and cauterize the tissues between the jaws of the clamp. The protruding hemorrhoidal tissue was then removed by an electric knife. There was no bleeding during the operation and the patient was returned to his room in excellent condition. As soon as he recovered consciousness from the anæsthetic, the patient told the doctor that he wanted to go home. The doctor, of course, insisted upon his remaining in the sanitarium. The day after the operation the doctor was no longer able to restrain the patient from his intention to leave the sanitarium. quently he was discharged on that day against the doctor's wishes. It apeared that he drove in an automobile twelve miles to his home. The doctor never saw him again.

Thereafter, a suit was instituted against the doctor in which the patient claimed that the doctor was guilty of malpractice in that he had used an improper technique in performing the operation. The plaintiff's complaint claimed that the proper performance of the

operation required the clamping of the hemorrhoid and the severing thereof with a hot instrument and that the operation would have been bloodless and non-injurious if it had been so performed. The plaintiff further claimed that the defendant in the operation negligently tore and destroyed a portion of the sound membrane of plaintiff's rectum and that as a result he was caused to bleed profusely and to suffer great pain and agony; that the functions of his rectum were greatly impaired and that he was compelled to undergo a second operation to correct the condition alleged to have been caused by the defendant.

After the action had been noticed for trial it appeared upon the calendar several terms at which times the attorneys for the plaintiff showed no particular inclination to try the case. The attorney for the defendant communicated with the plaintiff's attorneys in an attempt to force the matter on for trial and dispose of it. Plaintiff's attorneys then appeared in court and told the judge that they had withdrawn from the case. The case was called for trial and no one appeared to represent the plaintiff. A judgment of dismissal was thereupon entered in favor of the doctor.

CLAIMED NEGLIGENCE IN OPERATION ON EYE-SOCKET

A patient was referred by a general practitioner to the defendant in this case. who specialized in the treatment of diseases of the cyc. He received a history that the patient had in some manner fainted when near a stove and falling on the stove burned her right eye. Examination showed that the eye-ball had been badly burned and that there was no way in which the eye could be saved.

The doctor put the patient in an eye and ear hospital and there, under a local anaesthetic, performed an operation preparatory to the inserting of a glass eye. The operation included a repair to the eye-socket performed by taking skin from the patient's thigh and transplanting it into the eye-socket. The patient remained at the hospital for about three weeks and upon her dicharge her condition was satisfactory. The doctor intended to perform a second operation upon the patient to correct a shrivelled condition of the patient's eye-lids which had resulted from the burns that she had received from falling on the stove. The patient, however, never returned for such second operation.

Suit was instituted against the doctor in which the claim was made that the doctor's operation had failed to properly prepare her eye-socket so that a "revolving" glass eye could be inserted into the socket, and further that he had failed, as it was claimed he had undertaken to correct by skin graft burns on the plaintiff's face, especially in the region of her eye-lid. The complaint also charged that there was an understanding that the operation was to be performed in strict privacy with the attendance of only the necessary doctors and nurses, and that in violation of this understanding a large number of students were present and observed the operation performed upon the plaintiff while she was fully conscious.

After the case had been at issue for over two years and no steps had been taken on the part of the plaintiff to bring the case on for trial, a motion was made to dismiss for lack of prosecution. The motion was granted, thereby terminating the matter in the doctor's favor,



NEWS NOTES



LETTER TO THE GOVERNOR OF THE STATE OF NEW YORK

The following official letter, to the Governor of the State of New York, is published by direction of the Executive Committee of the Council of the Medical Society of the State of New York:

MEDICAL SOCIETY OF THE STATE OF NEW YORK Fifth Avenue and 103rd Street New York City

December 29, 1932.

His Excellency the Governor of the State of New York, Albany, New York.

Honorable Sir:

The New York Times of Friday, December 23, 1932, carried the following:

Alhany, New York, December 22, 1932.

"Governor Roosevelt announced today that he had turned over to the Aeadeny of Medicine for recommendations and suggestions from a professional standpoint a Special Report on Medical Abuses in Compensation Cases submitted to him by the Committee to Review Medical and Hospital Problems in connection with Workmen's Compensation Insurance submitted by him early last year."

We desire to commend the Sub-committee on Medical Problems under the Chairmanship of Dr. Adrian V. S. Lambert for its very informative report with constructive suggestions made to you on the medical aspects of the Workmen's Compensation Act. We wish, however, to submit our impression that a perusal of the report night lead the reader to believe that all compensation work is done either in "commercial" clinics, or by unprincipled physicians. We are convinced that existing conditions are in fact very bad, the evils involved pertain in a large measure to the Metropolitan area only, and scrutiny of that area does not afford a fair estimate of the application of the Act throughout the remainder of the State.

We respectfully invite your attention moreover to the fact that the Medical Society of the State of New York, with approximately 13,000 physicians as members, is the main official representative body of the medical profession of the State; and we suggest that this Society is therefore the logical body to make "recommendations and suggestions from a professional standpoint" on problems that have to do with the medical aspects and administration of the Workmen's Compensation Act.

The long tradition of the Society, which was incorporated under Legislative Act of April 4, 1806 "for the purpose of regulating the practice of physic and surgery in this State," lends, in our opinion, weight to the views just stated.

our opinion, weight to the views just stated.

Under the sponsorship of the Medical Society of the State of New York, one of its component County Societies, that of New York County, has already established and successfully maintained for eighteen months a Bureau of Compensation Arbitration. This was a practical step forward by organized medicine to correct abuses that had developed in the field of compensation work. The Special Report does not appear to have given consideration to this effort on the part of organized medicine. We feel strongly that the taking of this actual step is an additional reason for consulting the Medical Society of the State of New York in the whole matter.

May we assure you that the Medical Society of the State of New York is willing and indeed eager at all times to place its services at your disposal for the benefit of the State of New York.

Respectfully submitted,

CHAS. GORDON HEYD, M.D., President. Peter Irving, M.D., Assistant Secretary.

REGULATIONS GOVERNING MALPRACTICE DEFENSE AND GROUP INSURANCE

ADOPTED BY THE EXECUTIVE COMMITTEE OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, JANUARY 12, 1933

Members Not Insured Under the Group Plan:

The Medical Society of the State of New York will furnish to its members the services of the Counsel of the Society in actions brought for al-

leged malpractice, error, or mistake done or claimed to have been done in the legitimate performance of the duties of their profesion as physiciaus under the following regulations: The Counsel of the Society will serve as attorney in all actions for alleged malpractice, brought against members in good standing, who must be so certified by its Sccretary, excepting as follows:

Members shall not be entitled to malpractice defense if the acts in the suit for which they make application for defense were committed prior to their admission to membership in the State Society.

Members shall not be entitled to malpractice defense if the acts in the suit for which they make application for defense were committed during a period when they were not in good standing, according to Chapter XIV, Section 4, of the By-Laws.

Members shall not be entitled to malpractice defense while residing and or practicing medicine or surgery outside of the territorial limits of the State of New York.

The Society will not undertake the defense of any member who, after consideration by the Executive Committee, is believed guilty of criminal abortion, feticide, homicide, or any criminal act or who has not complied with the recognized ethical laws in regard to these cases.

Members shall agree not to compromise any claim against them, nor to make settlement in any manner without the advice or consent of the Society given through its attorney.

In the event that a member sued or threatened with suit shall, without the advice or consent of the attorney of the Society, determine to settle or compromise any claim against him, he shall reimburse the Society for the expense incurred in undertaking his defense, and in default thereof, he shall be deprived of further privileges of malpractice defense.

The Society shall not assume any responsibility for the payment of any sum agreed upon by arbitration in the settlement of claims, or awarded by court verdicts, or for making payments for any purpose whatsoever.

Members of the Society desiring to avail themselves of the privileges of this act shall make application therefor in writing to the Secretary of the Society, and it shall be shown to his satisfaction that they are members in good standing. They shall also furnish the Legal Counsel a complete and accurate statement of their connection with, and treatment of, persons upon which complaints against them are based, giving dates of attendance, names and residences of nurses and of other persons cognizant of facts and circumstances necessary to a clear and definite understanding of all matters in question, and shall furnish such other relevant information and execute such papers as may be required of them by the attorney of the State Society.

In the event of any difference of opinion between a member of the Society and the Counsel

concerning the eligibility of a claim for defense, or any other matter having to do with malpractice defense or indemnity, all details shall be presented to the Insurance Committee to be referred with recommendations to the Executive Committee of the Council for its decision.

The foregoing regulations are subject to such a change as may from time to time be authorized by the Executive Committee of the Council or the House of Delegates.

Members Insured Under the Group Plan:

All members in good standing shall be entitled to malpractice defense and indemnity in the Group Plan of Insurance on payment of the premium due on the policy selected but the amount of insurance protection granted to any member may be limited at the discretion of the Executive Committee of the Council, subject to petition for reconsideration.

If an assured shall fail to maintain in good standing his membership in the State Society, according to Chapter XIV, Section 4, of the By-Laws, the policy, so far as it applies to such assured, shall be cancelled as of the date upon which he ceased to be a member in good standing. A notice to this effect shall be mailed to the member's last address, and the Company will return upon demand and surrender of his certificate, the unearned premium due him on account of such cancellation. If the member is reinstated by payment of dues, the former policy cannot again be put in force but the member can secure a new policy under the same conditions as if he were a new member of the Society. This rule shall become operative if and when it is written into the policy of the Group Plan.

The Group Plan of Insurance shall insure a member within the limits of his policy against loss growing out of suits or claims for malpractice, error or mistake, committed or alleged to have been committed by an insured member in the legal practice of his profession or by any assistant of such a member, in the treatment or care of a patient previously seen and diagnosed by such a member and for whom the member has directed a

course of treatment or care.

The Group Plan of Insurance shall not cover the liability of an insured member on account of the use of x-ray for therapeutic treatment, the employment of partners, associates, assistants, technicians or nurses to practice medicine in his name independently of his personal diagnosis and specific instructions as to the treatment or care to be given, nor shall it cover the liability which such a member may have by reason of his participation in or ownership in whole or in part of any association, partnership, clinic, hospital, sanitarium, dispensary or any enterprise other than his private practice of medicine. The liability for such participation or ownership constitutes addi-

tional hazards not contemplated under the Group policy or rates, and losses on account thereof shall not be charged against the experiences of the Group Plan. Protection against these bazards shall, upon request and the payment of an additional premium, be furnished by the carrier by endorsement upon member's Group Plan Certificate or under an additional policy of insurance when necessary.

The Group Plan policy shall not cover the liability which an insured member may have an account of injury to patients from causes other than medical treatment, care or advice, nor for injury to persons other than patients from any cause whatsoever. Protection on account of such losses can only be had under general liability or work-

men's compensation insurance.

When in the course of duties imposed upon him as a medical officer of the State, or any political sub-division thereof, an insured member shall be required to render medical opinion, he shall be fully protected under his Group Insurance against the consequences of such an opinion provided it shall have been given to competent authority and not made public by him.

All members in the Counties in Greater New York and Rockland, Westchester, Nassau and Suffolk, desiring insurance protection in the Group Plan of the State Society, shall secure that protection through the Authorized Indemnity Representative of the Society, Mr. Harry F.

Wanvig.

Members Insured by Companies Other Than the Carrier of the Group Plan:

A member who elects to secure malpractice insurance protection from a company other than the Carrier of the Group Plan shall have the same right of defense by the Counsel of the Medical Society of the State of New York as those members not insured provided said carrier is authorized to do business in the State of New York. If

the member desires this service under the circumstances, all the regulations as detailed above applying to members not insured under the Group Plan must be observed. At the time the action is begun and not later the Secretary of the Society shall be furnished with the name of the Insurance Company, policy number, date of policy and amount of insurance carried. There shall also be presented at the same time a letter from an authorized officer of the Insurance Company certifying that the Company will assume the full cost of the defense including the fees of the Counsel of the Medical Society of the State of New York similar to those paid by the Carrier of the Group Plan in like instance. Also that he shall not be required to consult with or receive instructions from the Company as to the manner of defeuse and that the Company will accept his opinion on the final disposition of the action.

As Companies other than the Carrier of the Group Plan usually compel the holders of their policies to accept defense by the Legal Counsel of the Company concerned, the above would not apply. It is essential, however, that members so insured shall also enjoy the benefits of the services of the Counsel of the Medical Society of the State of New York if desired; but it is obvious that such service will be restricted by the rule of the Insurance Company cited above. Thus while the Legal Counsel of the Medical Society of the State of New York cannot be required under these circumstances to assume control of the defense or to appear as associate counsel, he shall be ready to render to the Counsel of the Insurance Company, if requested, a consultant's opinion and advice provided the Company concerned will compensate him for this service in the same manner as the Group Plan Carrier would do if the member was thus insured.

All previous resolutions heretofore adopted, pertinent to malpractice claims and defense, are hereby rescinded.

COMMITTEE ON LEGISLATION, BULLETIN NUMBER 1, JANUARY 13, 1933

This is probably the earliest we have ever issued a bulletin and it forecasts a long and difficult session. We beg of each chairman to make the most of his opportunities immediately to establish a workable contact with his legislators. The following is a list of the members of four important committees with which we can expect to do a good deal of work this winter (page 173).

We shall keep you advised right up to the minute with what is transpiring in Albany and will take the liberty of asking you, individually, when we feel that is the wise thing to do, to make special contacts. There will be great need for lay support this year, and may we, therefore, urge that you immediately enlist the interest of lay individuals in the general cause of medical legislation. If you start now, when a particular occasion arises where the legislators need knowledge of the attitude at home, you will be in a position to bring it out promptly. Remember, the Senate will be under democratic rule and the Assembly republican.

There follows a list of the hills that have been introduced:

Assembly Int. No. 63 - Vaughan, to amend the Penal Law by prohibiting experiments on living dogs. Referred to the Codes Committee. This is the identical antivivisection bill that Mr. Vaughan has introduced for a number of years.

Assembly Int. No. 72—Cooney, to amend the Workmen's Compensation law by providing compensation shall be payable for disabilities or death of an employee resulting from any occupational disease. Referred to the Labor Committee. Note that this amendment extends the law to cover all disabilities that may arise out of industry.

Assembly Int. No. 75—Kantowski, to amend the Workmen's Compensation Law relative to physical examination of employees by striking out provision that physician, as employee or carrier may select and pay for, may participate in examination if employee or carrier so requests. Referred to the Labor Committee.

Assembly Int. No. 102—Breen, amends Conservation Law relative to field meets or trials for dogs. Referred to the Conservation Commission. This bill was carried last year by Mr. Wallace and refers to the mistreatment of animals used in

sports and must not be confused with the antivivisection bill.

Assembly Int. No. 130—Breitenbach, to amen the Workmen's Compensation Law identically a Mr. Cooney offers to do in Assembly Int. No. 72 Referred to the Labor Committee.

Assembly Int. No. 131—Mr. Close reintroduce the lien law bill giving hospitals a lien on an rights of action, suits, claims, etc.. of any perso admitted to hospital on account of personal ir juries resulting from negligence of any person corporation. Referred to the Judiciary Committee. This bill is identical with Assembly In No. 1546, Print No. 1705 of 1932.

Assembly Int. No. 145—Theodore, amends the Workmen's Compensation Law by permitting in jured employee to request employer to furnish medical attendance or to furnish attendance him sent at expense of employer. Referred to the Labor Committee.

HARRY ARANOW,
JOHN J. BUETTNER,
B. WALLACE HAMILTON
B. B. BERKOWITZ,
EDWARD E. HALEY.
Committee on Legislation.

LEGISLATIVE BULLETIN NUMBER 2

January 20, 1933.

Since our last bulletin the following bills have been introduced:

Senate Int. No. 143—Berg (Assembly Int. No. 354—Rice). Senator Berg offers to amend the Education Law so as to permit restoration by the Regents of a license to practice medicine, to a person pardoned after conviction of felony. At present the law prevents the restoration of the license if conviction has been for misconduct in his professional capacity. Mr. Berg's amendment would delete this exception. You will recall he had this bill before us last year and we opposed it then. Give us your reaction this year. Referred to the Education Committee.

Senate Int. No. 184—Mr. Berg again asks that the Education Law be amended by extending for six months after May 17, 1933, time for applying for license to practice physiotherapy by those who have not taken the four-year course of instruction now required by law. Referred to the Education Committee. We see no reason why this amendment should be made. If there are persons who wish to practice physiotherapy, they should qualify for licensure in the regular way. Do you agree with us?

Assembly Int. No. 181—Bernhardt's antivivisection bill. He would amend the Penal Law by making it a misdemeanor to experiment or operate on a living dog for any purpose other than healing or curing the dog without the owner's permision in writing. Referred to the Codes Commitee. You will note that this would make it illeg for even a veterinarian to do anything with a dt without having a written permit from the owne Mr. Bernhardt has also introduced a resolutic calling for an investigation of the laboratories the state and appropriating \$25,000 for the expenses thereof. This resolution was referred the Committee on Ways and Means.

Assembly Int. No. 246—Mr. Lewis offers amend the Public Health Law by reducing the compensation of a health officer of a city, town village or district with population of 8,000 cless. At present the law specifies that such healt officer shall be paid not less than 15c per capit per inhabitant per annum. Mr. Lewis suggesthat the minimum shall be 10c. Referred to the Health Committee.

Assembly Int. No. 328—Mr. Close woul amend the Criminal Code, providing rule as a compensating witnesses attending before corone or medical examiners shall be same as prescribe by law for attendance of witnesses before a cour or judge. Referred to the Codes Committee.

Assembly Int. No. 329—Mr. Cohen would create a temporary commission to study the administration of the Workmen's Compensation Law and appropriates \$15,000. Referred to Way and Means Committee.

Assembly Int. No. 331—Mr. Hayes offers to amend the Civil Service Law by giving war nurses same protection against removal now given veterans and volunteer firemen and providing no position held by any of them shall be abolished while its duties continue to exist in that branch of public service. Referred to the Judiciary Committee.

Assembly Int. No. 342—Messer, to amend the Public Welfare Law by requiring public welfare district to provide necessary medical care for all persons unable to maintain themselves. Referred to the Judiciary Committee. Mr. Messer changes the definition of persons eligible for relief as follows: "The public welfare district shall be responsible for providing necessary medical care for all persons under its care and for such persons otherwise able to maintain themselves who are unable to secure necessary medical care" to read: "*** for all persons who are unable to maintain themselves."

Assembly Int. No. 345—Mr. Neustein would amend the Education Law by providing in New York City every place in which drugs, chemicals, medicines, prescriptions or poisons are retailed or compounded, shall be a pharmacy and under personal supervision of a pharmacist. Referred to the Education Committee.

Assembly Int. No. 346—Mr. Neustein would amend the New York City Inferior Criminal

Public Health

Courts Act, by enlarging jurisdiction of courts of special sessions held by City magistrates to include violation of Art. 22, Public Health Law, where defendant is charged with possessing narcotics and pleads guilty. Referred to the Codes Committee.

Assembly Int. No. 362—Bartholomew, adds a new section to the General Municipal Law, permitting supervisors of county not wholly in a city to terminate by two-thirds vote all child welfare allowances in which case the child welfare board shall be deemed abolished. Referred to the Indiciary Committee.

In response to our request, we have had information correcting our mailing list of county chairmen in two instances. Are there any others?

At a meeting of your Committee yesterday, a program was outlined calling for more intensive work from every county chairman this year than in previous years. The type of legislation which we anticipate will give us the greatest concern will relate to modifications of the Compensation Law. We especially urge, therefore, that every chairman read carefully the bills that relate to compensation, so that we may have most effective support when the time comes to take action.

Labor and Industry

COMMITTEE ON LEGISLATION.

COMMITTEES OF THE LEGISLATURE SENATE

77 7 4 4 674 5			
Esquirol (Cli.)	8th district	O'Brien (Ch.) 9th dis	strict
McCall	18th "	Byrne 30th	**
Feld		Nunan 2nd	"
Palmer		Mandelbaum 14th	н
Mandelbaum		Wojtkowiak 49th	44
Kernan		Patrie 35th	
Wicks	29th "	Hanley 44th	**
Lee	47tlı "	,	
Stokes	39th "	Codes	
		Qninn (Ch.)12th dis	4
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Public Education			44
Public Education Feld (Ch.)	20th district	Evans 6th	44 44
		Evans	44
Feld (Ch.) O'Brien	9th "	Evans 6th Feld 20th McNaboe 16th	44
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ASSEMBLY COMMITTEES

Public Health

- 1 Austin of Monroe (Ch.) 2 Elmond of Saratoga
- 3 Gimbrone of Erie
- 4 Lewis of Oswego
- 5 Pollard of Seneca
- 6 Palmer of Caynga
- 7 Hart of Westchester
- 8 Bush of Delaware
- 9 Doyle of Kings
- 10 Falk of New York
- 11 McGrath of Bronx
- 12 Nathanson of Kings
- 13 Paris of New York

Public Education

- 1 Rice of Cortland (Ch.)
- 2 Austin of Monroe
- 3 Gimbrone of Erie
- 4 Ives of Chenango
- 5 Lewis of Oswego
- 6 Thompson of Orleans
- 7 Averill of Wayne
- 8 Taylor of Orange
- 9 Hart of Westchester
- 10 Corwin of Schuyler
- 11 Albert of Bronx
- 12 Gillen of Kings
- 13 Ambro of Kings

Labor and Industries

- 1 Robinson of Tompkins (Ch.)
- 2 Wallace of Nassau
- 3 Hartshorn of Madison
- 4 Miller of Tioga
- 5 Goodrieh of Allegany
- 6 Thompson of Orleans
- 7 Washburn of Columbia 8 Rapp of Genesee
- 9 Corwin of Schuyler
- 10 Breitenbaeh of Kings
- 11 Vaughan of Richmond
- 12 Canney of Eric
- 13 Dennen of Kings

Codes

- 1 Esmond of Saratoga (Ch.)
- 2 Robinson of Tompkins
- 3 Sargent of Onondaga
- 4 Sheldon of Lewis
- 5 Abbott of Oneida
- 6 Lamont of Orange
- 7 Diekey of Eric
- 8 O'Mara of Monroe
- 9 Heek of Scheneetady
- 10 Brunstrom of Chantauqua
- 11 Alterman of New York
- 12 Samberg of Broux
- 13 Smith of Bronx
- 14 Schwartzwald of Kings
- 15 Farrell of Queens ,

GREENE COUNTY

The regular meeting of the Greene County Medical Society was held at the Saulpaugh Hotel, Catskill, at 8 P. M. on January 21, 1933.

A dinner preceded the meeting, with about forty per cent of the membership present.

Dr. Elisha B. Van Deusen of Catskill was elected to membership, and the application of Dr. William V. Wax of Catskill was referred to the Comitia Minora.

Drs. Edgar Vander Veer, James Vander Veer, Joseph Cox and Mr. Thomas Murray, Superintendent of the Memorial Hospital of Albany, were guests of the Society and presented a symposium on Hospital Staff organization, manage-

ment and equipment. This symposium was at the request of the Society in preparation for the opening of the new Greene County Memorial Hospital which is now nearing completion, and in which the organized profession proposes to take an active part.

It was decided to erect a memorial bronze tablet in the lobby of the hospital if a suitable plan and prices could be secured. To effect this the President appointed Drs. Atkinson, Daley and R. E. Persons a committee to draft the plan and to secure prices.

WILLIAM M. RAPP, Secretary.

BRONX COUNTY

A regular meeting of the Bronx County Medical Society, held at Elsmere Hall on December 21, 1932, was called to order at 8:50 P.M., the President, Dr. Klein, in the Chair.

Drs. Emanuel Feit, Joseph H. Hillman, Nathaniel T. Kwit, Emanuel J. Richter, Lionel C. Rubin and Abraham Werner were elected members.

In accordance with the recommendation of the Comitia Minora, Dr. Gustav H. E. Starke was elected Honorary Member of the Bronx County Medical Society.

Dr. Lefcourt presented the Report of the Social Committee. He appealed for the cooperation of the members in making the Beefsteak and Show, to be held on January 25th, a great financial, as well as social, success. The proceeds will be devoted to our relief fund.

Dr. Podvin, Chairman of the Special Committee on Baby Welfare, described in detail the work being done by the Committee. He asked the members for their cooperation and for any criticism they may desire to make. He emphasized that the work now being done by the Committee on Public Health, in connection with the Examination of High School students, as well as the work of his Committee. demonstrates how social welfare work can be done under the auspices of the County Society. These projects are now being carried out very successfully under our supervision, and it is felt that as a result other benefits will accrue to the profession and to our Society far greater than we imagined in the beginning. The Scientific Program then proceeded as follows:

"Interpretation of Abdominal Pain," by Dr

Edward M. Livingston.

The Paper was discussed by Drs. S. Philip Goodhart, Alexander Goldman, William Weinberger and Henry Roth. Dr. Livingston closed the discussion.

> I. J. LANDSMAN, M.D., Secretary.

A regular meeting of the Bronx County Medical Society, held at Elsmere Hall on January 18, 1933, was called to order at 8:45 P.M., the President, Dr. Klein, in the Chair.

Drs. A. Edward Balboni, Bernard Isaacson, Peter Kleinkopf, Joseph Lozner and Louis Rosenberg were elected members.

Reports of committees being in order, Dr. Frank, for the Social Committee, reminded the members of the Beefsteak Dinner and Show, to be held on Wednesday evening, January 25th, the proceeds of which will be devoted to our

Relief Fund. He appealed for the cooperation of all the members.

Memorial resolutions in honor of Dr. Sydney Steiner were adopted.

An address on "Group Practice in the United States: Retrospect and Prospect," was given by Dr. Morris Fishbein, Editor, Journal American Medical Association.

This address and our own plan to establish private group clinics in the County of The Bronx were then discussed by Drs. Nathan B. Van Etten and Benjamin H. Archer.

I. J. LANDSMAN, M.D., Secretary,

ROCKLAND COUNTY

Forty-one members of the Medical Society of the County of Rockland turned from scientific subjects to their Annual Banquet, which was held on Wednesday afternoon, December 7, at the Hotel St. George, Nyack.

Good music and splendid entertainment helped to make the afternoon a pleasant occasion.

Guests present from the Westchester County Department of Health were Doctors Matthias Nicoll, Jr., Commissioner of Health: Edward H. Marsh, Deputy Commissioner; and Eugene W. Bogardus, Director, Division of Tuberculosis.

All officers of the County Society for the previous year were re-elected:

President, Dr. S. R. Monteith. Vice-President, Dr. George M. Richards. Treasurer, Dr. Dean Millimore. Secretary, Dr. William J. Ryan. Chairmen of Standing Committees: Membership, Dr. G. F. Blauvelt.

Legislative, Dr. C. D. Kline. Public Health and Public Relations, Dr.

Royal F. Sengstacken.

Physical Therapy, Dr. Leo G. Weishaar. Medical Economics, Dr. Julius Pomerantz.

Dr. Russell E. Blaisdell of Orangeburg, was appointed a member of the Board of Censors-to fill the unexpired term of Dr. R. R. Felter, terminating in December, 1933.

Dr. Alfred M. Stanley, Dr. Harold H. Dodds. and Dr. Leo P. O'Donnel, all of the Rockland State Hospital, Orangeburg, were admitted to membership on this date.

The Treasurer reported that there was \$919.12 in the treasury and that the Society's membership was fifty-nine.

It is interesting to note that there is but one practicing physician in Rockland County who is not a member of the County Medical Society.

WILLIAM J. RYAN, Secretary.



THE DAILY PRESS



DR. WILLIAM H. PARK

Family physicians will approve the following editorial which appeared in the New York *Times* of January 20th:

"For more than a generation Dr. William H. Park has been head of the Health Department's laboratories and Professor of Bacteriology and Hygiene at New York University and Bellevue Medical College. Obviously, it marks no turningpoint in his career when he transfers to the new Hermann M. Biggs Chair of Preventive Medicine without making any change in his Health Department activities. The late Dr. Biggs was his predecessor, his chief and his collaborator in what was probably the most useful single case of gainful occupation in our times in New York.

"We speak of the world being transformed

beyond recognition by automobiles, wireless and airplane. But what a different world it is today, when diphtheria takes one child for every 100,000 people, from what it was in 1895, when diphtheria killed 150 times as many children! To have gone through forty years of campaigning against tuberculosis with impressive victories; to have seen the death rate for the general population cut in two; to be living in a world where infant mortality is one-sixth of what it was a generation ago, is to witness changes indeed. To have had an active hand in the furtherance of these changes is to have made history in a very real sense.

"The career of a public servant like Dr. Park helps to explain why people put up with political organizations."

POPULAR FALLACIES

The New York Sun of December 29 discusses popular fallacies in the following editorial:

"Two of the eminent scientists at Atlantic City, taking stock of the state of knowledge, have catalogued 'eight popular beliefs that are not true' thus:

"'A child is influenced by what its mother sees or thinks before the child is born;

"Birth marks are caused by what a mother sees or touches before her child is born;

"'In former times the average length of human life was much longer than now;

"'Fat people always are good natured;

"'Mental disorders are caused by over-study;
"'Children of first cousins, though of good parentage, are likely to be feeble minded;

"'Heavy growth of hair on a person's limbs and chest indicates great physical strength;

"'The theory of evolution implies that men are

descended from apes.'

"This list of beliefs unbased in fact is particularly interesting because each of its items is a

venerable cumberer of the human mind.

"A belief once accepted by the population at large has more lives than a litter of kittens. The earnest inculcator of sound doctrine who attempts to dislodge it undertakes an almost hopeless task. Nor does this mean that truth is mocked. The intruth is simply, often picturesquely, dressed; the exceptional circumstances that seem to support it are vividly related and remain in the memory, while the gown of truth is likely to be a drah garment stitched with ifs and buts."

A PROMINENT ANTI-VIVISECTIONIST

The New York *Herald Tribune* of December 29, carried an obituary of Dr. W. R. Hadwen, an anti-vivisection leader, of Gloucester, England, who died on December 28, aged 78 years.

The article says:

"Dr. Hadwen devoted his career to the vigorous opposition of two medical practices—the dissection of living animals and vaccination—and the enthusiasm with which he waged his campaigns drew wide attention on both sides of the Atlantic. The force of his utterances was strengthened by the fact that he held the degree of doctor of medi-

cine from the University of St. Andrews, Scotland, was a member of the Royal College of Surgeons, a licentiate of the Royal College of Physicians and of the Society of Apothecaries.

"Behind Dr. Hadwen's animosity toward vivisection and vaccination was a profound belief that the whole theory of medicine was built upon false premises. Among their beliefs he held that germs had no causal relation to disease, a theory that he fully explained in 1924 in an article en titled 'The Doctor and His Conscience.'

"Comparing himself to Harvey and Semmel-

weis, heroes of medical history who were indicated in their day. Dr. Hadwen wrote

"The germ theory of disease declares that a specific germ is the origin of every specific disease. I his, in other words, means that, when man was created, microscopic beings were created at the sime time to prey on and destroy the highest form of created life. This gives the impression that not only are higher eretures placed in the world for a useful purpose, but that other creatures are

placed there for the purposes of terrible evil Now this, in my opinion, is completely contrary to the whole design of a good and all wise Creator

"Members of the New York Anti Vivisection Society expressed regret yesterday at his death Mrs Diana Belais, founder and president of the local organization, characterized him as 'a great and powerful factor in the movement,' saying that his support 'was vital to a cause so frequently condemined by the majority of MD's'."

HEALTH ZONING

A new form of health zoning for New York State is outlined in the New York Herald Tribunc of December 20, as follows

"The creation of a new health zoning system throughout the state and the possibility of greater centralized control of highway construction and maintenance as stibstantial economy measures were considered yesterday at an executive session of the Legislative Tax Revision Commission, headed by Senttor Seabury C Mastick, at the Bar Association Building, at 42 West Forty-Fourth Street

"It was proposed, said Senator Mastick, that the state be divided into five health zones embracing all the various welfare agencies now existing in these suggested divisions, and that the entire system be placed under one head. The proposal, the charman explained, would climinate much current displacation and substantially reduce present

health costs

"It is proposed, therefore, to divide the state up as follows

"1 A state district under state administration comprising either parts or the whole of the ten counties in the Adirondack Mountinus section

"2 A city district for Buffalo

"3 City-county districts in which the city and county health departments are unified for the large eities and their counties, with New York City excepted

'4 County districts where the population is

sufficient to minintain a health district

"5 County consolidated districts wherein certum adjacent counties would consolidate to provide the requisite population

"Such a plan, Mr Mastick added, would give the state forty eight health districts outside of

New York, under central supervision

"New York City is not considered in the plan, because it is capable of sustaining itself."

SOCIALIZED DENTISTRY

The attitude of dentists towards the report of the Committee on the Costs of Medical Care is shown by the following news item from the New York Herald Tribune of December 8, 1932:

'Socialized dentistry was discussed by several speakers at yesterday's sessions of the Greater New York December Meeting for Better Dentistry at the Hotel Pennsylvania Dr John T Hanks, of New York City, said

"The dental profession is about to be faced with a proposition politically sponsored to set in socialized dentistry, and in order to anticipate such a move the profession should get up its own plan, so that if it is put into operation only the highest ethical standards would govern it, under the control of the dental profession and not by politicians."

"He pointed out that if such a plan were worked out and if i compulsory health insurance law were enacted, the profession could demonstrate that it already had its own plan working and that such a law should be fitted to it.

"The dental profession could organize a service that would make compulsory health in shrance unnecessary, he argued, and he emphasized that such plans would refer only to the care of low income groups and would not affect patients with financial ability to care for themselves

"He warned that a policy of complete opposition to insurance dentistry might put the medical and dental professions, if and when laws were formulated, in the same position as the professions in European countries, where, he said, they were ignored in the framing of the legislation which was dictated by the insurance carriers

"Dr Matin Dewey, past president of the American Dental Association criticized the report of the Committee on Cost of Medical Care contending that 40 per cent of the amount paid by the public would be used in administrative expense and only 60 per cent for actual medical service that is delivered to the people."



BOOK REVIEWS



A CORRECTION

The department of Book Reviews in the JOURNAL of January 15, 1933, page 119, carried a review of a book on "The Gastrointestinal Tract" by William Gerry Morgan, M.D., Philadelphia, but the heading was that of another book entitled "Functional Disorders of the Large Intestine and Their Treatment" by Jacob Buckstein, M.D., New York. These two reviews are printed below under their proper titles. Editor's Note.

Gastrointestinal Tract. By William Gerry Morgan, M.D. 12mo of 259 pages, illustrated. Philadelphia, J. B. Lippincott Company, [1931]. Fabrikoid, \$5.00. (Everyday Practice Series.)

This work, one of a series of books edited by Doctor Harlow Brooks, has been written for the general practitioner. The author, who realizes that a dissertation on functional gastrointestinal disorders would hardly fill even a small volume, has taken the opportunity to present much of value in other directions. In Part One he gives a brief. yet comprehensive survey of gastrointestinal physiology and goes at length into the important question of history taking and physical examination. In all the discussions of the so-called gastrointestinal neuroses, the author is very careful to emphasize that a diagnosis of a functional disorder must be made only after the most complete study of the patient has disclosed no lesion accounting for the symptoms. The book is replete with reports of cases treated by the author in accordance with his recom-mendations, and a careful study of his findings often reveals that an organic condition was the cause of trouble. Part Three, on "Motor-Sensory Neuroses of the Intestine" consists largely of a discussion of organic lesions such as duodenitis, colitis and proctitis with some men-tion of vagotonia as a cause of colonic disorders. The chapter on constipation is excellent, that on visceroptosis rather poor. As a whole, the book is apt to be misleading to a general practitioner, even though the case histories are illuminating.

Functional Disorders of the Large Intestine and Their Treatment. By Jacob Buckstein, M.D. 16mo of 265 pages, illustrated. New York, Harper & Brothers, 1932. Fabrikoid, \$3.00. (Harper's Medical Monographs.)

The term "functional" applied to disorders of the gastro-intestinal tract is usually a cloak for ignorance of the actual nature of the lesions causing symptoms. This very excellent little book has apparently been written for the purpose of dissipating some of this ignorance. The first chapter is one of the best treatises on the embryological development, the anatomy, and the physiology of the large intestine that has yet appeared. Following this, functional disturbances are discussed, not per se, but for the purpose of calling attention to the structural changes causing them. The book is replete with refcrences to the literature, and such subjects as membranes and adhesions, mucous colitis, allergy and the effect of extraneous diseases upon colonic function are adequately The recommendations regarding treatment show considerable clinical acumen, although at times they are somewhat empirical. On the whole the book can be recommended as one taking a very conservative view of the subject it treats.

Intracranial Tumours. Notes Upon a Series of Two Thousand Verified Cases with Surgical-Mortality Percentages Pertaining Thereto. By Harvey CushING. Quarto of 150 pages, illustrated. Springfield, Charles C. Thomas, 1932. Cloth, \$5.00.

This book represents another masterpiece by the outstanding neuro surgeon and teacher of this subject. This monograph is the result of a study of over 2,000 cases of brain tumors, a report of which was presented before the International Neurological Congress in Berne, Switzerland, in September, 1931. It represents a time consuming task which only the author can really appreciate. The classification, description, notes of interest and cases illustrating valuable points of information, have been so clearly and carefully worked out that we can state without hesitation, that this book is the only one of its kind. It is so valuable that every neurologist and surgeon interested in brain surgery should add it to his collection and consult it freely.

O. C. Perkins.

Mental Deficiency Due to Birth Injuries. By Edgar A. Doll, Ph.D., Winthrop M. Phelps, M.D. and Ruth Taylor Melcher, M.A. Octavo of 289 pages, illustrated. New York, The Macmillan Company, 1932. Cloth, \$4.50.

The authors present case material exhibiting mental deficiency, more or less directly traceable to cerebral injuries apparently sustained at birth. In every instance in this series, mental deficiency has been associated with motor paralysis.

The essential points studied were, the consequences of birth injury relative to mental deficiency and motor handicap; development of a reliable method of testing such children mentally. In the latter field, the Binet-Simon and Myers Mental Measure were found to offer the best technique for mental study of these children. Other points studied were the value, mentally and physically, of physical therapy, especially motor re-education. Lastly, the authors present for consideration, the question of whether or not, the limitation of movement and speech inhibit the intellectual development; if so, removal of these motor handicaps by physical therapy, may be followed by an increase in expressive intelligence.

The book is well organized. There is a detailed presentation of the etiology and symptoms of birth injury; also excellent chapters on the mental testing of such cases and finally physical therapy. Case histories are appended. Very important also, for those who may be students of the subject, is an extensive bibliography.

This book is recommended highly for perusal by all physicians.

STANLEY S. LAMM.

Your Teeth and Their Care. By Carl W. Adams. D.D.S. 12mo of 141 pages, illustrated. St. Louis, Mo., C. V. Mosby Company, 1932. Cloth, \$1.25.

This small but concise book is a very well written treatisc on an important subject that should interest every lay person as well as the profession. It has a good deal of interesting and excellent material in regard to the teeth.

The first half of the book, which contains four chapters, is devoted to a description of the anatomy and physiology of the teeth and oral tissues. This part of the book will not be very clear to the lay public because of the technical discussion of the histology and etiology of tooth disease.

The second part of the book, which is about oral prophylaxis, relation of diet to the teeth, and explanation of dental procedures, is much more readable and understandable by the average person. The chapter on oral

prophylaxis contains a good deal of sound advice on the use of tooth brushes, month wash, dental floss and tooth

It is about time that dental authorities inform the gullible public of the scientific truth in regard to teeth, month washes, and dentifrices, to counteract the many immerited and exaggerated claims made through the commercial media of newspapers, magazines and radio. This book ought to find a good deal of favor by the in-telligent public and is of especial interest to the dental OSCAR RODIN. hygienist.

THE AMERICAN LILUSTRATED MEDICAL DICTIONARY. BY W. A. Newman Dornann, M.D. Sixteeuth edition. Octavo of 1493 pages, illustrated. Philadelphia, W. Octavo of 1493 pages, illustrated. Philadelphia, W. B. Saunders Company, 1932. Flexible and stiff binding, plain, \$7.00. Thumb index, \$7.50.

This dictionary has been before the medical profession for thirty-two years. During this time it has been kept up-to-date by constant revision—sixteen editions having appeared.

It needs no introduction to workers in the field of medicine. It has established itself as a standard working tool in the equipment of the physician.

This latest edition has been prepared under the editorial supervision of the staff of the American Medical Association, with the collaboration of Doctor E. C. L. Miller. It is stated that more than three thousand new words have been included in this revision, hundreds of which have not been defined in any other medical dietionary. All the essential fundamental factors that go to make up a standard dictionary are incorporated in this work. To its many excellent features, there have been included in this edition, for the first tine, the portraits of two hundred and seventy-nine outstanding physicians of the past. This adds to the attractiveness and historical value of the work,

One of the commendatory features is that, in spite of its nearly fifteen hundred pages, it has been kept within a compact, easily handled volume.

For a complete, well arranged, well balanced, up-todate medical dictionary, we heartily recommend

TREATMENT OF SYPHILIS. By JAY F. SCHAMBERG, M.D. and CARROLL S. WRIGHT, M.D. Octavo of 658 pages, illustrated. New York, D. Appleton and Company, [c1932]. Cloth, 88.00.

This should be a widely consulted book as it is the first book in American medical literature to deal alone with the treatment of syphilis. Needless to say, the authors have presented the subject matter in a highly practical manner. A history of the use of each drug is interesting. Opinions of the results of treatments with various combinations by many authorities are pre-sented and finally the authors' methods,

The chapter on the treatment of syphilis in pregnancy should be of especial interest to the obstetrician. Chapters on syphilis and marriage, and other social aspects of the disease supplements the 600 page volume.

Thurshan B. Givan.

PULMONARY TUBERCULOSIS. By MAURICE FISHBERG, M.D. Fourth edition, thoroughly revised. Octavo, two volumes, totalling 1191 pages, illustrated. Philadelphia, Lea & Febiger, 1932. Cloth, \$15.00.

Dr. Fishberg's Fourth Edition of "Pulmonary Tuberculosis" more than fulfills all the high values we have come to associate with his writings. Again, the book has been most thoroughly overhauled and in a very large part truly rewritten. Barring a few exceptions which we will mention later, this work is to our mind incomparably the best on pulmonary tuberculosis written in the English language.

Without question, Dr. Fishberg is a profound student of his subject, and from his vast store of accumulative knowledge, he presents every possible known viewpoint on each of the several subjects he discusses. This Fourth Edition is even better than the Third. We note that he has dropped his previous classification of "Abor-tive Tuberculosis," the term that always struck us as being a bit gratuitous. In his chapter on the "Tubercle Bacilli," we are surprised that he makes no mention of the important work at present being conducted on the dissociation of types. The chapters devoted to "Tuber-culous Infection," "Predisposition," "The Phenomena of Immunity," and "Pathology and Morhid Anatomy" are admirable.

Only in the later chapters devoted to treatment do we find ourselves unable to subscribe io whole to the opinions of the author. Some of the statements he makes are so at variance with those of the vast majority of well-recognized workers in the field, that one is forced to assume that the burden of the proof of many of the author's statements must be placed squarely upon him. Particularly do we dissent from the view that less than five per cent of all cases of clinical pulmonary tuberculosis are suitable for collapse therapy. We realize that in certain portions of the country the advocates of collapse therapy are running a bit wild, and possibly some such stand as that taken by Dr. Fishberg is a wholesome one in holding our more radical friends in cheek. The successful application of collapse therapy lies somewhere in the mean between these two extreme schools. FOSTER MURRAY.

POSTURE, ITS RELATION TO HEALTH. By FRANK D. Dickson, M.D. 12mo of 213 pages, illustrated. Philadelphia, J. B. Lippincott Company, 1931. Fabri-koid, \$5.00. (Everyday Practice Series.)

If the average physician were to record his knowledge of posture one could be fairly certain that it would not require a 207-page volume. This is no reflection on the desire for the possession of such information, but is a reflection on the dearth of concentrated information on the subject in our medical literature. Books on massage and gymnastics are too technical, and of particular interest to those in semi-professional callings, whereas, medical literature in general often dismisses the correction of posture with a perfunctory phrase or too-rarely insufficient detail to provoke enthusiasm for its possibilities.

We are all aware of the deleterious effect of poor posture in a great number of subacute or chronic ailments, such as arthritis and tuberculosis. What we are not so well informed about is the markedly beneficial effect of the correction of such defects in the management of disease. Our notions regarding proper body balance, good body mechanics, and corrective exercises, are vague. An office formula to an inquiring parent regarding what should be done about the child's posture is very likely to be the terse expression, "have him stand up straight." There is, however, more to the ham stand up straight. I free is, however, more to the story than that, and this volume is the only one we have read which gives a concise, practical, and interesting exposition of the proper answer.

The author does not make extravagant claims for the effect of this element on the cure of disease, but he rightly iosists that the profession has been very neglectful of its importance. In a convincing, easy style he explains the relationship of posture to visceroptosis, with its resultant gastric disorders and constitution; to arthritis, especially the hypertrophic type; to backache, neurasthenia, and malnutrition. Read it-you will have occasion to use the information gained many times a D. E. McKenna.



OUR NEIGHBORS



THE COMMONWEALTH FUND AND THE FAMILY DOCTOR

The Journal of the American Medical Association of December 31, 1932, prints the following letter from Mr. Barry C. Smith, General Director, The Commonwealth Fund, whose headquarters are at 41 East 57th Street, New York City:

"In the issue of The Journal for December 3 appears an able editorial on the Committee on the Costs of Medical Care. In this editorial are references to 'the eight foundations that contributed financial support' and also, later in the editorial, on page 1952, a further reference to 'the great foundations' as supporting the principle of socialized medicine.

"In order that members of the medical profession may clearly understand that the Commonwealth Fund is not included among the foundations mentioned, I should like to make the following statement:

- "1. The Commonwealth Fund, although repeatedly requested to do so, has not made any appropriation directly or indirectly to the Committee on the Costs of Medical Care.
- "2. The Commonwealth Fund does not subscribe to or approve of the program of the majority report looking toward the establishment of socialized medicine.
- "3. The Commonwealth Fund agrees fully with the attitude expressed by the minority report on the subject of public health, as stated in the second paragraph on page 152 of the minority report.

"The policies of the Commonwealth Fund in its public health work are given in detail in the book Child Health and the Community, published by the Fund in October, 1931, which received lengthy and favorable comment in The Journal, Jan. 2, 1932.

"I write this letter not for the purpose of criticizing any person or group of persons but solely in order that practicing members of the medical profession may have a clear understanding as to the attitude and policy of the Commonwealth Fund toward the profession and its work."

The review of the book "Child Health and the Community," to which reference is made in Mr. Smith's letter, is as follows:

"Of particular interest is the statement by Barry C. Smith, general director of the Commonwealth Fund, referring to the place of the private physician in such a program. Mr. Smith says:

"'In one particular, the Fund considers itself most fortunate. It enjoyed, at all times, a high

degree of cooperation with the practicing medical profession.

"'Upon our medical schools must rest the responsibility—a great one—for training the future physician in the principles and technics of preventive medicine and of public health, and of making clear the indispensable service which the private physician must render to these activities if they are to be fully successful. Upon the public health worker rests the responsibility for showing a patient and cooperative attitude toward those from whom he expects such an attitude.'

"The chapter on physicians reveals still further the way in which this demonstration sought for medical cooperation. The general impression seems to be that medical practice improved, particularly as related to children, following the demonstrations. Indeed, the statement of principles which seem to be fixed premises for any permanently successful community program of preventive medicine and public health merits quotation in full:

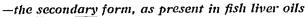
"1. The public interest must be paramount. This is a general statement to which almost any one will agree until the ideas of others as to the public interest come into conflict with his own ideas as to his private interests.

"2. The interest of any group that is contributing to the solution of a public problem must to that extent be considered a public interest.

- "3. Physicians constitute a body of citizens whose training has prepared them to render a service to public health for which there is no adequate substitute.
- "4. Physicians in private practice perform a service in the treatment of disease, whether as individuals or in fully organized groups, whether in private offices, clinics, hospitals, or homes, that is the accepted mode of treatment, in this country, for those able to pay for such service.
- "5. Physicians in private practice, because of their training, numbers and relationships to their clientele, constitute the one group which is potentially most capable of applying the lessons of preventive medicine to the habits and circumstances of the individual. They are largely unprepared to render such service because their training and experience have been chiefly therapeutic.
- "6. The public is largely unready to demand or pay for such guidance in the application of the lessons of preventive medicine to personal problems.

 (Continued on page 182—adv. xiv)

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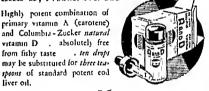


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(Continued from page 180)

"7. An honest, consistent and cooperative effort should be made by the organized medical profession, the health authorities, and private groups interested in public health to develop public demand for preventive services by private physicians whether practicing as individuals or in organized groups.

"8. An inseparable corollary to this effort should be the conscientious preparation of physicians for such services, without which the attempt to build up satisfactory preventive services by private practitioners is doomed to failure.

"9. Health conferences or preventive health center medical services conducted by the health department, especially for babies and younger children, are justified and desirable (a) as a means of creating a demand for such services, (b) as an agency for inaugurating proper standards for such services, (c) as a practice ground for physicians in the art of preventive medicine, and (d) as a supplement to the preventive services of private practitioners, so long as conscientious efforts to make such services adequate to the public needs have not been successful.

"10. The paramount interest of the public must come to the fore especially in any question of the control of communicable disease. Leaving to the private practitioner as much latitude as possible in all discretionary matters of treatment, the health officer should take responsibility for promoting such immunizations as are accepted as part of the necessary protection of the community and must assume final authority for all control measures and for diagnosis in so far as that is necessary to insure prompt and accurate recognition of cases.

"It would be well if the point of view here set forth by the Commonwealth Fund would be used to guide similar groups whose interests affect both the medical profession and the public."

PAY FOR AUTO ACCIDENTS IN MISSOURI

The Journal of the Missouri State Medical Association discusses collections for medical services after automobile accidents in an editorial, as follows:

"The Economic Survey Committee of the St. Louis Medical Society presented an exhaustive report to the Society at the meeting of December 13 on 'Automobile Accidents and Emergency Treatment.' In this report which was adopted by the Society the committee recommended that the Society request the Missouri State Medical Association to draft a bill for introduction in the 1933 session of the legislature with the view of providing a reasonable assurance of the payment of fees of physicians and hospitals for services rendered

(Continued on page 184-adv. xvi)

Modern diets often lack minerals

To-day, authorities are stressing the importance of the essential mineral salts. In addition to building sturdy bones, and blood rich in hemoglobin, these mineral elements aid metabolism and contribute to nervous stability.

Yet many modern diets cannot be depended upon to furnish the proper quota of minerals, and therefore millions of people suffer from the effects of demineralization. Cooking destroys a variable amount of the mineral value of foods—in some instances as high as 76 per cent.

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in emergencies growing out of automobile accidents. The committee proposed that this protection take the form of a lien upon any moneys received by the person responsible for the accident as payment of liability damages.

"The introduction of such a bill in the legislature was one of the major recommendations of Dr. J. F. Harrison, Mexico, in his presidential message to the House of Delegates at the Jefferson City Session of our Association in 1932; and the Committee on Public Policy was instructed to draft such a bill and introduce it in the 1933 session of the legislature. The action of the St. Louis Medical Society will materially strengthen the movement and its cooperation with the State Association committee will be invited.

"Lien laws to protect physicians and hospitals have been adopted in six states, viz., Delaware, Montana, Nebraska, New Jersey, Oregon and Virginia. Montana and Nebraska are the only states in this group that mention physicians, nurses and hospitals as entitled to liens. The other states limit the liens to hospitals, 'supported in whole or in part by private charity' in Delaware; 'supported in whole or part by private charity or maintained by municipal county board' in New Jersey; 'hospitals' in Oregon; and 'in hospitals, public or private,' in Virginia. During 1931 lien laws were introduced in the legislature of ten other states but the bills failed of passage. Nebraska was the first state to adopt the lien law in behalf of physicians and hospitals; this was done in 1927. It was not until 1931 that the attempt to pass lien laws was renewed and in that year Delaware, Montana and Oregon adopted the law, Virginia following with the adoption of the law in 1932. It is quite probable that the effort will be made to pass lien laws in many of the legislatures in 1933 ses-

"Compensation for injuries sustained in motor vehicle accidents has been under consideration by various state legislative bodies in the last few years. A number of states have enacted financial responsibility laws (not lien laws). These laws have been designed in part to increase gradually the number of financially responsible owners and drivers by requiring those who have been responsible for accidents to be insured. Massachusetts has a compulsory liability law requiring all motor vehicle owners to be covered by insurance against liability for personal injuries.

"In compensation for injuries the question of how people meet the expenses caused by motor vehicle accidents looms large and of course depends upon whether the injured per-

(Continued on page 185-adv. xvii)

(Continued from page 184-adv. xvi)

son was struck by an insured motorist or by one who was not insured. The report of a committee to the Columbia University Council for Research, February 1, 1932, says a study of cases not covered by insurance indicates that the injured person has about one chance in four of receiving some payment and that in most cases the payments will not cover the losses sustained. It is very evident therefore that when the person responsible for the accident is not insured the physician or hospital has a very remote chance of collecting ices for services. However, 'if the offending motorist is insured,' says the report just mentioned, 'payment will be received in 85 per cent of the cases.' Again, since only about 331/3 per cent of all motor vehicles are insured it is evident that the chance for collecting the fees in all cases is materially reduced.

"The committee of the St. Lanis Medical Society found no information concerning surveys made by other medical societies relating to this problem, but recently in Philadelphia thirty-five hospitals were surveyed, eighteen reporting data covering 688 cases treated in 1929. Sixty-two per cent of these eases received free treatment. Bills were rendered in 259 of the 688 cases and 50 per cent of these remained unpaid at the end

of one year.

"In 1930 the Ohio Hospital Association made a canvass of automobile accident cases in that state and found that the hospital bills resulting therefrom amounted to \$810,489.14, and of this

amount 50 per cent proved uncollectible.

"In New Jersey a study of highway accident cases treated in nincteen hospitals showed a total of 1781 patients with 22,400 hospital days and bills amounting to \$106,089. Of this amount 56 per cent was collected and hope has been abandoned of any further collections on these accounts. It can be reasonably assumed that the percentage of loss to the physicians treating these cases was even greater than the losses to the hos-

"The St. Louis Safety Council has tabulated 7,732 accidents with 8,542 persons injured and 929 killed in Missouri in 1931. In St. Louis during the first eight months of 1932 ending August 31 there were 5,340 automobile accidents with 2,828 persons injured. The City Hospital treated 1,405 of the cases and 255 were treated in private hospitals. Of the 1,405 treated at the City Hospital 800 received only first aid and 605 were hospitalized. Of the 255 treated in private hospitals 78 received first aid only and 177 were hospitalized. Thus it will be noted that the City Hospital takes care of approximately four times the number that are treated in all private hospitals combined.

"The committee on economics of St. Louis concluded that legislation making the fees of a physi-

(Continued on page 186-adv, xviii)

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*R. G. Nelson, Journal of the Florida Medical Asso ciation, August, 1932.

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(Continued from page 185-adv. xvii)

cian or hospital for services in such emergencies a lien on any money received as liability damages by the party responsible for the accident is the best means of protecting the physician and hospital and recommended the introduction of such a bill at the next session of the legislature."

A MEDICAL INSURANCE PLAN FOR CALIFORNIA

The November, 1932, issue of California and Western Medicine contains a description of action by the Council of the State Medical Association permitting county medical societies to undertake to give medical and hospital service on a periodic payment plan. The plan is essentially one of insurance for the payment of bill for medical attendance and hospitalization. It does not appear that the plan is in actual operation in any county. The report reads:

"The Council of the California Medical Association at its meeting held in Los Angeles, September 24, considered the report of the Committee on Public Relations, as presented by the chairman, whereby component county medical societies, by two-thirds majority of its membership, might adopt one of four suggested types of medical and hospital service on a periodic payment, plan

"The following principles were adopted which must be embodied in any approved plan undertaken by local societies:

"The plan shall include an insurance principle whereby the beneficiary pays at periodic intervals specified sums to be used for defraying the expense of his illness.

"Medical or hospital service shall be considered separately from indemnity for disability. The service in the beginning shall be limited to professional attendance only.

"The sole control of any organization for medical service must be limited to members of the profession.

the profession.
"Compensation for professional services—medical or surgical—shall be on the unit basis

"Professional service under any plan adopted shall be limited to the membership of a component county medical society or groups thereof endorsed through its official organization by two-thirds majority of its members. No plan shall be adopted or put into effect except with the approval and under the direction of the Department of Public Relations.

"The beneficiary member shall have the right to the selection of any physician or surgeon from

(Continued on page 187-adv. xir)

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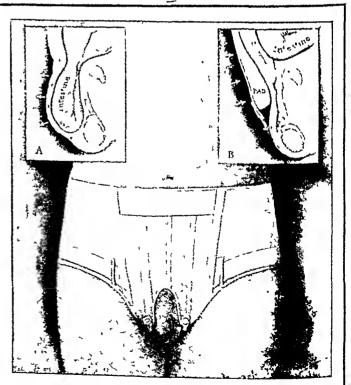
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(Continued from rage 186-adv. xviii)

the entire membership of the county society or group thereof that participates in the plan.

"Medical and surgical service will be rendered by means of a copartnership composed of a fixed number of general partners selected by the component county medical society and the remaining members of the county medical society participating in the plan will act as assistants to or associates of the general partners. All services will be rendered on a unit basis. A tentative draft of copartnership agreement and contract for medical and surgical service has been prepared.

"The terms of this contract will prescribe and determine the injuries and illness covered, extent of service, etc. All Workmen's Compensation

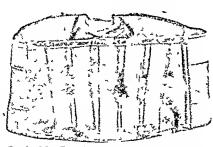
cases are excluded.

"Hospital service will be rendered by a corporation, incorporated under the laws of the State of California, for the purpose of furnishing and supplying beneficiary members with hospital and nursing service on a monthly payment plan through existing approved private hospitals.

"The corporation will consist of administrative and beneficiary members. Only members of the county medical society in good standing are eligible for administrative membership. "Beneficiary members will be those who meet the necessary qualifications, namely, that they shall have lived in the county months and shall have been engaged in a gainful occupation for a certain period of time. Their net income from such occupation shall not exceed a given amount, namely, \$2,000 a year. They shall have passed a physical examination by a designated administrative member. Beneficiary members will be liable for the payment of monthly dues in such amount, form and manner as may be determined and designated in the by-laws of the corporation.

"The County Mutual hospitals will have authority to provide and set up the necessary machinery to furnish the beneficiary member with approved hospital service, and to contract for said hospitalization with existing approved hospitals and to establish an administrative office for accepting applications from beneficiary members, receipts for monthly payments, actuarial and statistical departments, credit department, etc.

"No plan of organization for hospital service controlled by hospitals on a periodic payment plan has as yet been projected, but the committee it now at work on such a plan."



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PRESS COMMENTS IN WISCONSIN

The comments of newspaper editors on the report of the Committee on the Costs of Medical Care often contain words of wisdom and philosophy which physicians may note with profit. The January issue of the Wisconsin Medical Journal quotes editorials from a number of the daily papers of the State. Discussing the economics of the report the Journal says:

"Back of it all, of course, there lies a fundamental economic problem. Many, many people cannot afford the medical care they need; at the same time many, many physicians are not making a living wage. This report seeks to find a very set of the

find a way out of these difficulties.

"But it is just possible that the real cure lies deeper than a more reorganization of the medical profession. The wage-earner's mability to pay for the care he needs, and the doctor's inability to get the income he deserves—aren't these a part of a larger problem whose solution depends on a restoration of economic health to the whole community?

"In the long run, what we need to aim at is a restoration of prosperity on a broader and firmer base than we have ever had it before

"Certain benefits from these medical centers are at once apparent. There would be a saming in costs to most families, especially those that may be hard hit by illness. There would be created an opportunity we have never had of making available to all patients the best treatment that science has disclosed. The correlation between public health service and private practice and the extension of public health service could be promoted.

"And yet, this proposal is based on some considerations that have not been proved. It is assumed that the individual relationship between the patient and the doctor of his choice could be preserved. Is that true? Could we still have the family physician relationship, confidence and faith? Also it is assumed that this socialization would not disturb the high quality of those entering the medical profession. Again, is that true?

"We have progressed too far in the extension of public health, industrial medicine, group medicine, to go back now. The demand for lowered costs is imperative and must be met. Also, we shall not be satisfied with a system that makes all of science available to some groups and not to others.

"The doctors can be helpful. Their view-point should be considered. Also, there should be further analysis of some of the assumptions pointed out above. But as a people who regard health as the most vital factor in their lives, we are not going back to the old way.

(Continued on page 189-adv. xri)

(Continued from page 188-adv. xx)

There is going to be progress along the line here proposed, or along some line that is pretty closely related to this proposal.

"Whether the American people get good medical care depends, in the last analysis, on whether they have sufficient good sense to

demand it.

'That seems to be the point of the latest report made by the Committee on Costs of Medical Care. The report points out that the nation is suffering from a shortage of competent doctors, dentists and hospital facilities: but it adds that it would be unwise to increase the supply until the general public knows enough to insist on first-rate attention and is willing to pay for it, as that would simply increase unemployment among medical practitioners.

"The problem, then, seems to depend on the patients themselves. Medical science can not. in the long run, serve them any better than they want to be served. They cannot get the best until they insist on it."

INDUSTRIAL CONTRACT PRACTICE IN WASHINGTON

The November issue of Northwest Medicine

contains the following account of industrial practice in the State of Washington.
"In 1917 Pierce County Industrial, Medical and Surgical Service Bureau was formed. The plan adopted permited any member in regular standing of the Society to join. Officers were elected and a manager was hired, who secured contracts with firms coming under the jurisdiction of the Department of Labor and Industries. The purpose of this organization was to take care of the injured workman, giving him the free choice of physician in contrast to the closed contract system. Supplemental health or sickness contracts were also written so that the workman would be covered for twenty-four hours of the day, including sickness or accident on or off the job. After fifteen years of existence this organization still continues to function. Many abuses have crept in, both from the physicians that render their services and the unsound cost arrangement.

"The cost of medical and surgical care has increased but the old dollar a month charge has continued. The present economic period has raised havoc with all classes and with all known standards. For the systematic study and attempted regulation of the present problems, our present organization, the Physicians and Dentists Business Bureau, came into existence a little over a year ago. Included under our Bureau are: (1) Nurses Exchange, (2) Doctors and Dentists Exchange, (3) Collection Bureau, (4) Branch Read-

(Continued on page 190-adv. xxii)

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Ref.: Higgins & Kittel, Lancet, Page 68, 1-11-30
 Tunick & Nach, Annals of Surgery, Vol. 95, Page 734, May, 1932.
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RESEARCH STAFF-LILLY

Clinical observations on Merthiolate confirm the conclusions reached by the research staff of Eli Lilly and Company that this organomercury compound is an efficient bactericide in the pres-Physicians ence of organic matter. are quick to note other advantages: safety in therapeutic use, tissue compatibility, ability to stimulate cell regeneration and processes of repair, and the wide range of applicability of Merthiolate in all types of disinfect on and clinical antisepsis.

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Tests conducted at the Lilly Laboratories show less loss of potency in biologicals when Merthiolate is used as a preservative. Clinical reports indicate that injection of these products is not followed by stinging or pain. It would appear that Eli Lilly and Company have made another important contribution to medicine and surgery in the development of this germicidal agent. See page xii.—Adv.

READER

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Street, New York, for sample and liferature. See page ii.-Adv.

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See page xx.—Adv.

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ACUTE RUPTURED APPENDICITIS COMPLICATING CHRONIC LEUKÆMIC MYELOSIS

By BEN-HENRY ROSE, M D, NEW YORK, N Y.

PRECACE

OLLOWING the first description of Lenkamia in 1857 by Von Friedrich and the intense studies made in this disease by Virchow, interest in this blood dyscravia has attracted the attention of many observers who reported their cases in the various journals of the reported cases showed the classical symptom triad of a marked increase in the total number of white blood cells, an increase in the myeloeytic element, and the presence of a splenic en-largement or tumor, besides other interesting pathological findings Surgical complications of this disease have apparently never been reported and very rarely observed. It is for this reason that I am publishing in detail this most interesting and unusual case of ruptured appendicitis in a patient suffering from clironic leukaemic mi closis without palpable enlargement of the spleen, and who presented some extremely interesting blood studies

CASE HISTORY

H G, adult, female, white, widow, age 49, admitted to the Royal Hospital on October 25, 1931

CHIER COMPLAINT

Three days before admission to the hospital, the patient began to complain of slight cramplike pains over the whole of the abdomen unaccompanied by nausea or vomiting. Her bowels were made to move with enemata. Flirty hours prior to admission, the cramp like pains increased in severity and became localized in the right lower quadrant where they became markedly severe, still unaccompanied by nausea or vomiting, and unrelieved by enemata or icebag. The patient was able to move about in bed without any increase in pain. The temperature rose steadily to 101.5 F, and the pulse rate to 96

PAST HISTORY

Two years ago, the patient began to complain of bleeding from the mouth varying in amounts from a drop to staining a hundkerchief full. At

times it was pure liquid blood, at other times At no time was it caused by coughing, the bleeding seemed to come on spontaneously She complained of pain over the left cheek, and visited innumerable physicians, none of whom had taken a blood count during all this time X-Ray of the chest was repeatedly negative. She also complained of pain in and behind the left eyeball, and she was told that her trouble was due to a diseased left antrum Despite repeated treatments and washings by various nose and throat men, her bleeding and pain did not stop Several of the nose and throat men remarked on the spongy character of the wall of the antrum However, no attempt was made to explain it. The bleeding from the gums seemed to stop spontaneously six months ago. About two months ago, the patient went to a dentist who extracted several teeth in the upper left maxillary region, which was followed by a persistent purulent discharging sinus. A week previous to the present illness, the patient went to a dental surgeon who decided to curet the maxilla because of the discharging sinus, and open into the antrum he curetted, much spongy decayed grayish-white bone was extracted There seemed to be no limit to the amount of decayed material which he curetted He stopped the operation washed out the antral cavity and packed it with iodoform The patient began to ooze and since the bleeding did not stop the packing was removed and the gums sutured. Four days prior to admission, the patient began to bleed from the suture The bleeding was constant and the patient swallowed much blood and infected material. It became necessary to resuture the mucous membrane with dermal suture over a pressure pad to secure instant and complete hemastasis while she was actively bleeding from the sutured mucous membrane that the patient began to complain of cramp like pains in the abdomen

At no time did she have periods of diarrhea She was always constipated and resorted to laxatives and enemata for relief. She had never had a similar attack of abdominal pain before. Her appetite was always good. She did not lose any

weight, nor was there any progressive emanciation. She always had a mild degree of pallor to her skin. Urination was normal, and she did not complain of any dysuria or frequency.

Adult Medical: Bleeding from the mouth for two years. Occasional attacks of grippe.

Adult Surgical: Hysterectomy for fibroids of the uterus with hemorrhage, 1925. Operation for drainage of left antrum, 1931.

Menstrual History: 13x5x28 until 1924. Patient complained of menorrhagia and metrorrhagia; hysterectomy 1925.

Marital History: Married 31 years, 2 children, no abortions or miscarriages. She denied any venereal infection.

PHYSICAL EXAMINATION:

General Appearance: Adult, female, white, pasty color, not emaciated, apparently in pain.

Head: Normal size and shape. Eyes reacted equally to light and accommodation. No tenderness on pressure over the eyeballs.

Nose: Normal shape, no obstruction to breathing.

Left Antrum: Did not transilluminate as clearly as the right. There was some swelling over the left cheek as a result of the recent operation.

Mouth: All the teeth on the upper left side had been removed. The gums were sutured and showed no evidences of bleeding.

Tongue: Coated, small ulcerative patch on the left side.

Throat: Tonsils small, not diseased.

Neck: No cervical adenitis, thyroid normal.

Heart: Normal size, shape and rhythm. No adventitious murmurs heard.

Lungs: Normal vesicular resonance and nurmur.

Abdomen: The liver was palpable at the costal margin. The spleen was not enlarged nor was it palpable. The abdominal wall was well formed, somewhat flaccid, and showed evidence of a healed median hypogastric scar as a result of a previous operation. There was some rigidity and spasm of the lower right rectus muscle. As one passed one's hand lightly over the skin over the right lower quadrant, one could palpate a mass which was extremely tender to even slight palpa-This mass was easily movable, apparently saucer-shaped, and lie parallel to the fibers of the external oblique muscle. Elevation of the thigh on the abdomen without pressure did not increase the pain. With slight pressure over the right lower quadrant, pain and tenderness were greatly increased. Rebound tenderness was exquisite.

Vaginal Examination: Perineum relaxed; cervix small and smooth, forming a firm bed for the abdominal pelvic floor. There was no tenderness

in either fornix. Combined abdominal vaginal examination over the right lower quadrant was difficult because of the extreme tenderness on slight pressure over this region.

Glandular: There were no glands palpable in the cervical, axillary or inguinql regions.

Skin: Normal texture, pale color, no evidence of any petechiae or ecchymoses.

Mucous Membranes: No evidence of petechiae.

Operation: Under anesthesia, one could definitely see a mass protruding over the right lower quadrant midway between the anterior superior spine and the umbilicus. A McBurney intermuscular incision was made directly over this mass, the aponeurosis of the external oblique incised and muscles separated, and as the peritoneum was opened foul smelling colon pus was aspirated. The peritoneum was deeply hæmorrhagic in color. The abdominal cavity was walled off, the cæcum and appendix were delivered out of the wound, and the latter was gangrenous in its distal half, ruptured, and covered with plastic exudate. The mesentery, which was glistening and oedematous, was freed from the appendix and ligated. The appendix was divided between clamps applied closely to its base; its stump ligated, alcoholized and carbolized, not inverted but dropped back into the abdominal cavity. One tube was inserted down to the pelvis, and a cigarette drain to the stump of the appendix. An attempt was made to ligate all the bleeding points, but there was generalized oozing of very thin, almost watery blood from all the surfaces. The abdomen was closed in layers, using plain catgut No. 2 for the peritoneum and muscle, chromic catgut No. 2 for the fascia, and interrupted silk for the skin. The immediate postoperative condition was good.

PATHOLOGY:

The appendix was 6 c.m. x 1 c.m., and the lumen contained much free pus. It showed all the evidences of acute exudative inflammation with oedema and necrosis of the mucosa. There was no evidence of myelocytic infiltration.

LABORATORY FINDINGS:

Pre-operative Blood Count:

Hæmoglobin 75%; R.B.C. 3,720,000; W.B.C. 190,000; Lymphocytes 10%; Polys 85%; Eosinophiles 2%; Myelocytes 3%.

Postoperative Blood Counts:

10 hrs. Postoperative: Hæmoglobin 40%; R.B.C. 3,100,000; W.B.C. 96,000; Polys Segmented 91%; Young Forms 5%; Myelocytes 1%; Lymphocytes 3%.

20 hrs. Postoperative: (Dr. N. Rosenthal) Hæmoglobin 70%; W.B.C. 330,000; Polys Staff 18%; Polys Segmented 48.5%; Polys. Bas. .5%; Lymphocytes 2.5%; Monocytes 2%; Myclocytes Neut. 25.5%; Myeloblasts 3%.

30 hrs. Postoperative: (Dr. N. Rosenthal) Hæmoglobin 62%; R.B.C. 3,750,000; W.B.C. 220,000; Platelets 510,000; Polys Segmented 40%; Polys Staff 28%; Lymphoeytes 2%; Monocytes 3%: Myelocytes Neut. 27%.

6 Days Postoperative: Hæmoglobin 63%; R.B.C. 3,100,000; W.B.C. 140,800; Polys Segmented 61%; Band Forms 9%; Young Forms 2%; Lymphocytes 5%; Mononuclear and Transitional 1%; Eosinophiles 1%; Myelocytes 21%; Very few myeloblasts; Occasional normoblast, Mitotic cell, anisocytes, and Poikilocytes; Very few cells seen having morphology of myeloblasts and which give peroxidase reaction.

24 Days Postoperotive: IImmoglobin 68%; R.B.C. 3,350,000; W.B.C. 43,600; Polys Segmented 68%; Young Forms 1%; Band Forms 5%: Mononuclear and Transitional 1%; Lymphocytes 9%; Eosinophiles 2%; Basophiles 1%; Myelocytes 13%; Very few myeloblasts; Occasisonal Anisocyte, and Poikilocyte; Very few cells seen having morphology of myeloblasts giving positive peroxidase stain. (Negative for lymphoblasts.)

64 Days Postoperative: Hæmoglobin 74%; R.B.C. 3,648,000; W.B.C. 171,200; Polys Segmented Forms 58%; Band Forms 8%; Young Forms 1%; Large mononuclear & Transitional Forms 1%; Lymphocytes 11%; Eosinophiles 2%; Myelocytes 12%; Myeloblasts 8%; Occasional anisocytes and poikilocytes; Myeloblasts present giving positive peroxidase reaction (i.e. negative for lymphoblasts).

Pre-operative Urine: Pale amber; clear; acid; sp. gr. 1.007; very faint trace albumin; sugar, indican, acetone, diacetic acid, bile, crystals, amorphous and blood cells negative; occasional hyaline casts; very few squamus cells; occasional bacteria.

Pastaperative Urine:

4 Days Postoperative: Amber; turbid; acid; sp. gr. 1.010; Albumin ++; Urea 0.7%; sugar, indican, acetone, diacetic acid, bile, crystals, pus and blood cells negative; many urates; very many coarse granular casts; many epithelial cells.

15 Days Pastaperative: Examination revealed faint trace of Bence-Jones Albumin, 0.2%.

Postoperative Course:

The patient continued bleeding profusely from the wound directly after the operation and the wound dressing had to be reinforced several times during the night, despite the fact that icebag was applied directly over it. The patient retained retention enemas of 5% glucose in normal saline. The pulse rate rose to 128, and fifteen hours after the operation 300 c.e. of citrated

lilood was given intravenously. This was followed by a rise in temperature to 104.2, pulse 142, respirations 40, with a severe chill lasting fifteen minutes.

Consultation with Dr. Nathan Rosenthal (Hæmatologist): After examining the patient and before examining the blood smear, he did not lielieve the patient was a true case of leukæmia because of the absence of the large spleen, absence of petechia, etc., and thought that this was a case of thrombo-asthenia. After the blood examination, he changed his diagnosis and believed this to be a case of latent myeloid leukæmia.

On the following day, the patient felt somewhat better, and because she began to vomit small quantities of fluid, a Levine tube was passed through her nose into the stomach and gastric lavage was done with weak solutions of bicarbonate of soda. The vomiting stopped with this Forty-eight hours postoperatively, the patient began to bleed again through the wound. The pulse rate rose to 134 and was of very poor quality. Immediate blood transfusion of 250 c.e. of citrated blood was given, which was followed by a chill lasting twenty minutes and a temperature rise to 104.2, pulse 150, respirations After the chill, the pulse quality became stronger and dropped to 118, temperature to 101, respirations to 24. The following day, the Levine tube was again passed through the nose and the stomach lavaged to relieve the vomiting from which the patient suffered. The wound began to discharge a brownish-red foul smelling discharge which was probably disintegrated blood which was in the peritoneal cavity. On the fifth day postoperatively, it was necessary again to lavage the stomach through a Levine tube, and a transfusion of 450 citrated blood was again given. The patient reacted favorably after the chill which followed the transfusion. The temperature, pulse and respiration rates gradually diminished as the patient was in the hospital and the wound drained considerable greenish purulent discharge. cigarette and rubber tube drains were removed. The patient was in bed for twenty-three days, after which the discharge from the wound had sufficiently diminished to permit the patient to sit out of bed. At this time another blood examination was made which showed a marked diminution in the total number of white blood cells to 43,000, with the presence of 22% myelocytes. The Bence-Jones Albumin was 0.2%.

The patient was discharged from the hospital on November 23, her general condition greatly improved, with no bleeding from the gums, no petechiae, a normal sized spleen, and with the abdominal incision almost entirely healed. Dressings were continued at her home and the wound closed firmly and solidly within two weeks after her discharge from the hospital. After returning from the country six weeks later, the patient

gained some weight, felt well, her appetite was good, but she still complained of pain in and behind the left eye-ball due to a possible myeloma of the orbital wall. Palpation and percussion of the spleen revealed no enlargement of this organ. A blood study performed at this time, sixty-four days after the operation, revealed the presence of 171,200 white blood cells per c. mm., with 12% myelocytes and 8% myelocytes which gave a positive peroxidase reaction.

COMMENT

Myelogenous leukæmia is a disease of the reticulo-endothelial system, the chief organs to be affected being the spleen and the bone marrow, the exciting cause acting upon the reticulo-endothelial cells with the production of myelocytes and neutrophile leucocytes which pass into the blood in numerous numbers. It appears more frequently among the males than females, and manifests itself usually between twenty-five and forty years. The disease is usually chronic and of several years' duration, but the acute form is also described which runs its course in a few weeks.

The changes in the bone marrow would seem to be best described as a hyperplasia. The resemblance of leukæmia to an infectious process and the known action of chemotaxis in infectious leucocytosis suggest, as Reed has observed, that leukæmia is due to the action of some chemotactic agent or agents which by withdrawing certain varieties of leucocytes from the bone marrow cause a compensatory hyperplasia to replace the elements of the type withdrawn.

Merely a great increase in the white corpuscles is not necessarily characteristic of the specific disease, leukæmia, the diagnosis being dependent rather upon the presence of such special forms of cells as myelocytes. These reticulo-endothelial cells assume the property of the bone marrow as well as in manufacturing the granular series of leucocytes, and that in consequence, the spleen is one mass of leucocytes and polymorphonuclear leucocytes, which overflow and obliterate the Malphigian bodies and compress the blood sinuses. Similar appearances are seen in the liver and the bone marrow, the fat of the latter being replaced by a pinkish-gray mass of cells so formed that solid blocks can be cut out. The changes of the marrow and the liver are active, whereas an accumulation of myelocytes in the lymph glands is merely passive as these glands do not participate in the process.

A review of the various pathological reports of cases of myelogenous leukæmia reveals the leukæmic invasion of other organs besides the spleen and bone marrow. There is Warthin's case where the ileum was extensively involved in a large abdominal tumor which extended to the kidneys, stomach and regional lymphatic system, a careful study of this case demonstrating small hæmor-

rhages with pigmentation in all the serous membranes, mucosa of the intestines, bladder, eyegrounds, brain, bone, heart, lung, muscle and skin: the blood vessels were engorged with myelocytes; myeloblasts were demonstrated in groups outside the vessels; and some of the vessel walls were degenerated and myelocytes penetrated them. In Logefeil's case, the abdomen and intestines showed numerous petechial hæmorrhages in the serosa of the intestinal coils; and an intestinal polypoid mass was found in the cæcum-sections through this mass showed it to be due to an infiltration of leukæmic cells into the mucosa and necrosis was quite marked. Musser and Sailer reported the findings of irregularly punched-out and serpiginous ulcers in the lower portion of the ileum and throughout the whole extent of the large intestine including the rectum. reported by Simon and Rosenthal, the omentum was peppered with large and punctate hæmorrhages; the serous coverings of the viscera contained numerous petechiae, and the mesenterymore especially that of the small intestine-was diffusely hæmorrhagic; there was no free blood in the peritoneal cavity. Solomon reported the presence of blood in the lumen of the small intestines, in a pronounced case of splenomyclogenous leukæmia.

Cases of myelogenous leukæmia, in which, together with an improvement in the patient's general condition, there is a disappearance of the splenic tumor and at the same time of the myelocytes, are apparently very rare. The few instances recorded in the literature are those of McCrae, Senn, Plehn, and Simon and Campbell. In the latter's case, the classical features of the disease, viz., splenomegaly and myelemia, could be demonstrated and then disappeared twice within less than twelve months, and at neither intermission was there any evidence of an intercurrent disease to account for the improvement.

There are several interesting features in the The unexcase which I have reported here. plained pain over the left antrum and behind the left eyeball, the spongy character and grayish appearance of decayed bone of the antral wall, are undoubtedly caused by the myelocytic invasion of the bones comprising the walls of the antral and orbital cavities. How simple the explanation of the symptoms would have been had someone, during the two years in which the patient complained of bleeding from the mouth and pain over the left cheek and behind the eyeball, made a clinical blood study as a part of his examination of his patient. Indeed, she presented no other clinical features, viz: progressive weakness, loss of weight, emaciation, diarrhoea, petechiae and no splenic tumor. If it were not for the development of an attack of appendicitis-she might have gone on unrecognized for some time! The influence of the suppurative process on the blood is evidenced by the preponderance of polymorphonuclear leucocytes in the preoperative and first postoperative blood-sniear examinations; the true nature of the blood dyscrazia showed itself in the third blood-sniear taken twenty hours after the operation. As the purulent infection was on the ascendency, evidenced by the increasing purulent secretion from the abdominal cavity, the total number of white blood cells increased in amount to 330,000, and with the subsidence of the infection—decreased to 42,000, although the number of myelocytes remained approximately the same. At no time during the infection or after her discharge had the spleen increased in size.

A resume of the history of this patient with a copy of the blood studies were sent to Dr. A. Piney, Haematologist to the Cancer Hospital of London. He agrees with me that this case is a genuine example of chronic lenkaemic nyelosis of the chronic type. The fact that the total number of leucocytes has subsequently increased to 171,200 per c. mm., with many immature forms, seems definite evidence. The presence of Bence-Jones protein is unusual and is, as a rule, a grave sign, but in the present case may be incidental to the infection and not of great importance in prognosis.

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THE DIAGNOSIS OF PULMONARY NEOPLASMS

By HENRY MONROE MOSES, M.D., BROOKLYN, N. Y. From the Medical Service, Kings County Hospital, Brooklyn, N. Y.

TUDY of the history of medicine by an individual is usually begun a few years after having been graduated from a medical college; and the question sometimes arises in one's mind as to whether or not the recent graduate in medicine realizes fully the comparatively recent advances in the methods of diagnosis, and the advantages which he has over those of the earlier practitioner in medicine. This fact is well illustrated in the methods now used in the diagnosis of pulmonary neoplasms.

An example of the difficulties of diagnosis of a pulmonary new growth is found in the report of a patient under the care of Dr. Robert J. Graves, of Dublin, one hundred years ago. We find in his lectures on clinical medicine, an excellent, detailed history, physical findings, course of the disease and gross post-mortem findings, upon a patient having a pulmonary

tumor. A study of this history will be of benefit to one who might care to review it. The comments of this keen clinician in reference to this patient are of historical interest; he states at the beginning of his lecture:

"Rare diseases should not be looked upon as mere matters of curiosity but should be attentively studied with the view of enabling us to recognize the true nature of similar cases when they again occur. The diagnosis of encephaloid tumors of the lungs was, a few years ago, completely impossible; but I trust that ere long we may be enabled to arrive at some degree of certainty even in this difficult and obscure branch of thoracic pathology. The wish to promote so desirable an object has induced me to publish the details of the following case, chiefly valuable on account of the accuracy with which the symptoms were observed during life."

After giving the history and post-mortem findings, he concludes:

"Such are the most important particulars of this remarkable case, which, during the patient's life proved an opprobrium to the science of diagnosis, for it is scarcely necessary to observe, that both myself and colleague, Dr. Stokes, were completely mistaken as to its nature. Aneurysm; circumscribed pleuritic effusion, and enlargement of the heart; pleuropneumonia; pleurisy and hepatization, in consequence of previous pneumonia; solidification from tubercles, etc. were each successively advocated: as to myself, I became quite tired of the difficulty of attempting to explain the phenomena observed, with any of the diseases I had originally fixed on as the causes of the symptoms; and latterly, however erroneously positively I had been when I first took the man under my care, I gave up all further attempts at diagnosis; and yet it seems strange that the external tumors did not awaken a suspicion of the true nature of the case, for although we were not permitted to examine them, their nature was certainly the same with the internal. At the present stage of our investigations on this subject it is premature to attempt pointing out true features, which may hereafter serve for making the correct diagnosis in similar cases; some of these features are sufficiently obvious, but we must wait for additional facts before the symptoms peculiar to this disease can be pointed out with accuracy."

These expressions of doubt by this able observer, present, with the greatest force, the paucity of knowledge of these pulmonary tumors one hundred years ago, compared with our knowledge at the present time,

The method of making a diagnosis at the present time is exemplified in the following histories:

Case 1.—A male, thirty-nine years old, was admitted to Kings County Hospital complaining of a cough of nine months' duration, which was at first dry but later productive, with hemoptysis on three occasions; weakness became so marked that he had not worked for six months; there was marked loss of weight; for eleven weeks before admission to the hospital, the pain had been so severe in the right lower chest that the patient had been in bed this length of time. In addition, his family physician had made a diagnosis of tuberculosis of the right upper lobe.

Physical examination on admission gave evidence of a mass in the right upper lobe, and there were signs of a cavity in the right lower lobe. Frequent examinations of the sputum for the tubercle bacillus were negative. His

blood Wassermann was negative. The next steps in diagnosis were the fluoroscopic examination and the Roentgen-ray picture which showed a localized area of tumor in the right upper lobe, and an abscess cavity in the right lower lobe.

Following this, a bronchoscopic examination was made from which a diagnosis was given as carcinoma of the bronchus with secondary retained abscess cavity. A biopsy specimen of the bronchial tumor was obtained; the microscopic report upon the specimen is as follows:

"This section shows neoplasm composed exclusively of squamous epithelia arranged in rather disorderly manner. There is definite pearl formation and areas of keratinization. There are attempts at tumor giant cell formation. Diagnosis; squamous cell carcinoma."

This patient died thirty-seven days after admission, and no post-mortem examination was permitted.

When we consider that secondary tumors metastasize to the parenchyma of the lung, and not to that part of the bronchus observable through the bronchoscope; also that primary carcinoma in the lung originates in the bronchial tree; and that when a biopsy specimen is obtainable through the bronchoscope, we have a primary carcinoma of the bronchus, we must consider this patient as having a primary pulmonary neoplasm.

Case 2.—The following history is of interest as the ante-mortem diagnosis was confirmed by post-mortem examination. A man, forty-six years old. was admitted to Kings County Hospital complaining of severe, paroxysmal pain in the right upper chest, of seven weeks' duration; he had a cough productive of a whitish sputum which had been blood-tinged on two occasions; he had lost twenty-five pounds in weight in six weeks; anorexia had been present since the onset of pain; he complained of dyspnea on exertion, and was cyanosed. Physical examination led us to believe that he had a new growth in the right upper lobe, and the methods followed in the patient reported above were followed with this patient. died nineteen days after admission. The postmortem findings confirmed our diagnosis of primary carcinoma of the lung.

In making a diagnosis one hundred years ago. Graves had the history, the physical findings. the course of the disease and the gross findings of the tumor at autopsy, as the use of the microscope was not general at this time.

To these findings have been added:

(1) the fluoroscopic examination and the Roentgen-ray picture;

(2) the bronchoscopic examination and the microscopic examination of the specimen obtained during life;

(3) the histological findings at autopsy.

A study by the writer of 140 patients with pulmonary neoplasms, primary and secondary shows the following different types of tumors:

13 primary carcinoma of the lung, with autopsy findings.

51 carcinoma of the lung, believed to be primary, without autopsy reports.

44 carcinoma of the lung, secondary to carcinoma elsewhere.

20 lymphosarcoma of the lung, secondary.

8 sarcoma of the lung, secondary.

3 hypernephroma of the lung, secondary.

1 teratoma of the lung, secondary.

The primary carcinomas of the lung, with autopsy findings have been reported in detail.2, 2, 4

The greater number of primary carcinoma of the lung are reported as originating in the bronchus, one writer on the subject making the statement that all primary lung tumors are broneliogenic. These primary carcinoma are accessible to the bronchoscope and a biopsy specimen may be obtained except in cases of sub-mucous growths, which may extend into the parenchyma. Primary growths in the bronchi may metastasize into the parenchyma and cause general diffuse carcinoma or carcinomatosis throughout both lungs. When a biopsy specimen can be obtained, and is histologically proven to be carcinoma, one may safely assume that the patient has a primary carcinoma of the lung, since secondary growths attack the parenehyma, the pleura, or the mediastinal lymph nodes, and not that part of the bronchi which is accessible to the bronchoscope.

Primary sarcomas of the lung have never been satisfactorily proven. Lympho-sarcoma of the lung are never primary. Secondary carcinoma in the lung are more apt to be diffuse and spread throughout both lungs causing carcinomatosis, although occasionally discrete nodules are formed, this occurs more frequently when metastasizing from the breast. Secondary sarcoma usually appear as discrete

nodules, spherical in shape, which vary in size. Secondary lymphosarcoma, forming discrete nodules, appear chiefly at the hilus and spread out from there. Hypernephroma metastases may appear as discrete nodules but usually form one or two large spherical tumors, larger than sarcoma and fewer in number. These tumors are sometimes called the "cannon ball" tumor of lypernephroma. Chorioma may metastasize as discrete spheres about the size of a golf ball.

Roentgenologically the appearance of primary carcinoma of the lung depends upon the stage of the disease, and its progress. In the earlier stage picture, there are signs of diminished aeration, beginning atelectasis and obstruction; later the growth appears in the lung field directly, and still later, we find signs of pneumonitis, destruction and cavity. The appearance of these tumors, primary and secondary, are usually grouped into four classes:

- (1) The nodular type.
- (2) The infiltrative type.
- (3) The lobar type.
- (4) The lymphogenic type.

The appearance of a tumor in the fluoroscope or in the rocutgenological picture indicates an advanced state of malignancy, whether primary or secondary, for which little benefit has been possible, as yet, by treatment. Earlier methods of diagnosis must be found, and in order to make an earlier diagnosis in primary carcinoma of the lung, the bronchoscopists are advocating earlier examination by the bronchoscope in all cases of persistent cough without known reason, or any condition which seems due to irritation, such as wheezing. The use of the bronchoscope will undoubtedly be the means of earlier diagnosis in cases of primary carcinoma of the lung.

By the time secondary tumors appear in the lung, the entire system is involved with malignancy, and attempts at relief must be directed not only to the lung condition but also toward the primary growth.

The recent developments in methods of diagnosis of pulmonary neoplasms have been shown in contrast to the methods used one hundred years ago.

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DIABETIC DIETS

By ARTHUR H. TERRY, JR., M.D., NEW YORK, N. Y.

From the Medical Service, Beekman Street Hospital, New York.

HERE are several diabetic forms and systems, each one easy for the originator but difficult for others. Probably the simplest and most universally used form is by Dr. Joslin. The one here proposed, as devised for the Beekman Street Hospital, is more or less patterned from it. The difference in this from is that the first four diets are for special conditions, namely: what to give when the patient has mild acidosis or a fever, or when requiring soft food, as after an operation; or what a child needs. No diet is provided for real coma, as none is possible.

The special diets are listed according to name and according to their carbohydrate, protein, and fat content. This content is measured in grams of food; and on the reverse side of the card the gram measures are given in household measures for those unable to use a gram scale.

The last six diets are employed for the routine treatment of diabetics entering the office; each succeeding diet increasing in carbohydrate, protein, and fat content. A diet sufficiently high in food must be given to make the patient happy and to maintain body weight and strength. Sufficient insulin must be given, before each meal if necessary, to keep the urine sugar-free. It may be possible to get along with insulin before breakfast and supper or merely before breakfast. On the other hand, an additional small dose on retiring may be necessary.

Diet number eight is the best average diet; and about ten units of insulin before breakfast and supper are usually required to render the urine sugar-free morning and evening; five units more or less, probably sufficing to keep the afternoon urine sugar-free. Frequent small doses of insulin are usually more effective than one or two large doses.

TABLE 3. Food Values.

	Gram					Calo-	
Food	Wt.	Measure	Carb.	Prot.	Fat	ries	
Vegetables 5%	100	2 H. tbsp	3	2	0	20	
Vegetables 10%	100	2 H. tbsp	6	2	0	32	
Vegetables 20%	100	2 H. tbsp	20	3	0	92	
Fruit 10%	100	Small Orange.	10	0	0	40	
Fruit 15%	100	3 H. tbsp	15	0	0	60	
Milk, whole	30	1 ounce	1.5	1	1	19	
Cream, medium	30	2 H. tbsp	1	1	6	62	
Jee Cream	100	2 H. tbsp	20	5	10	190	
Cheese	30	1 ounce	0	8	11	131	
Pot Cheese	30	1 ounce	1	6	.2	30	
Butter	30	2 balls	0	0	25	225	
Eggs	50	One	0	6	6	78	
Bread	30	½ inch slice	18	3	0	84	
Unceda	6	one	5	0.5	0.5	26	
Oatmeal, dry	30	1 ounce, !4cup.	20	5	2	118	
Oatmeal, cooked	100	2 H. tbsp	10	2.5	1	59	
Farina	100	2 H. tbsp	12	2	0	56	
Shredded Wheat	30	one	23	3	0	104	
Meat, lean	100	2 lean ehops	0	25	20	280	
Baeon	30	4 strips	0	5	15	155	
Chieken	100	1/2 broiler	0	25	10	190	
Fish, boiled	100	1 H. tbsp	0	25	0	100	
Oysters, Clams	60	six	3	6	1	45	
Almonds	30	20 large	5	6	16	188	
Brazil Nuts	30	5 large	3 5 2 6	5	20	203	
Ginger Ale, dry	100	3 % ounces		0	0	24	
Olive Oil	30	2 tbsp	0	0	30	270	
Sugar	5	1 lump	5	0	0	20	
		V .			1 4	1	
1 gram Carbohy	drate.	=4 ealories	30 gr	rams	=10		
1 gram Protein.		= 4 ealories	4 ee		=1 to		
1 gram Fat		= 9 ealories	1 kile	ogram	=2.2	pour.d3	
1 gram Alcohol		=7 calories	2 tbsp. = 1 oz.				
]	-			

TABLE 2.

CARBOHYDRATE CONTENT OF FRUITS AND VEGETABLES.

2½%	5%	10%	15%	20%
Asparagus Celery Cucumber Chard Endive Greens (beet) Lettuce Marrow Rhubarb Spinach Sorrel Sauerkraut	Brussel Sprouts Broccoli Cauliflower Cabbage Egg Plant French Arti- chokes Leeks Mushrooms String Beans Sea Kale Tomato Grapefruit	Beets Carrots Pumpkin Squash Turnip Blackberries Muskmelon Oranges Peaches Pineapple Strawberries Watermelon	Green Peas Parsnips Apples Cherries Grapes Huckleberries Pears Raspberries	Beans—Lima Beans—Baked Beans—Shell Green Corn Macaroni Potato Rice Banana Figs Plums Prunes

TABLE 1 BEI KMAN STREET HOSPITAL DIABETIC DIFTS (Terry)

			F	oop C	Conti	17.		CAR	пэнү	LYAT	E (C	(Ams)		P to	FINE	FAT	(Grams)	REMARKS
	Du	L18	С	Р	ŀ	Cal	Orango	Vilk	Oatmeal	5 % 5 cg	20 °; Veg	Unreda	Bread	Meat	Egg	Butter	Cream	Other Foois of equivalent value may be substitute i
	1	Acidosia	108	0	0	400	1080	_								-		Ginger Ale or Cruel or any Carho- hydrate if preferred
SPECIAL	2	Fever	110	23	20	-12	500	500	30			3x				Γ		Ir sul n re juliements doubled Watch for Acidosis
SPE	3	Soft	120	31	47	1039	500	240	30		120	2x	_		2x		120	More Insulin II fess exerc se
	4	Child	123	67	58	1282	200	960	60	150		2x		60	1		SCC C 1 0	Correct for Age 6 1It 44 Wt 46=20 Kilograms
	5	Basic	89	63	84	1364	200	210	30	300	120		_	120	1	30	120	Unsustaining Fmploy only until
	6	Resting	109	71	92	1548	200	210	30	200	120	4	Γ	120	2	30	120	Unsustaining Uncedas increased one daily to lour
=	7	Sustaining	127	74	92	1632	200	210	30	300	120	4	30	120	2	30	120	Do not add all the bread at once-4 Uncedas-30 bread
REGULAR	8	Average	145	77	90	1698	300	210	15	300	120	3	60	250	,	30	120	Arrive at this diet gradually 5 grams Carh (1 Unceda) daily increase
Æ	9	Med Work	161	78	90	1766	100	210	15	300	150	4	60	150	1	30	120	1f too much carbohydrate take 30 less bread 15 more butter
	10	Working	179	83	95	1903	400	210	15	300	240	4	60	180	1	30	120	Carbohydrate may be left as in diet 8 or 9

Sugar and Acctona in urine—Feed every three hours 180CC (6 oz) Orange fulce. Test urina with Benedicts before each feeding if red reduction give 15 units Insulin—Fellow reduction 10 units—Green reduction 5 units—When sugar and acctona free proceed to diet Ne. 2

No 2 Four daily feedings—Insulin before each meal if Glycosuria May aubstitute Cereal for Orange Julco No 1 Insulin and leedings three times daily No 4 Three daily feedings—Unceda between meals to avoid reaction—Insulin usually two or three times

No 5 Glycosuria without Acetone—three feedings InC at each meal Insulin 5 units before each meal if necessary If Glycosuria perasits increase insulin until sugar free—then change to diets 6 7, 8 9 10 according to food required—adding Insulin if necessary Adults require I gram protein per kilogram children 3

LIPOID HISTIOCYTOSIS CASE REPORT

By A TOW, MD and H F WECHSLER, MD, NEW YORK, N Y

erom the A Jacobi Division for Children, Service of Dr J S Leopold, and the Achelis Laboratory, Dr C F Rohdenburg Director Lenox H II Hospital New York City

C INCE Pick established the disease as a clinical entity, examples of lipoid histocytosis have been published with increasing frequency and with clinical and pathological descriptions that are almost monotonous in their similarity However, the disease is still rare enough to be recorded, and especially our case because it occurred in an infant of pure Italian stock. We have been able to find only three cases of lipoid histocytosis reported in non Jewish patients-two of German and one of French parentage Again, the discovery of the resemblance between the findings in the brain in this condition and those in amairrotic family idiocy has, in recent years necessitated a complete revision of our conception of the idiotic form of the disease. It has become evident that there exists a fundamental relationship between the two, and that in all probability the same metabolic dis turbance is the etiological factor in both. In some instances it affects primarily the visceral organs. and in others the central nervous system

CASE REPORT

MC, female age nme months, of pure Italian parentage on both sides, was admitted to the A Jacobi Division for children, Lenox Hill Hos pital on July 15th with the diagnosis of acute intoxication

The family history was negative except for the fact that the father and mother were first cousins Two children were living and well and three had died, two during the first week of life with signs of intestinal obstruction and one at six months of pneumonia

The patient was a full term normal delivery with a birth weight of seven pounds. Breast milk and various formulae had been given but the in fant had failed to gain weight and develop nor-A marked respiratory stridor had been present since birth. At the age of six months adenectomy had been performed in an unsuc cessful attempt to relieve the stridor For two days prior to admission, there had been intractable vomiting and diarrhoea

Physical examination revealed a poorly developed, acutely ill female infant; weight 10 pounds 3 ounces. A diffuse papular folliculitis was present over the back. The palatal arch was high and the tonsils were greatly enlarged. The liver was palpable three fingers beneath the costal arch in the nipple line and the spleen extended almost to the umbilicus.

The patient was given a transfusion of 80cc. of whole blood but grew steadily worse, and expired six hours after admission with signs of acute intoxication and edema of the lungs.

Autopsy:

The body was that of an emaciated, poorly developed infant, 9 months of age and measured 63 cm. in length. The skin was of a dirty grayishbrown color. A papular rash was present on the forehead, shoulders and back. The frontal bosses were prominent and the anterior fontanelle was open.

Both lungs lay free in the pleural cavity. The right lung weighed 125 gms. and the left 75 gms. They were light purplish-pink in color, felt firm and fleshy and the interlobular markings stood out clearly as a grayish yellow network. On section, they had a mottled appearance, solid dark red and yellowish areas alternating with pink, crepitant ones. The network visible over the pleural surface extended throughout the lobes.

The larynx and trachea showed no gross abnormalities.

The tracheobronchial lymphnodes were enlarged, firm and yellowish-brown in color.

The thymus was grossly negative.

The heart weighed 35 gms. and except for a pale, flabby myocardium revealed no abnormalities.

The liver was markedly enlarged, weighing 400 gins. The right lobe extended into the right iliac fossa. Its surface was light yellowish-brown in color and was doughy in consistency. On section it had a grayish-yellow, boiled appearance and the markings were completely obliterated.

The spleen was of huge size, weighing 185 gms. It was of a mottled red and yellow color and the Malpighian corpuscles were apparently much re-

duced in number.

The pancreas felt somewhat firmer than normal but was otherwise negative.

The adrenals were firm and on section, the medulia was of a yellowish-pink color.

The kidneys together weighed 50 gms. and revealed no gross abnormalities.

The stomach was dilated and contained a large amount of mucus.

The solitary follicles and Peyer's patches of the

small intestine were markedly enlarged and were vellowish-pink in color. A few scattered enlarged follicles were present in the colon.

The abdominal lymph nodes were enlarged, firm

and mottled reddish-yellow in color.

The brain was small and rubbery in consistency. The meninges were dull gray in color, the convolutions normal and the sulci widened.

Microscopically, the characteristic picture of lipoid histiocytosis was present. The hyperplastic reticuloendothelial cells stained a faint orange with Suda iii, pinkish-red with Scharlach 4, a light grayish-black with osmic acid, bluish-black with the method of Lorrain-Dittrich and with Mallory's stain the nucleus was reddish-brown and the cytoplasm a light pink.

These cells practically filled the sinuses of the spleen and markedly encroached upon the Malpighian corpuscles. Many of the latter had disappeared entirely, others showed small collections of lymphoid cells interspersed among the endothelial cells. The pulp, where visible, contained a few scattered round cells, an occasional poly and a small number of red blood cells.

In the liver they filled the sinuses and compressed the liver cells. The latter showed marked degenerative changes and extreme vacuolization. Small collections of polys were occasionally pres-

ent about the degenerating liver cells.

In the lymph nodes the architecture was completely altered by the cells and the lymphoid elements were much reduced in number. medulla of the adrenal and the thymus contained them in great abundance. They were extremely numerous in the lungs, in many areas completely filling the alveolar spaces and to a lesser extent were found in the septa and about the bronchi and blood vessels. Serous fluid was present in some alveoli and hemorrhage had taken place into others. A few small foci were present in the kidneys. The epithelium of the convoluted tubules exhibited marked degenerative changes and in many areas were completely necrotic. The blood vessels were congested and a few small hemorrhages were present in the interstitial tissue between the tubules. The lymph follicles and Peyer's patches showed moderate numbers of these cells. The stomach, pancreas and heart muscle were negative.

The brain showed a diffuse vacuolar degeneration of the cells, most marked in the cortex of the cerebrum and cerebellum. The cells were enlarged, the nuclei were eccentric and the cytoplasm was foamy in appearance. cells were especially abundant about the blood vessels. The ganglion cells in addition showed granules which took the hematoxylin, absence of Nissal bodies and displacement of the cell processes.

THE PRESENT STATUS OF THE ALLERGIC DISEASES*

By T. WOOD CLARKE, M.D., UTICA, N. Y.

THREE years ago I presented a paper before the Oncida County Medical Society and the Pediatric Section of the State Society analyzing twelve years' experience in the study of allergic diseases in childhood. Since then I have extended this work to adults referred to me by my fellow physicians.

The present paper is not confined to the pediatric aspect of the subject but gives a summary of the present-day status of our knowledge of the allergic diseases referring to my own work only by way of presenting illustrative cases.

Theobald Smith's discovery of anaphylaxis in guinea pigs in 1904, von Pirquet's introduction of the term allergy, Meltzer's suggestion that bronchial asthma was a manifestation of anaphylaxis in 1910, and Schloss's introduction of skin testing in 1912 form the foundation on which is built our knowledge of the allergic diseases.

Allergy may be defined as a hypersensitiveness of body cells to one or more specific proteins. When such a protein, called an állergen, comes in contact with the sensitized cell, morbid conditions occur which cause symptoms complexes grouped together as allergic diseases.

ETIOLOGY

Heredity plays an enormous part in allergy. From forty to sixty per cent of all patients suffering from allergic diseases give a family history of allergy in some form.

The hypersensitiveness to protein itself is not inherited, but the capacity to become hypersensitive is, and this follows the Mendelian law as a dominant characteristic. With this inherited background, the actual hypersensitiveness is due to antibody formation by the action of foreign protein upon the cells of the patient.

A sensitized guinea pig can pass its sensitization to its offspring in utero, and when a pregnant guinea pig is given horse serum hypodermically, the embryo becomes sensitized. Thus intro-uterine sensitization may be either passive or active. In some cases where young infants are allergic to a certain food, the mother is found to have had an inordinate appetite for the especial food stuff during her pregnancy. This explains the advent of allergic symptoms following the first ingestion of the offending protein by the infant.

Schloss¹⁰ demonstrated that while unchanged proteins cannot be absorbed into the blood through the normal bowel wall, they will pass through the mucosa during intestinal disease.

Hypersensitiveness, therefore, is due to excessive doses of some protein, either in utero, in the ordinary course of existence, or from abnormal absorption through intestinal lesions.

When once the specific hypersensitiveness has been established, it remains but for the specific protein or allergen to which the cell is sensitized to come in contact therewith when a colloidal shock occurs, and symptoms of one of the allergic diseases results.¹¹

The allergens which are the exciting cause of this shock may be the proteins of foods, of pollens, of clothing, of bacteria, of animal eminations as hair, dander, or feathers, or of smoke, powders, dust, or numerous other substances. Symptoms indistinguishable from allergic shock can also be produced by non-protein drugs and chemicals.

Talbot,¹² O'Keefe,¹³ Shannon,¹⁴ and Lyon¹⁵ demonstrated that a nursing infant might receive allergic shock hy means of allergens included in the mother's diet and transmitted to her child through her breast milk. Balyeat¹⁶ and Sterling¹⁷ present evidence that a similar condition exists in regard to cow's milk.

One case of maternal transmission is worthy of reporting:

Case J. P., 4½-months-old child, nursed every 3 hours. For the past two months he had severe eczema covering face, body, arms and legs. Skin tests by the scratch method made a dozen at a sitting over a period of several weeks gave reactions to rice, banana, chicken, egg white and yolk, veal, tomato, and cat hair. The foods were eliminated from the mother's eliet and ultraviolet ray was used locally. The improvement was very slight. On the last day of testing reactions were obtained to several nuts. The mother then stated that as the family physician had prohibited candy owing to the baby's cezema, she had been eating nuts in considerable quantities. Elimination of the nuts from the mother's diet caused complete disappearance of the eczema in two weeks.

PATHOLOGY

When the allergen comes in contact with the antibody which appears to be located in the globulin fraction of the serum and cells, 18 certain pathological changes occur characterized by spasm of smooth muscle, stimulation of glands, and increased permeability of the capillaries. 10 There is an eosinophilia in the blood and in the secretions from the respiratory tract.

These lesions, spasm and oedema, may occur at the point of contact or at widely disseminated parts of the body, and may so produce widely different symptoms.

Read before the Fifth District Branch of the Medical Society of the State of New York, at Oneida, N. Y., October 4, 1932.

GENERAL MANIFESTATIONS

The manifestations of allergy involving the entire body may be acute or chronic. The acute symptoms make the syndrome known as allergic shock exemplified by acute serum shock with which all are familiar. Such symptoms may follow the introduction of the foreign protein by mouth, or by hypodermic injection.

In other cases the ingestion of the foreign protein may produce high fever as illustrated by the

following case.

P. M., born September 19, 1928, at Lowville. At the end of one week it was given complemental feedings of cow's milk, and at the end of the second week was weaned. He promptly developed a crowing respiration and fever, and was admitted to St. Elizabeth Hospital at the age of 3 weeks. The child was found to be so allergic to cow's milk that the slightest amount thereof would cause a fever of 104° to 105°. During six months in the hospital, five attempts were made Each attempt was followed by to give milk. croupy respiration and high fever. Upon removing milk entirely and giving soy bean, barley and olive oil (a mixture subsequently introduced by Hill20 and given the name of Sobee) and banana cream, the child throve well.

The chronic general manifestation of allergy comprises what Rowe²¹ and Kahn²² have described as allergic toxæmia. It is due to the chronic ingestion of foods or the inhaling of pollens to which the patient is allergic and produces symptoms of general malaise, nervous irritability or melancholia. With removal of the

allergens prompt recovery ensues.

SKIN INVOLVEMENT

The most common of the manifestations of allergy, especially in children, are those involving the skin.

In eczema there are two factors, an allergic background and a local irritant. Both factors are necessary to produce the lesions in the skin. This explains the marked improvement by the local use of ointments, x-ray and ultraviolet rays, and the prompt return of the symptoms when these methods of treatment are discontinued.

The allergic sensitivity producing eczema is usually due to the ingestion by mouth of food proteins, the most common causes being egg, milk, or wheat. Orange, so commonly accused of being the causative factor, has in my experience

been very rarely a cause of eczema.

Besides foods, articles of bedding or clothing may produce eczema, an especially common cause being silk. Many children are having their clothing lined with silk to protect the skin from the irritation of wool, when wool is quite harmless and silk a violent poison.¹

· While allergic hypersensitiveness is not the only factor in eczema, it is certainly the most im-

portant one, and the attempt to treat the disease by relieving the local irritation alone by ointments and ray treatments and neglecting the allergic aspect, is but doing half the job and striving for temporary relief instead of permanent cure.

In one group may be considered the conditions characterized by itching and local swelling of the skin, pruritus, urticaria, giant urticaria and angioneurotic oedema. Wynn²³ has reported two severe cases of general senile pruritus lasting for months, which gave reactions to wheat globulin, were relieved when all wheat was removed from the diet, and relapsed promptly after the ingestion of even one slice of bread.

Urticaria and angioneurotic oedema have been known for years to be intimately associated with the ingestion of certain foods. They may also be caused by bacterial allergens arising from points of focal infection in teeth, tonsils, or sinuses.²⁴ Menagh²⁵ reports finding biliary tract infection in 48% of a series of cases of urticaria and angioneurotic oedema, and obtained excellent results from the administration of autogenous vaccine. Urticaria has been produced by the allergic reaction to the malarial parasite²⁶ and to trichophyton in "athletes foot."²⁷

The bizarre nature of the etiological factor in urticaria is well illustrated by the case of a young woman who had suffered for six months from daily distressing attacks of hives. Series of skin tests failed to give positive reactions. months later she wrote me that she had discovered the cause of her hives. Since the onset of her trouble, on the theory that it was due to indigestion and that pepsin chewing gum was good for her digestion, she had conscientiously chewed gum for a short time after each meal. Two months before writing me she had gone on a camping trip and forgotten to take her gum. To her astonishment she had no hives. then she has chewed no gum and had no signs of urticaria.

It long has been known that some individuals will develop an acute dermatitis upon coming in contact with certain substances quite harmless to other persons. The best known example of this is poison ivy.²⁸ Some people cannot wear collars made of certain furs without having acute inflammation of the neck. Henna and other hair dyes, commonly harmless, may cause acute distress in people allergic thereto.

Dermititis, too, may recur every spring in those sensitive to timothy²⁹ and every autumn in the person with a ragweed allergy.^{30, 31} The skin of florists may show acute hypersensitization to such irritants as the leaves of chrysanthemums³² or that of a housekeeper to the pyrethrum of insect powders.³³ The acute dermatitides occasionally following the injection of arspenamine are of a similar nature.³⁴ Even ephedrin, a drug of such value in the treatment of all forms of

allergy, may at times defeat its own ends by sensitizing the patient and producing a dermatitis 85

RESPIRATORY MANIFESTATIONS

Asthma

The most characteristic and commonly recognized of the respiratory manifestations of allergy are asthma and hay fever. Three theories are held as to the nature of asthma that it is a spasm of the smooth muscle of the bronchial wall, that it is an ocdenia of the mucosa, and that it is a plugging of the bronchi due to hypersecretion of the bronchial mucosus glands 36. It is probable that they occur simultaneously, as all three are types of lesions characteristic of allergic shock.

While foods may be the cause of asthma, more commonly the paroxysm is precipitated by some substance inhaled from the air. Horse, dog and cat asthma have been known long before the theory of allergy was propounded asthma, especially following years of suffering from hay fever, is a common occurrence. Among the other frequently met excitants of asthma may be mentioned silk, orris root found in sachets and face powder, pyrethrum, or the basis of most of the insect powders, and glue of the last of the support of the saction of the insect powders, and glue of the last of the support of the last of the saction of the insect powders, and glue of the last of the last of the saction of the sacti

A few years ago a child was sent to me with eczenia and asthma, who proved to be sensitive to horse and eattle hair, a number of foods and Some months later the boy was ill with a non-related condition. He had two mirses One he would allow at the bedside, the second Upon the latter administering he objected to to lum, his respiration rose from thirty to muety with no rise in temperature The boy's condition was unchanged except for the astonishing increase in respiratory rate Careful questioning revealed that nurse number two was wearing silk bloomers These being removed, the child's respiration rapidly returned to normal, and his objection to the nurse vanished

Probably the most common factors in the production of asthma are the contents of pillows Chicken, duck and goose feathers, Kapok or cottonsced¹⁰ may precipitate an attack, and where they come on suddenly in the middle of the night they are the usual cause. Parrott¹⁰ and canary¹¹ feathers have been found to be the cause especially among bird fanciers. In New York City rabbit hair¹⁴ raiks high as a cause of asthma due to the custom of certain New York pillow makers of mixing rabbit hair with the feathers in their pillows and of the use of felt pillows.

The most common of the foods causing asthma are eggs wheat milk, and the condiments especially mustard 42

Recently a young man was seen who had been a chronic sufferer from asthma for 21 years As his attacks always started with what his mother considered to be a cold and as she feared that the cold would run into asthma, she did all in

het power to break up the cold. Her regular routine was flax-seed tea and hot ministard foot boths. In spite of all her efforts, however, the colds always developed into asthmatic attacks. A study of the case revealed that the two substances to which the pritient was most sensitive were ministard and flax-seed. He was instructed to discontinue his treatment of colds and at the last report was free of his asthma.

Recent studies lead to the belief that the emanation of certain insects as said flies, moths, or butterflies⁴⁴ may produce the disease. The literature is full of case reports of asthma produced by the most bizarie and unexpected causes as Christmas trees,⁴⁵ maple leaves⁴⁶ human dander,⁴⁷ bowood,⁴⁸ and such drugs as ipecac⁴⁹ and the easter oil bean ⁴⁰

To add to the difficulty in solving the problem of asthma is the fact that in the majority of cases there are many varied and entirely unrelated allergens

Hay Fever

Seasonal hay fever, or pollenosis, is one of the commonest of diseases. It is estimated that one per cent of all human beings suffer from it in one form or another 31. Its allergie inture, its dependence upon tree pollens in the early spring, upon grasses in Jime, and upon weeds, especially ragweed in August, are too well known factors to require more than passing comment. Amy pollen which is wind disseminated may be a cause of hay fever. The insect germinated pollens, as rose and goldenrod, can cause them only if the sensitized patient comes in intimate contact with the flowers.

In seasonal hay fever one should not be content with determining the nature of the pollen scusitization, but should investigate also the possibility of an allergic reaction to foods, animal emanations and other allergens, for it has recently been abundantly demonstrated that a patient who is pollen sensitive but cannot be cirred of the hay fever by the ordinary methods of treatment will respond promptly if some food to which he is sensitive is at the same time removed from the diet or if contact with animals feathers or orris root is discontinued ⁹²

Closely related to seasonal hay fever is the symptom complex known to the allergist as perennial hay fever, and to the rhinologist as vaso motor rhuntis

The sufferers from this disease show all the symptonic common to seasonal pollen hay fever except that these occur throughout the year, either constantly or in repeated attacks with sudden onset and equally sudden relief. On examination of the nasal mucous membrane it is found to be swollen grayish in color and glistening in appearance. The nasal secretion is profuse and watery. It contains large numbers of cosino plules. The clinical picture differs distinctly from

the red turgid mucous membrane, and the mucopurulent or purulent discharge of infections.⁵³

Many of the cases of chronic running noses, obstructed breathing, mistakenly diagnosed as sinus disease and operated upon therefor, are really allergic in character. In such cases often repeated operations of tapping of sinuses, removal of turbinates and snaring of polypi have been performed with little or no relief.

While sometimes occurring in patients suffering from seasonal hay fever or asthma, perennial hay fever may appear as an independent affection due, either to foods or to inhalants. As an example of the variegated etiological factors in this condition, the last five cases which have been referred to me for investigation by a rhinologist have proved to have an allergic hypersensitiveness to wheat, to pyrethrum from insect powder, to cat hair and parrot feathers, to cheese and the pneumococcus and to tobacco respectively.

If the practitioners, and especially the rhinologists had a more widespread appreciation of the allergic nature of many of the chronic incurable nasal conditions which they treat palliatively year in and year out, there would be less unsuccessful nasal surgery and a great decrease in the sniffling population.

Besides the running of the nose these cases are characterized by lachrymation, sneezing, especially in the morning, and itching of eyes, nose and ears.

Allergic croup⁵⁴ may be of any degree of severity. Probably many of the mild cases of spasmatic croup in childhood are due to allergic sensitiveness of the child, either to foods or more probably to the feathers of the pillows. As these croups are either due to muscle spasm or to oedema, the two characteristic lesions of allergy, it does not take a great stretch of the imagination to include them in the allergic category. This probability is emphasized by the fact that the usual cause of death in allergic and anaphylactic shock is suffocation due to spasm and oedema of the larynx, in reality the same condition which occurs in a milder form, in nocturnal spasmatic croup.

Cough is not infrequently an allergic manifestation either associated with hay fever or asthma, or as an independent affection stimulating recurrent bronchitis. The cough may be associated with a running nose, and may precede an attack of typical asthma, giving rise to the mistaken notion that the asthma is caused by "catching cold." The coryza and cough are not due to infection but are as much a part of the allergic attack as is the wheezing of the later stages of the attack.

Colmes⁵⁶ has reported a case of uncomplicated recurrent cough due to orris root, and Rackeman and Colmes⁵⁷ have presented a series of

similar cases caused by orris root, animal hairs and feathers. A case reported by me¹ several years ago bears repeating. The child had frequent attacks of bronchitis, blamed by his mother on becoming overheated due to over-exertion when visiting his grandmother's house in the country. On my obtaining a reaction to cat hair, his mother denied this possibility as in their apartment house life they saw no cats. The child interruped by saying that at Grandma's there were stray cats in the barn and he always had fun catching them. He stopped catching cats, and during the past fourteen years has had no bronchitis except last year when a new cook in the family brought a cat into the house.

Balyeat⁵⁸ goes one step further than bronchitis and describes what he calls pseudo-bronchopneumonia. He pictures the "patient who develops an acute cough with dyspnoea, temperature, and lassitude. On physical examination these children may have a temperature of 99° to 104° and the other findings will not differ from the true bronchopneumonia. Within 12 to 36 hours the condition has cleared up. The child is perfectly normal, running and playing and apparently no worse for the attack of bronchopneumonia." He believes that these cases are allergic and urges that where there is a history of repeated attacks of bronchopneumonia and a family history of allergy, the allergic etiology be given serious consideration.

OPHTHALMIC MANIFESTATIONS

The allergic nature of primary diseases of the eye has received but slight attention. Individual reports of cases of vernal conjunctivitis.⁵⁹ scleritis,²⁰ recurrent retinal oedema,⁶⁰ and episcleritis⁶¹ of allergic origin and cured by the removal of the offending allergens have been reported. These cases suggest that the oculist by keeping allergy in mind may increase his percentage of successes in certain troublesome eye conditions.

GASTRO-INTESTINAL MANIFESTATIONS

The digestive manifestations of allergy are caused by ingested food, and may be due to a direct contact reaction of the protein upon the mucosa, or as a part of a general reacton after the protein has been absorbed. The intensity of these reactions may well be understood when one considers the intimate relation of the allergen to the sensitized wall of the digestive tract.

Cases of recurrent canker sores in the mouth due to such foods as chocolate, wheat. or cabbage, in which complete relief was obtained by removal of the offending foodstuffs from the diet, are known.63

Since Osler's⁶⁴ classical article calling attention to the abdominal crises occurring in the erythema group of diseases, several surgeons

have described finding at operation swellings of the intestinal wall resembling angioneurotic oedema and characterized by intense thickening with little or no involvement of the lining mem brane Careful study by many allergists have led to the belief that these conditions are evidences of food allergy In Rowe'ses analysis of 150 cases of gastro intestinal allergy, he describes canker sores, conted tongue, and heavy breath, distention, belching, epigastric heaviness sour stomach and burning, nauser vonuting, diarrhoca, and many other symptoms including pain and tenderness in any and all parts of the abdomen and The duration even acute intestinal obstruction of the symptoms in his series varied from four months to fifty-five years

The most dramatic manifestatious of gastromtestand allergy have been recognized for many years under the title of food poisoning. In these cases it has been known that certain foods were poisons in children especially egg and the ingestion of even a small amount of the substance may produce swelling of the hips and tongue, oedema of the glottis intense comiting, sometimes

dyspnoer, collipse, and even death

It is possible that many of the cases of chronic indigestion in which the physician cannot satisfy himself of the presence of any organic lesion are due to the oedema and muscle spasm caused by local allergic reactions in the intestine

Where the symptoms follow the enting of sonic uncommon food as erali, lobster, or strawberries, the recognition of the relationship between the food and the symptoms is simple. When the allergen is one of the common foods duly eaten is wheat, eggs, or milk no connection is appreciated but study of the problem has shown that it is just these three common foods which are most prone to produce the symptoms of gistro intestinal allergy. Exerman has demonstrated by x ray examination of the colon the spastic condition of that organ after the administration of wheat to a sufferer from wheat allergy.

Lintz⁶⁷ has shown that in a large percentage of cases of asthma a careful examination of the gastric contents and the stools reveals the presence of blood, and he believes that this is due to concomitant swelling of the gastro intestinal mucosa due to the allergic process

Owing to the acuteness of the abdominal cramps and the tenderness over the oedematous gut produced by areas of local allergie reaction in the bowel the diagnosis of appendicitis cholecystitis and gastric and duodenal uleer have been made in allergic cases and operations have been performed which were unundicated and failed to afford the patient the slightest relief. No allergist pretends that all cases of acute abdominal pain are allergic but they do point out that some of them certainly are and they urge the practitioner and especially the surgeon to

give this aspect of medicine more consideration in those eases in which the symptoms are not ac companied by characteristic physical signs of organic lesions, and especially in those unfor tunites who return some months after the removal of an appendix or a gall bladder with the cheering news that the symptoms are as bad as

Several years ago I was called to see the child of a Utica physician who had been under my care for asthma due to dog hair. At this time she was having intense abdominal pain and vomit ing. In the left hypochondrium there was a hard tender mass the size of a good-sized apple believed this to be a feeal impaction and ordered In twenty four hours the mass had disappeared A month liter, although the bowels had been kept well open the same thing was re peated and at irregular intervals since similar attacks have occurred always following the ingestion of egg, even in such small quantities as oceur in a piece of cake Although when first tested for her asthma the child gave a negative egg test, today the test for egg white is positive Undoubtedly this phantom tumor is a local allergic oedema of a portion of the intestine

Some allergists have gone farther than to say that allergy may be mistaken for acute abdominal lesions and believe that certain well recognized abdominal lesions of doubtful ctiology may

actually be of allergic origin

Schloss⁶⁸ has called attention to the resemblance of cyclic voniting to the recognized allergic discases, and reported a few cases in which the distressing condition was proven to have an allergic foundation. Others have noted similar

At times attacks of allergic vomiting are so reute that intestinal obstruction may be suspected. In one case, an infant of 13 months of age was referred to me whose constant vomiting and collapse for three days caused the family physician to make a diagnosis of intussusception. Lack of blood in the stools negative r ray findings and a sudden outbreak of hives put us on the right track. Milk allergy was demonstrated and the child which on admission appeared moribund on being given a milk free diet recovered immediately and gained eight ounces in weight during its week in the hospital

Cohen and Breitbartee have reported a series of cases of infantile pylorospasm in which they were able to demonstrate an allergic sinsitivity to egg milk, or cereals. They believe that these cases are allergic in character that the obstructive cases are sensitized in early intrainterine life and that repeated allergic shocks occurring during prenatal life cause the secondary hypertrophic After birth the child develops normally until it receives a dose of the specific allergem when spasm and oedema cause the distressing symptoms. The simple pylorospasm cases without

organic obstructions, according to their theory, are cases of late intrauterine sensitization and antenatal allergic shock. The theory is certainly interesting and explains many features of this distressing affection of early infancy.

Lintz⁶⁷ in his article on canker sores suggested that if allergic lesions could produce ulceration in the mouth, it might be possible that they would do the same thing in the stomach and duodenum.

Ivy and Shapiro⁷⁰ have reported successful production of gastric ulcers in the rabbit and dogs by first sensitizing the animals to a foreign protein and then later injecting a small quantity of the same protein into the gastric mucosa.

Last year Kern and Stewart 11 studied a series of 32 unselected cases of duodenal ulcer. In 40% of these there was a personal history of other allergic conditions, and in 60% positive skin tests were obtained to proteins, in 25% suspicious reactions and in only 15% negative reactions. several of the cases in which positive tests were obtained, clinical symptoms of ulcer could be produced by feeding the specific protein, and periods of complete relief could be obtained by eliminating all reacting proteins from the diet. While acknowledging that their series is too small for definite conclusions the authors believe that "evidence has been presented which tends to show that food hypersensitiveness may be an etiological factor in a small but appreciable percentage of cases of duodenal ulcer.

In 1922 Vaughan⁷² called attention to the fact that the characteristic symptoms of mucous colitis, smooth muscle spasm, and secretion of mucus were identical with those of asthma, and suggested the possibility that mucous colitis was an allergic disease. In 1927 Hollander⁷³ and in 1928 Vaughan⁷⁴ reported cases of typical mucous colitis of long standing in which it was proven that the patients were allergic to various proteins, and complete recovery followed their elimination from the diet. Immediate recurrence followed reingestion of the offending foods. Treated in the usual way mucous colitis is the bête noir of the physician. Studied from an allergic viewpoint, many cases show prompt and complete recovery.

NERVOUS MANIFESTATIONS

In 1922 Shannon⁷⁵ reported a series of cases of nervous, irritable children, some associated with eczema, asthma, or vomiting, and others with no such concomitant symptoms, all of whom were proved to have allergic susceptibility to foods. The nervous symptoms and instable temperament promptly cleared up when the offending material was removed from the diet, and returned upon its again being administered.

In 1919 Pagniez. Vallery-Radot and Nast⁷⁶ in an article in the *Presse Medicale*, called attention to the facts that migraine was a hereditary

disease, beginning in childhood and lasting for many years, coming on in sudden attacks without any evident etiological factor or else after the ingestion of some specific food. They further noted that it was often associated with attacks of asthma, urticaria, or gastro-intestinal disturbances, and they came to the conclusion that it was of allergic origin. Allergists since have been investigating migraine from the allergic viewpoint with such success that last year Balyeat⁷⁷ reported 202 consecutive cases of migraine, every one of which showed an allergic skin reaction. Of these cases the elimination of the offending proteins caused complete relief in 21% of the cases, good results in 37%, and fair results in 28%. In but 12% was there no benefit. When one considers the utter hopelessness of our efforts to relieve and prevent most migraine attacks by the usual methods, such a report certainly holds out hope for the millions who, through weary years, are doomed every few days or weeks to the agony and intense illness of this symptom com-

In 1921 Welchsler⁷⁸ in writing on epilepsy expressed the belief that the ingestion of certain foodstuffs bears a special relation to some cases of epilepsy. In the same year Thomson⁷⁹ of London in investigating 200 cases of convulsions in infancy laid special stress on the poisoning of milk, eggs, and cereals as the cause of con-The next year Wardso suggested the allergic nature of epilepsy and reported two cases in which positive skin tests were obtained and withdrawal of the offending food caused relief from the attacks. In 1923 Wallis and Nicol⁸¹ in England reported the study of 122 insanc epileptics among whom 46 gave skin reactions to proteins, while among 100 control non-epileptic insane patients only four reacted. VanLeuwen and Leydner⁸² extracted a substance from the blood of patients with asthma, urticaria, migraine, and epilepsy which, when injected into normal animals, produced muscle contractions. Howell83 then reported a series of cases of epilepsy sensitive to both foods and bacterens. Ward and Patterson⁸⁴ reported a thousand cases from the Craig Colony and the New Jersey State Village for Epileptics in whom 37% gave positive skin tests and 100 controls in which only 4% were positive. Spangler⁸⁵ reports 100 epileptics in 80% of which there was a family history of allergy. Waldbott⁸⁶ has recently reported two cases of epilepsy in which the attacks alternated with attacks of asthma.

While the allergic nature of all cases of idiopathic epilepsy is not proven and probably does not exist, there is strong evidence that at least a certain proportion of them are allergic and are curable. In a disease the outlook of which is so poor, one should grasp at any straw which holds out hope of curing even a small percentage of epileptics.

Last year I had a case of this kind. The patient, M. F., aged 10 years, was referred to me for convulsions. Her family history was negative. Her personal history miniportant except that she had had attacks of asthma since infancy and for the past four years had had typical epileptic convulsions of progressively increasing frequency until they occurred once or twice a week. Dermal tests gave reactions to cottonseed, cattle hair, radish, and cheese. Cheese and radish were eliminated from the diet, cotton was removed from her environment, and as she could not avoid the cinanations of cattle, inoculations with cattle hair were started.

As the dose of cattle hair increased, the frequency of the convulsions diminished until in the fall of 1931 they stopped entirely, and the child has now been quite free from both con-

vulsions and asthma for a year.

Other less frequently reported symptoms due to allergic involvement of the central nervous system are Meniere's Disease first described by Duke⁸⁷ and since confirmed by Rowe,⁸⁸ and certain transient cases of paralysis, hyperaesthesia, and local anaesthesia.

When one considers the tremendous local swellings which can occur on the surface in angioneurotic oedema or giant urticaria, it is easy to understand how similar acute swellings occurring in the cranial cavity could cause neurological symptoms of all kinds and description. The application of allergy to neurology opens a field of fascinating possibilities.

JOINT INVOLVEMENTS

There is probably no affection which causes more prolonged and intense suffering and a greater amount of disability than the group described under the heading of arthritis. When we have eliminated tuberculosis, gonococcus, syphilis, and acute infective joints from the category, we still have a large group of which the etiology is unknown.

Very little has been done towards studying these acute and chronic joints from an allergic viewpoint, although it has been recognized for many years that acute swelling of the joints is not an uncommon symptom of scrum disease after the administration of antitoxin, and recently orthopedists have been blanning certain acute joint swellings upon auto-intoxication.

Eight years ago Turnbull*o called attention to the fact that diet had always been considered an important factor in the production and control of arthritis. He then suggested the possibility of an allergic reaction in the synovial membranes. He obtained positive skin tests with various protein in a series of cases of arthritis in some of which there was associated mucous colitis. On removal of the offending foods, not only did the colitis improve, but the arthritis disappeared as

well. Failure to adhere to the diet caused imme-

diate return of the joint pain. Freiberg in 1929 reported an interesting study carried out on the theory that arthritis was an allergie reaction to a bacterial allergen. proved that an experimental arthritis simulating the proliferating arthritis of man could be produced in rabbits by sensitization to a bacteren, and then injection of a bacterial extract. next year Freiherg and Dorst91 reported an extensive series of clinical cases of arthritis which they studied by making cultures from all possible points of focal infection and from the stools. Individual vaccines were made with each organism grown. Skin tests were then made with these vaccines and those giving reactions were combined into one vaccine, and minute desensitizing doses administered. Their results were truly startling. In a series of thirteen cases with a duration varying from 18 months to 14 years they report seven cured, three with marked improvement, one with improvement, and only two with no benefit.

Last April Vaughan⁹² reported 100 cases of arthritis in which follow-up work had been done. He also considered the condition to be allergic and had treated with minute desensitizing doses of autogenous or stock vaccines. He, however, did not follow Freiberg's method of checking up his vaccines with skin tests. Nevertheless of his 100 cases, 10 per cent were completely relieved of their symptoms, 37 per cent were very much improved, 25 per cent were benefited somewhat, and only 27 per cent were not effected.

Miller and Lewines report one of the rare cases of intermittent hydrarthrosis of sixteen years standing completely eured by treatment on the theory that it was an allergic disease.

These few studies would seem to suggest that at least some cases of arthritis are of an allergic nature, and in a condition so long standing and resistant to therapy, it is possible that allergic studies may hold out some hope for the sufferer.

GENITO-URINARY SYMPTOMS

Irritable bladder⁹⁴, encuresis⁹⁶, and uterine cramps⁹⁶ have been described as allergic symptoms in isolated instances.

DIAGNOSIS

In the diagnosis of the allergic diseases, three things must be determined, first the clinical identity of the disease, second whether it is of allergic origin, and third the identity of the allergen which is the immediate cause of the attacks.

The first is answered by clinical examination and usually the symptoms are so characteristic that little difficulty is experienced.

The second, whether the manifestations are allergic or not, can usually be determined fairly

well by a careful history. The family history is of importance, as in most cases allergic manifestations occur in near relatives. A patient with asthma may have a mother with migraine, an uncle with urticaria, a sister with eczema, and a brother with hay fever. Such a family history strongly suggests allergy. In the personal history one must learn whether the patient suffered previously from allergic manifestations of any nature. An important item is to learn the patient's likes and dislikes, and whether any special food has ever upset him, or is consistently refused, for nature tries to protect the allergic subject from its specific poison by giving it a distaste therefor. Any child that expresses a distinct dislike for a food should have his allergic reaction to that food studied before he is forced to eat it.

The third matter to be decided is the nature of the specific allergen. This is done by the well known tests: dermal, intradermal, ophthalmic,⁹⁷ nasal,^{98, 99} patch,¹⁰⁰ and passive transfer.¹⁰¹

The dermal test consists of making a series of small abrasions on the patient's skin, and placing on each a minute quantity of one of the proteins being tested and dissolving it in sodium hydrate. The intradermal test resembles the Schick test in that the test material is introduced into the skin with a fine hypodermic needle. A positive reaction occurs in twenty minutes and consists in an irregularly shaped wheal in the center of an area of erythema. These are the tests commonly used, the other methods being reserved for special occasions where the dermal tests are unsatisfactory.

After Schloss' introduction of skin testing, his enthusiastic followers were of the opinion that all allergic diseases could be diagnosed by this simple method. It was, however, soon found that this was not true, and that a certain percentage of cases, typically allergic, failed to give skin reactions to proteins to which clinically they were susceptible. It is now found that nearly all seasonal hay fever cases give satisfactory reactions. Most asthmas and eczemas do likewise provided an adequate number of test materials are used. The gastro-intestinal allergies, the perennial hay fever cases, and the epilepsies give a moderate number of positive results, while the urticarias and the migraines are prone to be disappointing.

When all skin tests to specific proteins are negative, results may be obtained by testing with extracts made from the dust of the patient's house or with bacteria, yeasts and molds.

Various reasons have been given for the failure of the skin tests in certain cases. In allergy the susceptibility of different parts of the body varies, the same allergen in one patient causing asthma, in another migraine, and in a third urticaria. It is therefore easy to appreciate that a patient's nasal mucous membrane or meninges may be highly hypersensitive to a certain protein,

while the skin might have such a high resistance thereto that no positive test reaction could be obtained.

For a period directly following an allergic attack the patient develops a resistance to the exciting protein, not only in the part effected, but in the skin as well. This explains the periodicity of attacks and the presence of a negative skin test to a specific protein for a few days after an acute attack caused by that particular protein. For this reason tests should not be made immediately after an attack as at that time they are prone to give false information. When a patient has been free from contact with the offending allergen for some time the skin sensitiveness may be lost. The same thing happens after desensitizing treatment or after drug therapy. An inert allergen, owing to improper extraction or to age, may also lead one astray.

Not only may skin tests not be obtained in cases of definite allergy, but it is also possible for the skin to give positive reactions to substances, the administration of which cause no clinical symptoms.

This uncertainty of the skin test has led to the allergic theory and the testing methods falling into a certain amount of disrepute in some quarters, a disrepute justified if one is to depend upon skin testing entirely for a diagnosis. The skin tests are but one means of diagnosis, and are of value only when combined with the history of the case and the careful study of clinical symptoms, living relations, and dietary reactions.

A new stimulus was added to the study of allergy in 1928 when Rowe¹⁰² introduced his method of "elimination diets" in the diagnosis of allergy, especially in those cases giving negative tests.

On the theory that most food allergy cases were due to sensitiveness to eggs, wheat, and milk. Rowe devised a series of four fundamental diets in none of which do these substances appear. A patient suffering from symptoms of allergy is placed upon one or other of these diets. If symptoms continue, another diet is used until one is found that gives relief. If all diets are symptom-free they may be combined. The patient thus being on a diet causing no symptoms, one food at a time is added until symptoms appear. In this way the allergic nature of the disease can be determined and the offending protein identified even in the presence of negative skin tests. It is, however, always advisable to do a complete series of skin tests before attempting the elimination diets, as the information so received directs the choice and modification of a diet and may save one many months of tedious diet manipula-Vaughan¹⁰³ and Waters¹⁰⁴ have modified and elaborated these tests.

It will thus be seen that the accepted view of

the study of a case of allergy today includes a careful family and personal history, a complete set of skin tests, and then with the knowledge so obtained as sign posts, a careful dietary and environmental study of each case from a clinical standpoint. The diagnosis of a case of allergy has gone far beyond the mere scratching of the skin, applying proteins, and watching for the resulting wheal

TREATMENT

The first essential in the treatment of allergy is an accurate diagnosis, not only a diagnosis of the allergic nature of the disease, but also an identification of the offending allergens. In most cases several widely differing allergens are at fault and the failure of the identification of any one will vitiate the value of the treatment.

Once the allergens are recognized the first step is to eliminate the offending materials from the patient's diet or environment. If this can be done it not only gives relief from symptoms, but in some cases the allergic hypersensitiveness will disappear, and the patient will be permanently cured. Relapses, however, may occur either due to reappearance of the hypersensitiveness to the same allergen, or the development of allergy to a new protein previously innocuous

If the elimination is not possible owing to one's mode of life or to the fact that the food is so common that it cannot be avoided, or if the hypersensitiveness does not disappear, the next step is desensitization. This is carried out by the administration of minute quantities of the offending material by mouth in the case of a food, or hypodermically in the ease of bacteria or inhalants, these doses being gradually increased over a period of months until the hypersensitiveness is lost and the patient can take the normal amount of the material without symptoms secret of success in such desensitizations is con-The more slowly the dose of allergen is increased, the more successful the results. One overdose can cause immediate recurrence of symptoms

The moculation method is most widely used in the case of hay fever, and is if properly carned out, usually successful. If a case comes in during the hay fever season the coseasonal method may be tried, but too much should not be expected therefrom. The usual method is to begin some four months before the onset of the season and give weekly injections so that the immunity becomes well established when the pollen first blows Care must be used in the case of multiple reactions to use the pollens which are really causing the symptoms In 1927 Vander Veer, Cook, and Spain105 suggested that in order to prevent recurrence of hay fever in subsequent years, the inoculation be not stopped at the end of the season, but be kept up at monthly intervals during the entire year Vaughan, 106 Stewart, 107 and others have reported most favorable results by this method, more permanent cures being attained than by the purely seasonal treatment

Time will not admit of discussing the nonallergic treatment of the allergic diseases or the care of acute attacks, but it must be remembered that these cases need local and general medical treatment for their symptoms and the physician who depends entirely upon allergic desensitization is but doing hilf of his work

The inoculation of allergic cases with nonspecific proteins, using typhoid vaccines, sera, milk and peptones have had their advocates, but have not been generally accepted as comparing favorably with the specific treatment

Conclusion

The present status of the allergic diseases would seem to be that practically all cases of urticaria, angioneurotic oedema, seasonal hay fever, and most of the cases of uncomplicated astlma must be included in that category, that most cases of eczema not caused by direct irritatin or inflammation of the skin are allergic, that many cases of chronic rhinitis and recurring bronchitis are of a similar nature, that probably most cases of unicous colitis, and some cases of indefinite gastro intestinal symptoms including pain, natisea, and tenderness are due to allergic The suggestion has been made that pylorospasm and gastric and doudenal ulcer may have an allergic origin In the nervous system migraine is commonly caused by allergy Meniere's Disease may be another manifestation of the same condition and there is a probability that certain cases of epilepsy are of a similar nature Certain acute arthritides and some cases of chrome arthritis are probably allergic

If one runs his mind over this list it will be seen that most of them have in the past been clussed as diseases of unknown citology, not amenable to treatment Sufferers therefrom were doomed to lives of pain or discomfort and were of the type that drifted from physician to physician in the vain search for health

The allergist does not claim that he can work nuracles. He cannot cure all chronic incurables, but he certainly can cure certain cases previously considered incurable. The allergist does not ask that every case of bronchitis or abdominal pain be put through a course of skin tests, but he does ask that cases of asthma, eczema, uritcaria and hay fever be given this opportunity of relief, that, where migraine has gone on for years, after eye strain, constipation, and pituitary involvement have been eliminated, that where chromic indigestion has made hie miserable, and medical aid has been unavailing, that where a running nose persists in spite of the best local

medical and surgical care, and that where a child shows signs of beginning epilepsy without evident cause, the family physician offer this patient the chance of relief offered by an appreciation of the possible allergic nature of these diseases, and refer them to the allergist for careful study. If he does this, not all cases will be cured, but if successful results are obtained in even a small percentage of these supposed incurables, his patients will rise up and call him blessed.

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SPEECH DISORDERS AS A MEDICAL PROBLEM* By SMILEY BLANTON, M.D., NEW YORK, N. Y.

31, 1931.

CPEECH is the highest function of the human organism. It includes not only words but the accompanying tones and bodily actions. It is one of the best indicators of whether the nervous system, the brain especially, is developing normally. It shows also injuries of the brain whether caused by trauma or disease, for speech, being the latest and highest function of the nervous system is very unstable and usually is affected by slight injury of the highest cortical cells.

Defects of speech due to organic injuries of the nervous system are seen in myasthenia gravis. where the speech difficulty very often shows itself first in a nasality due to a weakness of the soft palate. The scanning speech defect, in multiple sclerosis, due to a spastic incoordination of the tongue and vocal cords, is well known to all neurologists. In the majority of cases of general paresis we find a well marked speech defect characterized by a tremulousness of the voice and a slurring indistinctness of the speech, caused chiefly by an incoordination of the front part of the tongue, giving rise to distortion of the sounds, and a substitution of one sound for the other. The dysarthrias occur very commonly after brain hemorrhage, and the inability to understand language or to use spoken language, which is seen in the aphasias, needs no discussion here. Rather, I should like to emphasize the fact that in the dysarthrias, and especially in the aphasias, much can be done by careful, conscientious, skillful and persistent treatment.

In motor aphasia is treatment especially effective. It consists in the formation of new speech patterns by having the patient see the word, hear the word, write the word and try to reproduce the word vocally. If there is difficulty in saying the word, the exact posi-

tion of the tongue for the sounds in the word can be given. At first the aphasic should be given only words of one syllable and very common everyday words. Thorndike in his word book has made a list of the most used words in the English language. We select nouns from this list and start practice with these. There are, moreover, some twenty simple words which make use of all of the vocal positions called into action in making the fifty odd -ounds used in the English language. These words are:

yellow	plate
jacks	ĺiouse
tootlı	glove
pig	foot
ring	bird
letter	ball
shoe	white
nose	boy
knife	cap
lieel	mân
watch	

In the aphasic where the intelligence has not been seriously injured and where there is no paralysis of the peripheral speech organs, one can usually develop a large working vocabulary through training over a period of six months to a year. Care must be taken with the aphasic that he not be made tired and it is therefore better to have a practice period only a few minutes long at first with several periods dur-ing the day. Later the period can be lengthened to thirty minutes twice or three times a day.

A very frequent speech defect in children is found in Little's disease. Along with the spastic condition of the legs and the athetoid movements of the hands, there is a real inactivity and incoordination of the speech organs. Such children usually have suffered an injury

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of the basal ganglia which gives rise to incoordinated movements of the hands and legs but in many cases the intelligence has not been seriously affected, sometimes not at all. The speech, however, is very often marked by gross inactivity of the articulatory organs, especially the tongue, giving rise to slurring, indistinct speech which most people interpret as coming from a feebleminded or defective individual.

In the speech clinic at the University of Wisconsin some years ago we saw a boy who was in his junior year at college—he had been transferred from another college—who possessed a very brilliant mind but his speech was so defective that he found himself unable to engage in the social life of the college and as a result he had developed morbid feelings of shame and inferiority. He was twenty-one years of age at the time but two years of careful training so improved the boy's speech that he was able to speak without any serious defect.

Another similar case was that of a high school graduate who had specialized in the installation of electrical apparatus but who was unable to get a position because of his peculiar speech.

A third type of case was that of a boy of twelve who had had a rather severe hemorrhage at birth due to a difficult labor, whose legs were so spastic that he could only get about with difficulty, who still had athetoid movements of the hands, but whose intelligence quotient was 110. He had been placed in the hands of a speech trainer with more energy than insight who used to give the boy vocal training for two to three hours a day. As a result of this training the speech muscles were fatigued and less efficient and the speech became very much worse.

It is obvious, of course, that speech training in such cases must be given in very small doses and suited to the individual. Speech training for short periods was carried on for four years with this boy and at the end of that time his speech approximated the normal.

Another interesting type of speech difficulty was that of a little girl of three who came to the speech clinic ten years ago. At that time she was diagnosed as feeble-minded. She drooled at the mouth, made only a few animal-like sounds, her legs were quite spastic and there were marked athetoid movements of the hands. Observation of the child showed that she had a good deal of intelligence which was concealed from the casual observer by her serious injuries. Muscle training in general was prescribed and very short periods each day were devoted to games in which were some of the simpler speech sounds. The mother was so interested in the child's welfare that she

took a course in phonetics and speech correction and has carried out the training consistently and intelligently for ten years. At the present time the child's speech is almost normal. Her intelligence quotient is 105 and she is in the seventh grade in school. Certainly without speech and muscle training this child would not have been able to have developed her potential intellectual capacities.

We hope these cases show that much can be done, even when there is a serious injury of the nervous system, to bring back normal speech. The physician, however, should carefully supervise the speech training and thus avoid the possibility of over-training.

Perhaps the commonest speech difficulty that the physician meets with is lack of speech. The normal child begins to use words by the time he is 15 to 18 months of age. By the time he is two years of age, he should be using simple sentences, and by the time he is two and a half to three years the child of average intelligence should have a vocabulary of several hundred words and the child of superior intelligence who is developing normally should have a vocabulary of a thousand words or more.

It may be said safely then that the child who does not talk, that is, use at least single words, by the time he is two or two and a half years of age is suffering from a speech defect. The most common cause for children not talking at the right time is amentia, caused by a lack of brain development, the most common cause being defective genes. Occasionally it may be due to minute hemorrhages at birth, giving rise to no paralysis but injuring the higher cortical cells, or to encephalitis which blights the cells that underlie speech and leaves the motor system intact.

These amentia cases are often quite puzzling. The following case will illustrate this:

Patient is a boy four years of age. mother and father are both college graduates. intelligent and healthy. There are two other children besides this boy, a girl twelve and a boy ten, both of superior intelligence. The patient began to use a few simple words when he was 15 to 18 months of age—"mama," "go," "up." At the age of four years he has about 20 words which he uses. He uses only single words and has never put words together in even the simplest sentences. His hearing is normal, his body is perfectly formed, and he has very good coordination in balancing himself, in climbing, but shows some incoordinations when he tries to run. His hand coordinations are quite superior. He can take pegs out of a peg board and put them back in with a fair degree of skill. He does not control his bladder and if he were not taken

to the toilet four or five times a day would soil himself. His attention is very fixed. He will sit and put pegs into a peg board for an hour at a time and not be distracted by other toys or what other children are doing around him. This is a very ominous symptom in children. The normal child of four is much interested in his environment and does not fix his attention on one thing for long at a time. This boy is not interested in anything you say to him nor is he interested in his environment. He pays no attention to pietures, does not know the various colors, nor does he try to name the simple toys with which he plays. Every effort has been made to make him talk. The mother once withheld food from him for a whole day to make him say "juice" or "dinner" but without results. The family feel if the child would only talk that he would be quite normal but the fact is if the child were normal he would talk. He is very definitely feebleminded, probably a high grade imbecile, although the parents have not accepted this faet and are still going from doctor to doctor seeking help.

In this case I am sure that there is a lack of development of the higher cortical cells which underlie the function of speech. It is probable that this child will never be able to use anything but single words and probably his mental age will never be more than that of

a 4 year old child.

Another puzzling type of speech defect oceurs in children who have some intellectual retardation but a retardation in speech far greater than we should expect from the mental retardation alone. Such a ease is that of a boy ten years of age who, judged from his general behavior and from the Pintner-Patterson Performance Test, has an intelligence quotient of 83. He did not talk until the age of four. His speech is slurring and indistinct, he can not do first grade reading work and uses single words, rarely putting two words together.

I think we are justified in a case of this type of hereditary amentia in saying that we have a specialized defect of the speech area. Such children should be given speech training whenever possible for without speech training they will not be able to make use of the intelligence which they have. Good speech in such cases spells the difference between the person who will be economically dependent and socially inadequate and a person who may be taught to do some simple work and who can be trained to adjust himself to group living.

The child who has defective speech because of deafness requires teachers who have specialized in the training of deaf children. maintain that these children who are delayed in their speech because of defective hearing should receive speech training as early as possible. Where the parents can afford it, we urge them to place the child in a school where he can be given speech training daily.

The organic defect which remains after an operation for eleft hard or soft palate should be mentioned. If the soft palate can be used at all, rather fair results can be accomplished for the throat muscles are able to compensate and even a short soft palate with the help of the throat muscles can block off the back of the nose and fairly good speech can be ob-A ease which came to the speech elinie some time ago was that of Margaret, a child ten years of age, who had from birth a defective soft palate which although not cleft was very short. She has average intelligence but she is doing very poor work in school. She has developed a great sensitiveness about her speech defect, she does not like to play with other children, she cries very easily and is developing a quite morbid emotional attitude because of her speech defect. Training for six months has improved her speech materially and has also changed to a certain extent her feeling of inadequacy and inferiority.

There is a type of speech defect which we describe by the term "oral inactivity." This defect is characterized by an indistinctness and slurring of speech such as might be seen in a drunken man or in general paresis, or in the very markedly retarded child. We find such defects, however, in children who have superior intelligence. The defect seems to be due to a eombination of organic and emotional factors. Severe or even mild rickets is sometimes found to be the organic basis of this condition. Severe and prostrating illnesses occurring when the child is between 15 months and two years of age often eause a speech retardation and when the child begins to talk he talks indistinctly. This defect is often ascribed to tongue tie—to a too short frenum. rarely the ease.

We find especially in such eases a history of food finickyness in which the child refuses to a great extent green vegetables and lives on a diet composed very largely of carbohydrates and sweets,-low in vitamine content.

On the emotional side, such defects are often caused from the desire of the child to use a speech of his own and thus dominate his parents and nurses. It is often very hard to determine in such cases whether we are dealing primarily with an organic difficulty or an emotional difficulty. In most eases we have a combination of both.

Letter-sound-substitution is a defect which is characterized by the substitution of one sound for another, the most common type of substitution being "th" for "s". Sometimes the letter-sound-substitution is so extensive that the child's speech is unintelligible. The organic causes back of this defect are high palatal arch or malocclusion of the jaws. But it is very rare indeed to find such cases caused primarily by organic difficulties. These letter-sound-substitution cases are caused primarily by desire of the child to remain an infant or to dominate his parents and nurses.

The treatment for the oral inactivities and letter-sound-substitution is first, mental hygiene, teaching the child to give up his infantile methods of domination and to pass on to a more adult type of speech and conduct. Especially should the child not be given the things that he wants until he makes the effort to say the word clearly and distinctly. Where there is an organic element, the child should be given corrective phonetics. This work should be done with care. Too much insistance on phonetic drill may make the child speech conscious and give rise to stuttering.

Speech mirrors not only the normal development and organic integrity of the nervous system but is the clearest reporter of emotional development and emotional control.

Stuttering is a speech defect which is caused primarily by emotional factors. The child talks first to communicate his feelings and later on his thoughts. The child talks primarily to get attention; secondly he talks in order to express his emotion of love, also of anger and hate. He uses speech, therefore, as a means of adjusting himself to the social group, of asking for their love, and as a means of aggressive attack.

The speech mechanism is especially under the influence of the emotions. Even the subtlest emotions cause a change in the quality of the tone, in the rhythm of speech and in the breathing. To state the matter simply and rather superficially, we should say that stuttering is caused by timidity or anxiety on the part of the child in meeting certain situations. It is true that in certain cases of stuttering there may be a constitutional tendency on the part of the child to have poor speech. Also a tendency towards stuttering may be caused by the fact that the left-handed child is made to use his right hand. The primary factors in stuttering, however, are emotional.

From five to ten per cent of nursery children stutter for a period. Perhaps two or three per cent of them stutter for several months and about one per cent of the general population stutters.

We do not believe that any speech exercises should be used for the young stuttering child. The whole treatment should consist of a modification of the child's environment. Take off pressure, demand less speech response of the child, give him more freedom and remove the sources of anxiety from the child. In the schoolchild from six to twelve years of age relaxation exercises can be used and plays and pageants in which the child is stimulated to speak. We do not believe in the use of vocal exercises or phonetic exercises or breathing exercises in the treatment of stuttering. The treatment should consist primarily in teaching the child to adjust to situations with speech, through games, through plays, through pageants; and through the proper use of mental hygiene, building up in the child a feeling of confidence and security. In the adolescent and adult, a certain amount of psychiatric readjustment can be successfully used and in a very limited number of cases, especially those with marked anxiety states; and cases with mental symptoms approximating those of the obsessional neurotic, psychoanalysis may be used effectively. In this way, by modifying some of the personality tendencies as found in the stutterer, such as marked anxiety, sensitiveness or over-aggressiveness, the speech defect can be eliminated as the other mental processes approach normality.

GENERAL HYPERTHERMIA WITH HEAT LOCALIZATION BY RADIOTHERMY IN THE TREATMENT OF PELVIC INFLAMMATORY DISEASE

By WILLIAM BIERMAN, M.D., and EDWARD A. HOROWITZ, M.D., NEW YORK, N. Y. Read before the section on Obstetries and Gynecology, at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932. From the Gynecological Service and Physical Therapy Department of the Beth Israel Hospital, New York.

EAT has been applied in the treatment of the subacute and chronic stages of pelvic inflammation of the female, for the relief of pain and to hasten the absorption of exudates. For this purpose various procedures have been utilized such as hot sitz baths, hot vaginal douches, diathermy, and more recently the various vaginal hot water bags.

The development of a very high frequency oscillator which produces a general hyperthermia, combined with a new technique for concentrating electrical energy in the region of the pelvis, provided a new method for the application of relatively high temperatures in the treatment of pelvic inflammatory disease.

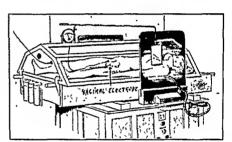
The technique for the systemic elevation of

temperatures in the human subject by means of the high frequency electric field in the radiotherm has been described by Carpenter and The method consists essentially in Page.1 placing the subject between the plates of a large condenser which forms part of an oscillating circuit. The oscillations in this circuit are produced by the use of radio tubes of appropriate construction (500 watt screen grid in push pull) with the necessary associated equipment for the attainment of a high frequency electric field of high intensity. The frequency commonly used for this work is approximately 10 million cycles per second, corresponding to a wave length of 30 meters. The condenser plates between which the subject is placed are large enough (50 x 80 cm.) to produce a field over a reasonable part of the volume of the subject, and are separated from one another by a distance of approximately one meter. The subject rests upon a stretcher between these plates but not in contact with them, and is kept covered during the treatment so as to prevent excessive loss of heat. With a total DC place current, of 0.5 amperes using two UV861 tubes, it is possible to produce an elevation of body temperature of about 70° F. in the course of an hour and one-half.

In order to produce a simultaneous increase of body temperature with a still higher increase in the temperature of the vagina the following method is employed,2 With the subject in place between the condenser plates of the radiotherm, an electrode is placed in the vagina. This electrode is connected, through an ammeter, to a small auxiliary metal plate suspended near one of the large condenser plates of the radiotherm. Under these conditions the electrical field produced in the region between the electrode and the condenser plate opposite to the one near which the auxiliary plate is suspended, is considerably higher than it is at any other part of the body. When the region to be heated is bilateral the pick-up plate is placed first on one side, and then moved to the other. With a pick-up plate of about 300 sq. cm. area, the distance between the pick-up and the condenser plate varies from 10 to 30 cm. The readings on the radiofrequency ammeter usually vary from about one to two amperes. With this technique it has been possible to develop temperatures ranging between 110° to 116° F. as indicated by a mercury thermometer inserted in the vaginal electrode while the temperature in the mouth is registered between 101° and 104° F.

It is possible to maintain a systemic elevation of temperature after it has once been established, by utilizing some device which retards heat loss, such as several layers of blankets, the application of hot water bottles, or a heated hood placed over the patient while lying in bed. Local elevations of temperature in the vagina may be maintained by introducing some other heat creating procedure such as diathermy.

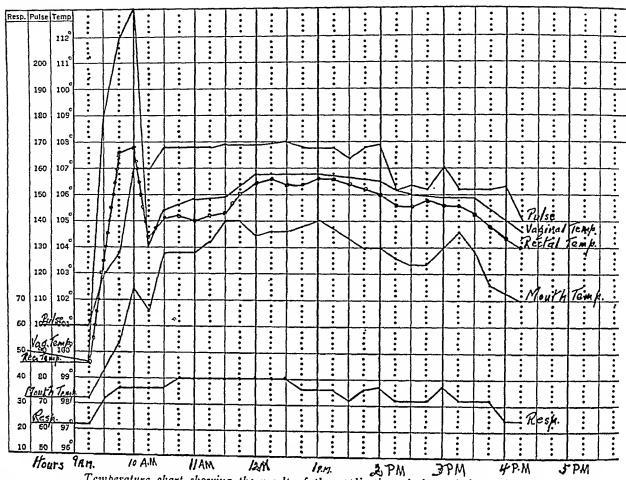
In preparation for the treatment the patient is given an enema in the early morning. Breakfast is limited to fluids. After the patient is placed in the radiotherm she is reassured by a description of the sensations which she will experience. She is carefully covered with towels to absorb the perspiration. The month and rectal temperatures, pulse and respiration rates are observed and recorded every ten or fifteen minutes. About 15 minutes after the current is turned on the patient begins to perspire and states that she feels warm. With the continuation of perspiration the towels may become moist and must then be changed or else there may be an unpleasant sensation due to the arcing of the current. Individuals react differently to the treatment. When the systemic temperatures are elevated to a high level such as 106° to 107° F the patient may develop various complaints such as headache, nausea, shortness of breath, palpitation, thirst, or a



This is a drawing showing the technique of applying general radiothermy with the special localization in the vagina.

sensation of numbness of the hands and feet. The advantage of the special localizing technique which we employ in the treatment of pelvic inflammatory disease is that it is possible to create marked temperature elevations in the region of the vagina with a comparatively mild degree of temperature elevation in the rest of the body. The uncomfortable sensations which the patient experiences are therefore much less than they would be were it necessary to elevate the temperature of the entire body to a higher degree.

Our first radiothermy treatment of a case from the gynecological service at the Beth Israel Hospital was administered on March 23, 1931. The patient had been operated upon by Dr. I. C. Rubin, for a large pelvic abscess



Temperature chart showing the result of the application of the technique of general radiothermy during a short period of time.

Blood Findings Before and After Temperature Elevation

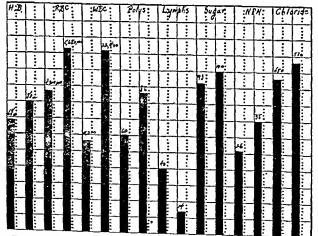


Chart showing the result of the technique of applying general radiothermy with a sustained elevation of systemic temperature over a period of several hours.

due to the streptococcus. Drainage was established by an extra-peritoneal abdominal incision. Thirteen days post-operative there was still a resistance on the left side. Three radiothermy treatments were then given, at intervals of two days, producing a general hyper-

pyrexia with higher elevation of temperation the vagina. On March 30th, a week aft the first treatment, Dr. Rubin found the maentirely gone. The treatment had apparent hastened resolution.

Our first radiothermy treatment of a gond rheal arthritis case was most dramatic. T patient, a married woman of forty-four, had subacute gonorrheal arthritis of two mont duration. The left hand and right foot we especially involved, with marked peri-articul reaction. There was a profuse cervical dicharge containing gonococci, but the pelvorgans were otherwise normal. After fiveeks in the hospital with slight improvemer Dr. A. A. Epstein decided to give this patie artificial fever treatment, using the radiother

Following one treatment with the radi therm, the joint pains completely ceased, the inflammatory reaction subsided, the vagin discharge diminished and the cervical smes became negative for gonococci. The block sedimentation rate, which had been 43 per cerbefore treatment, had dropped to 14 per certhree days later. Two weeks afterward, a fer gonococci were again found in the cervic secretion, but after a short period of lock.

treatment with silver nitrate, they again disappeared A score of examinations during the last year have shown no gonococei, and the joints have remained relatively normal

In addition to the two cases just reported, we have applied radiothermy to thirteen prients with pelvic inflammatory disease. The localizing technique, with the vaginal electrode, was used in every one of these cases. The patients were all hospitalized, and kept in hed during the period of treatment. Treatments were usually given every second day until a total of 4 to 6 treatments had been given. They were stopped during menstruation.

The red blood cell sedimentation rate was of value in guiding us as to the activity of the influimination, and in checking the results of treatment. Some of our blood sedimentation tests are reported in minutes, the rest in percent. The tests reported in minutes were done by one of us, using the Linzennieier technique with which acute influminatory cases give values under 1 hour—the more acute, the shorter the time. The percent results were from the hospital laboratory which uses the Fahreaus-Weisst technique with which influininatory cases give values over 8 percent—the more acute, the higher the percent

We will briefly describe these cases in chro

nological order

CASE No 3 G 11

Admitted May 12, 1931 Patient had been in bed for five weeks with abdominal pain fever and a profuse vaginal discharge. On admission, her temperature was normal Examina tion revealed a purulent urethritis and cervicitis, both positive for gonococei The uterus was anterior, not enlarged A left adnexal mass, fixed and tender, extended toward the cul de sae The right adnexa were tender, no mass was felt The leucocyte count was 16 200 with 82 per cent polys Sedimentation 32 per cent She was given three radiothermy treatments during one week. After the last treatment abdominal pain had almost entirely disappeared, and there was no longer any discharge Cervical smear was negative for gono cocci The left adnexa were smaller, but the right could be felt a little enlarged. After the second succeeding menstrual period gonocoeci were again recovered from the cervix but dis appeared after local treatment. The adnexal masses subsided Symptomatically, she has remained well

CASE No 4 H G

Admitted September 23 1931 Patient had an abortion performed August 10th A fetus and placental tissue came away, but lower

abdominal pain and fever kept her in bed for the six weeks preceding admission. On examination, the interus was anterior, not enlarged, fixed. The both adnexa were enlarged, tender fixed. She was treated four times. On discharge, there was no pain except for an occasional eramp at night, and no discharge Temperature was normal. Bilateral adnexal masses could be felt, slightly tender a little smaller than before. The sedimentation time which had been 56 minutes before treatment was now 90 minutes. This patient has felt well since leaving the hospital.

CAST No 5 L M

Admitted October 13, 1931, with chronic salpingitis and cervicitis. Blood counts and sedimentation rate were normal. Cervical smears were negative for G.C. Patient received four radiothermy treatments starting October 15th following which the vaginal discharge was very much less and the induration on the left side of the pelvis was less marked. She was seen in March, 1932, and found to be well.

Cisr No 6 M V

Admitted October 15, 1931, in her second attack of acute salpingitis Examination re vealed an inflammatory mass behind the uterus, extremely tender reaching to the height of the internal of Cervical smears were negative leucocytes 11 850 with 78 per cent polys. Within three days her temperature be eame normal and five days later, radiothermy treatment was started At this time the patient had constant severe pain in the left lower obdomen Sedimentation time was 19 minutes Twe treatments were given during a period of two weeks, at the end of which time the patient felt well, except for occasional pain in the left lower abdomen Discharge was scant Sedi mentation time 95 minutes Pelvie examina tion showed that the uterus was more mov able and there was only a slight thickening in the cul de sae Six days later the patient had no pain at all and the sedimentation time was 140 minutes

A few months after leaving the hospital she had a recurrence of abdominal pain for which she stayed in bed at home for several weeks. When seen in follow up on April 5th 1932 she still complained of pain. On pelvic examination. Dr. Rubin found the cul de-sac occupied by an irregular semi-cystic mass more marked toward the left side, evidently chronic diseased adnexa.

CASE No 7 B G

Admitted October 2nd 1931, with acute sal pingitis and pelvic peritonitis. She was treated

conservatively for twenty days. After the eighteenth day temperature remained normal, smears were negative for G. C. At this time there was considerable pain in the lower abdomen, more on the left side, but no muscle spasm was present. Sedimentation time was 25 minutes. She was given five radiothermy treatments. After the treatments she felt perfectly well. Examination by Dr. Lorber revealed a somewhat movable uterus and hardly any induration on either side. Sedimentation time, however, was still 33 minutes.

This patient has remained well. She was seen in April, 1932. There was no discharge and no induration.

CASE No. 8, H. B.

Admitted November 23rd, 1931. Patient had an attack of acute gonorrheal salpingitis six weeks before admission. She now complained of persistent abdominal pain, most in the left lower abdomen, and a profuse vaginal discharge. Her temperature was normal, sedimentation 30 minutes. Pelvic examination revealed an induration of the left adnexal area. She was treated six times. After the treatments the lower abdominal pains had disappeared and discharge was no longer noticed. Pelvic examination revealed only a slight resistance on the left side but no tenderness. Sedimentation time was 70 minutes. follow-up.

Case No. 9. G. B.

Admitted November 27th, 1931, with a post abortive pelvic infection of six weeks duration. Temperature was 101 degrees. Pelvic examination by Dr. Rubin on November 30th revealed that the right half of the pelvis was "frozen." The left parametrium was indurated but to a less extent than the right. The uterus was not made out separately or distinctly. Sedimentation was 30%. After five days rest in bed, temperature became normal, and after a day and a half of normal temperature, radiothermy treatments were started, on December 3rd. Six treatments were given. After the last treatment the patient felt and The uterus was movable with looked well. little pain. On either side was a somewhat tender mass. Sedimentation time was 5%. Three weeks later, follow-up examination revealed almost normal pelvic findings. Patient has continued to be well, and pelvic findings May 3, 1932, were normal.

Case No. 10. R. B.

Admitted December 16, 1931, patient had had her right ovary removed the year before. A month later she had a "vaginal abscess" which was incised. For the past year men-

strual periods lasted 12 to 14 days. Patient was admitted with a two days history of right lower abdominal pain with nausea and vomiting. There was evidence of salpingitis with pelvic peritonitis. The leucocyte count was 12,800 with 82% polys. Sedimentation 35%. Cervical and urethral smears were negative for G.C. Patient was treated six times with the radiotherm. On discharge, January 3rd, she felt perfectly well. There was still some induration on the left side. Sedimentation 15%.

Patient was seen April 5, 1932. She then complained of pain in the lower abdomen, not nearly so severe as when she was in the hospital. The pain was worse, especially on the left side, during menstruation, at which time she was obliged to go to bed. Examination revealed some enlargement of the left adnexa.

Case No. 11. B. B.

Admitted January 3, 1932. She had been in bed for eight weeks with lower abdominal pain and backache. Both adnexa were considerably enlarged, prolapsed and indurated. Temperature was normal. Leucocyte count was 11.400 with 77% polys, sedimentation time 20 minutes. Diagnosis, subacute gonorrheal salpingitis. Because of the persistence of the adnexal inflammatory masses, with a rapid sedimentation time, in spite of two months bed rest, it was believed by her attending gynecologist that surgery would probably be necessary. However, it was decided to administer radiothermy treatments in the hope of promoting resolution. She was treated five times with the radiotherm, starting January 4th, 1932. Treatment was stopped because she started to menstruate. On her discharge from the hospital the left adnexa felt smaller, but the right were more than 50% larger and felt semi-cystic. Sedimentation time was 16 minutes. Although the patient felt fairly well, and the temperature remained normal, there was unquestionably a tubo-ovarian abscess developing on the right side. She was re-admitted January 24th, 1932, camplaining of pain on the right side. Pelvic findings were unchanged, sedimentation time 25 minutes. Three more radiothermy treatments were given, during which she complained of vaginal pain and felt nauseated. There was no improvement in the pelvic findings. A week later the right adnexa were definitely larger. Sedimentation time was 56 minutes. At operation February 8th, there was a right tuboovarian abscess the size of a large orange and on the left side a retort-shaped pyosalpinx. There were no adhesions. Both adnexa were removed and drainage instituted. Pathological diagnosis; chronic salpingitis and ovarian abscess. Patient made an uneventful recovery.

CASI No 12 BIATRICT B

Patient had a large tubo-ovarian abscess with daily temperature of 103° Two radio thermy treatments were given which relieved her pain, but the mass was no smaller and the temperature no lower. No further treatments were given. Three weeks later the abscess was drained vaginally and the patient rapidly recovered.

In addition we treated two cases of chronic silpingitis with adherent retroversion of the uteus, (E. II and M. S.) who complained of bickache and vaginal discharge. Temperature leucocyte count and sedimentation rate were normal. The first of these patients received six treatments in December, 1931, and was relieved of her symptoms. Four months later she was still feeling well. The second case had three treatments in March, 1932 which relieved her backache for only a week or two like only change found on examination after treatment of these cases was the disappear ance of pelvic tenderness.

One case (AG) of subsiding salpingo ophortis was treated once, in January, 1932 and was "too nervous to treat further. We do not know how much the radiotheria contributed to her improvement.

CHAICM RESULTS

Five cases of subroute sapingitis and two postabortive pelvic infections improved rapid iv (Cases 3, 4, 6, 7, 8, 9, 10)

Three cases of chronic salpingitis improved (Cases 5, 13 and 14)

A gonorrheal arthritis case was cured after one treatment (Case 2)

In one subacute salpingitis case a tubo

ovarian abscess requiring operation, developed after radiothermy treatment (Case 11).

One large tubo-ovarian abscess was not

much affected by two treatments (Case 12)
One drained abscess resolved rapidly (Case 1)

RISUMT

It is difficult to evaluate the effect of treat ment in pelvic inflammatory disease, because one cannot estimate how long it will take an inflammatory process to subside. These inflammations usually do subside with rest in bed alone. However, it appeared in most of the cases in our series that the period of rest in bed and convalescence was shortened by the radiothermy treatment. In the subacute sal pingitis eases the clinical improvement was in most cases paralleled by a slowing in the rate of blood sedimentation.

The promptness with which the subjective symptom of pain was relieved is alone a good leason for giving this measure a further trial

From the small series that we have had to observe on our service, it would be unfair to draw broad conclusions. After further thor ough trial, we shall be able to select the type of cases, and the technique, which will give the best results with the radiotherm.

We are grateful to Dr I C Rubin, Director of the Gynecological Service at the Beth Israel Hospital of New York for help and advice, and to Doctors Lorber and Rashbaum of the Gynecological Service for permission to study their cases. We also wish to thank Dr W R Whitney, Director of Research Laboratories of the General Electric Company for placing the radiotherm apparatus at our disposal

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Annual Meeting, April 3-5, in the Waldorf-Astoria, New York City.

INSPIRATION OF THE ANNUAL MEETING

The annual meeting of the Medical Society of the State of New York to be held April 3-5, 1933, promises to be of unusual interest and value to every member. The official listing would assign values to the features of the meeting in the following order:-1. Business: 2. Scientific; and 3. Social. But the individual member will unconsciously assign the first

place to the informal social contacts which he makes. He will go home happy and satisfied if he has met his old friends and made a number of new ones.

The meeting rooms in the Waldorf-Astoria, with their abundance of space, and their grouping on one floor, are themselves invitations to sociability. A member has only to

sit on a comfortable lounge and his friends are sure to appear as they stroll among the No one need exhibits and assembly places be lonesome at the meeting Friendly talks with individuals constitute a most valuable forum on the subject of County Society Administration, and an inspiration to practice the ideals set forth in the formal papers that are listed on the program. Come and compare rates with your fellow doctors

ENLARGEMENTS OF THE LIVER AND SPLEEN

This issue of the Journal contains the report of a case which will add to the slowly aceumulating knowledge of an obscure enlargement of the spleen and liver in babies Doctors frequently find the liver of a sick baby surprisingly large during any fever of toxic origin, and upon subsequent examinations find the liver has receded markedly. The liver of a baby is not unlike a clinical thermometer in its expanding with fever and returing to nearly normal as the symptoms are relieved

But there is the mysterious case of an in fant under two years of age who dies from manition after slow emaciation, whose spleen and liver are readily recognized as enlarged, whose lymph glands are generally palpable, and that is about all Our knowledge of this disease grows only through the autopsy findings, and it is important that they be recorded in the hterature

The article which is published on page 203 is a distinct contribution to the existing records of lipoid histocytosis, or lipoid spleno hepatomegaly, or Niemann-Pick's discase, as one may choose to call it While the condition is supposed to ocenr almost entirely in infants of Jewish parentage, this case occurs in pure Italian stock. The necropsy findings in the brain support the observation of other investigators that the ganglion cells of the central nervous system are markedly swollen and vacuolated, presenting an appearance similar to that described in the condition known as amaurotic family idiocy

LOOKING BACKWARD

This Journal Twenty-five Years Ago

Medical Libraries -This Journal of February, 1908 contains the report of a Special Committee on Medical Librarics, which says

"A brief reference to the principal medical libraries and departments in the State of New

York may be in order

"The Library of the New York Academy of Medicine stands at the head. More has been done by that institution to encourage and advance medical libraries in this country than perhaps by all other agencies combined

'Albany is represented by the excellent medical department of the State Library, and this will benefit by the newer quarters now under way The original nucleus of this collection was gathered by the profession of Albany It is the only library of this class dependent on State support
"In Syracuse (Onondaga County) the work is

done through the medical department of the Um versity Library

"At Rochester (Monroe County) the collection of the Academy of Medicine constitutes a department of the Reynolds Library, the latter contribnting one half of its support as well as earing for it Originally the Monroe County Medical Society participated in this work, but is now en tirely divorced from it

"In Tompkins County, Cornell University has

n small medical library at Ithaca
"At Utica (Oneida County), a medical library

has recently been instituted

"In Brooklyn is the Library of the Medical Society of the County of Kings This is the only one of the series barring the collection of the Erie County Medical Society, that is directly affiliated with the State Society, and is the only one which also possesses a home of its own"



MEDICAL PROGRESS



Muscle Strain and Muscle Weakness .-- W. E. Tucker, writing in the Practitioner, December, 1932, cxxix, 774, calls attention to the fact that disabilities caused by a strain to a muscle or the symptoms shown by a muscle too weak to carry out its work are not fully realized. This is well illustrated by a flattening arch, caused by extra strain thrown on the muscles. The pain in these cases is not due to the flattening of the arch, but to the strain placed on the muscles and ligaments. Another instance is postural scoliosis in young children on whom extra strain, such as hard work at school or excessive standing, has been thrown. Medically an overtaxed heart muscle will show itself by cardiac dilatation or failure of compensation. Chronic muscle strain or muscle weakness undoubtedly plays a most important part in some cases of the following conditions: Tennis elbow, rider's nruscle, pain in the inguinal region due to strain of the abdominal obliques, pain along the sciatic nerve due to strain of the hamstrings, knee-strain from wasting of the quadriceps and muscles around the knee-joint following an injury or operation, a slack or weak muscle causing bursitis, sacro-iliac or lumbo-sacral strain and certain cases of occupational palsy. These conditions may be treated on the same principles: (1) Manipulation in those cases in which there is definite limitation of movement and pain produced by adhesons; (2) support to the part while the muscles are becoming strong enough to carry out their work—this is gradually diminished; (3) strengthening of the muscles by surging faradism and remedial exercises. Emphasis is placed on support to the part. Many patients with bursitis had diathermy, ionization and radiant heat for long periods without any results, but as soon as the muscle was supported and surging faradism and exercises ordered, they improved immediately.

A Clinical Type of Paroxysmal Tachycardia of Ventricular Origin in Which Paroxisms Are Induced by Exertion.—Frank N. Wilson, Shelby W. Wishart, A. Garrard Macleod and Paul S. Barker call attention to a type of ventricular tachycardia of ventricular origin in which moderate exertion almost invariably brings on an attack. They report four cases of this kind and review the cases described in the literature. While long attacks lasting several hours or days sometimes occur, a rapid succession of short paroxysms is more usual. In the pauses between these short attacks ventricular extrasystoles occur singly or in salvos of two to five or more. Rest is often followed

by a gradual decrease in the length and frequency of the paroxysms and a return to normal rhythm. This condition is quite different from paroxysmal tachycardia of the ordinary type and may be easily overlooked. There is often no sign of structural heart disease and no disturbance of the cardiac mech-It is only when the anism while at rest. patient is examined after exertion that the real nature of the disorder is discovered. As a rule the disability is greater than that produced by a well compensated valve lesion or by continuous auricular fibrillation without congestive failure. There is little tendency to recover. There is slight evidence to indicate that coronary disease may be the cause of this disorder. Typical anginal pain did not occur in any of the cases reviewed. In the case histories general arteriosclerosis, arterial hypertension, diabetes and luctic infection, which are relatively common in coronary disease, were conspicuously absent. The relation of the attacks to exertion and excitement, the absence of signs of structural heart disease, and the fact that the paroxysms are precipiated in some cases by adrenaline and atropine suggests that the cause of the disorder may lie in the vegetative nervous system rather than in the heart. In one of the authors' cases a long paroxysm of ventricular techycardia was frequently interrupted by short attacks of auricular tachycardia. Quinidine may be regarded as a specific remedy in this type of tachycardia in the same sense as digitalis is so regarded in auricular fibrillation. In some cases small doses of quinidine completely prevent the attacks and enable the patient to return to his customary mode of life.—American Heart Journal, December, 1932, viii, 2.

Observations on the Heart in Old Age. Frederick A. Willius and Harry L. Smith refer to a previous publication in which Willius presented a clinical study of the hearts of 700 aged persons, showing that most aged persons, even in the presence of heart disease, possess hearts of unusual quality. Statistics clearly prove that the greatest mortality from heart disease occurs between the fiftieth and seventieth years of life, and that persons who have survived this period are more likely ultimately to succumb to other diseases, such as carcinoma, pneumonia or nephritis. The present study comprising 381 patients, ranging in age from seventy to ninety-nine years who came to autopsy, confirms the statements made above. Of the 381 patients, 59.4 per cent. were between the ages of seventy and seventy-four years, whereas 15.7 per cent. were eighty years or older. The ratio by sexes was five men to one woman. Varying degrees of coronary sclerosis occurred in all cases but the involvement was moderate to advanced in 72.5 per cent. of them. Likewise, aortic sclerosis was a constant finding, but existed in from moderate to marked degree in 80 per cent. of the cases. Sclerosis of the valves occurred in 92.7 per cent. of the cases. Cardiac disease other than arteriosclerosis, was present in 16.4 per cent. of the cases. The blood pressure readings in 371 cases indicated a tendency to hypertension. The causes of death in this group of patients were diverse, carcinoma leading the list with 93 cases, and pneumonia ranking next with 69 cases. In only 48 cases or 12.6 per cent, of the group was death attributed to Among these, hypertensive heart disease. heart disease was present in 14 cases, cardiac failure consequent to healed cardiac infarction in 11 cases, acute cardiac infarction in 11 cases. coronary sclerosis with angina pectoris in 7, aortic stenosis in 3, and syphilitic aortitis and chrouic adherent pericarditis, each in 1 case. This study and the former paper by Smith do not indicate that there is increase in the weight of the heart in old age, except such as occurs in the presence of disease. Low blood pressures were found infrequently in this group .-American Heart Jaurnal, December, 1932, viii, 2.

Radiographic Résumé of Rickets and Scurvy. -I. Spencer Silverstein, writing in the Archives af Pediatrics, December, 1932, xlix, 12, describes the roentgenographic findings in rickets and scurvy. As these diseases are both nutritional disorders, they present themselves according to the sequence and amount of altered metabolic disturbance. Each may occur separately, or they may occur together. In rickets the more commonly involved bones are those of the skull and thorax and later the long bones. The cranial bones show areas of decreased density with prominence of the frontal and parietal bosses. The head is greater in circumference than that of a healthy child of the same age. The suture lines are widened, and the fontanels are late in closing. All of these findings are seen on the x-ray films. The chest signs are manifested by enlargement of the costochondral junctions, known as beading of the ribs. When this is present on both sides of the sternum, there is produced what is known as the rachitie rosary. The long bones undergo changes of atrophy, absorption, bowing, and occasionally fractures. The epiphyses become saucer-shaped and hollowed out, with a margin of fuzziness and indistinctness. There are very slight periosteal changes. The rountgenographic aspect of seurvy presents a ground glass, ghost-like appearance in the center of the cancellous portion of the long bone. The epiphyseal end is saucer-shaped and hollowed out, but is sharp and chalky in appearance. The earliest evidence of its presence is a white line in the shaft margin of the epiphyseal zone, this line being thinner, denser, and sharper in out-line than in rickets. The scorbutic process frequently has a tendency to spread out into the soft tissues beyond the line of the shaft. If the condition is allowed to continue, a porous zone is formed behind the chalky line, and if the process advances, there may be a fracture at this point, with later a stripping and elevation of the periosteum and hemorrhage under this elevation. Soon fibrous changes take place under the periosteum and then formation of calcareous deposits is seen, irregular in outline and arrangement, and of greater density than bone.

Influenza,-After reviewing the etiology and pathology of influenza, H. Morley Fletcher describes four clinical types of the disease; (1) Simple catarrhal; (2) pneumonie; (3) gastro-intestinal; (4) apyrexial. The last named type is not common and may be difficult to recognize unless it occurs during an epidemic. The general symptoms are those of an ordinary attack of influenza, but there is no fever. The complications and sequels of influenza are numerous and at times serious. From the first onset it should be clearly recognized that the potentialities for ill in influenza are great. During an epidemic it is almost impossible to avoid infection. Delicate persons should avoid public gatherings. Bed-rooms and sittingrooms should be well ventilated, Gargling the throat and washing out the nasal passages have considerable prophylactic value. A 1:4000 solution of potassium permanganate in nor-nial saline is useful for this purpose. Vaccines do not seem to be so effective in preventing an attack as in preventing complications or lessening their severity. Every effort should be made to increase the resistance of the patient by good food, with an adequate supply of vitamins A and D, and plenty of sleep. With the onset of an attack of influenza the patient must be given absolute rest in bed in well-ventilated room. The temperature should be maintained at a constant level of about 62° F. day and night. The bowels should be cleared with calomel followed by a saline. The diet should be mainly milk, with a proprietary food such as ovaltine, bemax, or Benger's food. Water or lemonade may be given freely, with the addition of glucose. In

the early stage of an attack the following mixture generally relieves the pain in the limbs: Quinine sulphate, 1 grain; sodium salicylate. 10 grains; syrup of orange, 30 minims, and chloroform water to make I ounce. This mixture is taken every four hours, and 20 to 30 grains of potassium citrate may be added. The frequent use of a gargle or mouth-wash is indicated. The following prescription is recommended: Potassium chlorate, 8 grains; boracic acid, 5 grains; tincture of myrrh, 10 minims, and water to make I ounce. Phenacetin and acetylsalicylic acid will generally relieve the splitting headache. Hypnotics may be given for the insomnia. For the painful cough inhalations often give relief; a teaspoonful of the following mixture is added to a pint of water at 150° F. and the vapor inhaled: Tincture of benzoin, 60 minims; menthol. 3 grains, and oil of eucalyptus, 3 minims. an expectorant the following prescription gives satisfactory results: Sodium bicarbonate, 15 grains; potassium iodide, 2 to 4 grains; wine of ipecac or tincture of squills, 71/2 minims; syrup of tolu, 30 minims; spirits of chloroform 10 minims, and infusion of senega to make one ounce. For congestion at the bases of the lungs a linseed poultice usually gives relief. A failing heart should receive prompt attention. Great care should be taken during convalescence. — Practitioner, January. 1933, cxxx, 775.

The Treatment of Local Frostbites.—Frostbites, according to Rudolf Campbell, who writes in the Schweizerische medizinische Wochenschrift of December 17, 1932, may be classified as of 3 degrees, according to their gravity: (1) Congelatio erythematosa, (2) congelatio bullosa, and (3) congelatio escharotica. In every third degree frosting, the other 2 degrees are also present, and not until 2 or 3 days have passed is it possible to evaluate a case correctly on the basis of its reaction to treatment. Campbell's experience in high mountain regions has led him to use the following procedure: The patient is brought into a warm room and his trunk wrapped immediately in warm covers with application of all available kinds of external and internal heat, with a view to promoting the best possible circulation for the sake of the frozen peripheral parts. Meantime the frozen members are placed in a cold water bath at 8-16° C., in order that the thawing out may be accomplished gradually, the temperature of the water being regulated by the addition of snow and ice as needed. The patient is urged to perform all the active movements he can with the frozen member. The physician strokes the frozen parts toward the heart with a wet

towel, with care to remove from time to time any ice that may form on the skin. Through freezing of the water upon the surface of the skin the cold necessary for this physical process is withdrawn from the frozen member, and the latter is thawed out quickly, safely, and, as it were, without secondary effects. If the frostbite is on the face, the same result is effected by passing cold compresses over it. Rubbing with soft, dry snow is always useful, but the use of hard frozen snow is to be condemned, since it may inflict wounds that will admit infection with the possibility of fatal results at a later time, inasmuch as a frozen part is singularly defenseless. The operator's own hand must be perfectly clean and should be wrapt in a woolen cloth or glove to prevent its freezing while at work. Immediately after the part is thawed out, antiseptic treatment should be used. The member is placed in elevation, in a freely movable position, in semiflexion, with strict avoidance of any pressure. The patient is again urged to undertake active movements systematically, while supportive and stimulating measures are carried out for the general condition. Where the patient is unconscious, no time should be lost before giving stimulation by enema or infusion. Light massage toward the heart is then given every 2 to 3 hours, with mild skin stimulants such as camphor or camphorated oil. Hot air treatment and the quartz vapor lamp are useful in this stage, with Bier's hyperemia reserved for use first after arterial hyperemia has been established. Later stages in severe cases demand care of the blisters and transudates and of secondary infection which always finds a good culture medium in the lat-Campbell recommends Tschmarke's method of radical removal of the blisters with all epidermal shreds, soaking up of the transudates, and removal of the jellylike masses of serum and fibrin with aseptic precautions, after which the deep necrotic parts without blisters are treated with iodoform, dermatol, or the like, while an ointment of tannin in lanolin is applied to the aseptic parts.

Cellulitis of the Breast and Angina Pectoris.—A case reported by Paul Veil in the Archives des Maladies du Cœur of November, 1932, is highly instructive in that it holds new elements responsible for the production of certain apparently typical attacks of angina pectoris. A woman of 42 had for 2 years been subject to extremely painful cardiac seizures, resulting at length in constant retrosternal pains radiating toward the neck and even the inferior maxilla. The left arm was in a state of perpetual swelling, with its little finger painful, and extrasystoles with syncopations

time afterward pressure on the gallbladder had caused a lancmating pain, and at the mo ment of its syncopations the heart had slowed This made it seem reasonable to think of irradiation of hepatic origin, and of nervous Such a view was supported by bradye irdin the circumstance that introglycerin had no effect and that even a milk diet was ill tolerated On the other hand the angual attacks were of the most typical kind, and the presence of a diphasic T wave in the electrocardio gram seemed decisive for this diagnosis. Light was thrown on the subject when massage of the left arm rapidly reduced its swelling, for the patient now called attention to the fact that her left breast had for some time been larger than the right Upon examination it was found to be filled with a mass that gave the impression of a saturated sponge and was Obviously, in a very painful on pressure state of cellulitis, it yielded to massage in a few sittings. As its regression continued the pains grew less and disappeared, together with the diphasic T wave, the patient was transformed, and her cure has persisted thus refutes the classic view that the presence of a diphasic T wave invariably means an orgame coronary process, and that a diagnosis of true anging pectoris can be made on the sole basis of such an alteration. For here the diphasis was certainly due to nervous influences the point of departure of which was probably at the level of the nerve branches caught within the cellulitie masses of the breast and from which arose the pain localized by a paradoxical play of the neurocardine pianoforte in the same zone as that of true angina Pyretotherapy in Experimental Syphilis, and Its Association with Chemotherapy -Accord ing to Ch Richet fils and J Dublineau, the treponema is extremely sensitive to heat a series of experiments covering 18 months these authors inoculated rabbits with trepone mas that had been subjected to a temperature

increased the agonizing pain, which no medi-

cine could relieve. It so happened that an

attack of paratyphoid 10 years before had been

followed by attacks of migraine, for a certain

Pyretotherapy in Experimental Syphilis, and Its Association with Chemotherapy—According to Ch. Richet fils and J. Dublineau, the treponema is extremely sensitive to heat. In a series of experiments covering 18 months these authors included rabbits with treponemas that had been subjected to a temperature of 41° C in a water bath for 30 to 120 minutes. In a group of 11 animals which received intra-testicular moculations it appeared that the virulence of the micro organisms had been entirely lost no chance nor any primary orchitis developing and the Memicke test proving negative in the 6 animals upon which it was tried after a resistance of more than 24 days. The mobility of the treponemas was attenuated after 30 minutes at 41° C and was practically nil after 80 minutes. On the other hand, of 10 controls 7 developed a typical orchitis with

ultramicroscopic treponemas and positive Memicke In tests to determinate the effect of pyretotherapy upon syphilis already present in rabbits, the authors observed cures in 3 and no cures in 2, where the rabbits were kept in a water bath in such a way that the rectal temperature rose on an average to 415° or 425° C in the course of 15 or 20 minutes When arsenotherapy in infracurative doses (less than 9 ing novarsenobelizol per kilo rabbit) was associated with pyretotherapy, it appeared always to bring about a complete physiologic cure, (4 cases) Although not yet ready to publish in detail their work in human cases, the authors report that in 38 cases of primary or secondary syphilis submitted to this associated therapy, a clinical cure was observed, and in 36 of these a positive Wassermann became negative at the end of the first series of treatment -Bulletin de l'Academie de Medecine, December 27, 1933

Calcium as an Analgesic -The good effects of calcium for the relief of pain in chronic neuralgia neuritis rheumatism and incoercible headache are pointed out by Godfrey Tavares in the Munchener medizinische Wochenschrift of December 9, 1932 The author has been making use of calcium laetate for this purpose during the last 15 years. Apparently the gen eral acceptance by the medical world of cal cium as an analgesic has been hindered by the moderation of its analgesic properties action begins slowly, after a lapse of hours, and is little intense, but is, on the other hand durable and lasting Tavares has brought about complete cures in patients who had had recourse to the whole armamentarium of classie analgesics without obtaining relief. He had the best results from oral administration the soluble salts when thus given everting a more energetic action than under intravenous or intramuscular injection. Since solutions of calcium lactate are very short lived, the best method is to dissolve I 2 gm in a little hot water after each meal and give it to the patient in a glass of cold water. The disagree able taste of calcium lactate does not neces sarily call for correction but in the milder cases it may be covered up by a little lemon juice which facilitates its solution in cold water Sugar may be added or the lactate may be combined with the glyconate of calcium which is nearly tasteless Taveres has always, however had better results from calcium lactate than from other salts of calcium the stomach is sensitive it may also be advisable to use weak solutions as enemas (2 gm in 100 cc water) as the author does in cases of chronic diarrhea but for most cases the oral use is recommended and only after meals



LEGAL



ILLEGAL PRACTICE OF MEDICINE BY A LICENSED PHYSIOTHERAPIST

By LORENZ J. BROSNAN, ESQ. Counsel, Medical Society of the State of New York.

The strict enforcement of the provisions of the Education Law relating to the illegal practice of medicine is of great importance to the welfare of the people of this State. A recent case involving the illegal practice of physiotherapy, decided by our Court of Appeals, is of great interest to the medical profession. A consideration of the facts in the case and the ruling of the Court requires, in the first instance, an examination of the statutes involved.

The practice of medicine is defined in Article 48, Section 1250, subdivision 7 of the Education Law as follows:

"A person practices medicine within the meaning of this article, except as hereinafter stated, who holds himself out as being able to diagnose, treat, operate or prescribe for any human disease, pain, injury, deformity or physical condition, and who shall either offer or undertake, by any means or method, to diagnose, treat, operate or prescribe for any human disease, pain, injury, deformity or physical condition."

The chapter of the law which contains the statute above quoted, also regulates the practice of osteopathy and physiotherapy. The law is definite in providing that an osteopath may not administer drugs or perform surgery with the use of instruments. The law is even more strict as to physiotherapists. They may not "administer drugs or practice medicine . . . except to treat diseases under the supervision of a duly licensed physician." Physiotherapy is defined in Section 1262, subdivision 2 of the Education Law as follows:

"Physio-therapy as used in this article is hereby defined as the use of actinotherapy, hydrotherapy, mecanotherapy, theremotherapy, and electrotherapy, exclusive of the x-ray."

In the case under consideration, criminal charges had been brought against a licensed physiotherapist charging him with illegally practicing medicine. Proof was introduced at the trial to show a violation of the provisions of the Education Law and a failure to comply with a rule of the regents which provides as follows:

"Registered physiotherapist shall keep a written prescription signed by a licensed physician for each patient given physiotherapeutic treatment. The prescription shall state the diagnosis and the type of treatment ordered. Such records shall be open to the inspection of the department of education at all times."

The physiotherapist was convicted and an ap-

peal was taken to the highest Court of the State. In affirming the conviction the Court in its opinion described the practice of physiotherapy as permitted by law to be as follows:

"...it would seem that a patient having consulted a licensed physician of his own choice might after examination and diagnosis be found in need of physiotherapeutic treatment. His physician then writes for him a prescription stating the diagnosis and type of treatment ordered by him and he takes it to a licensed physiotherapist in the same manner as he might take a prescription for drugs to a pharmacist to be filled. The theory that the physiotherapist acts under his own supervising physician does not comport with the practice that the physician examines and prescribes before the physiotherapist sees him."

In the case before the Court the defendant claimed that when he was consulted by the patient whom he undertook to treat, he first went to the telephone unknown to the patient and consulted with a licensed physician with respect to the physical examination which he had just made of the patient. He claimed that he had discussed the findings of the examination with the doctor, and that the doctor had by telephone told him the precise sort of diathermy treatment to administer to the patient. The defendant claimed that after the treatment had been given, the doctor with whom he had had the telephone conversation had come into the defendant's office where he tried to examine the patient, but to this she protested. Apparently, with no further examination than that which had been made by the physiotherapist previously, the doctor proceeded to write out a prescription and a direction card as to her treatment. The defendant claimed that by reason of the said facts he had not rendered the complainant any treatment except "under the supervision of a duly licensed physician," and therefore he claimed that he had not violated the provisions of the law.

The Court, however, answered these contentions with logic and finality, stating:

"Adopting for the purpose of the decision so much of defendant's contention as is consistent with the evidence of the People's witness, who was a police woman attached to the crime prevention bureau and temporarily assigned to the attorney-general's office to get evidence against illegal practitioners of medicine, we think that a case of practice of medicine by defendant was made out; that defendant treated the witness for rheu-

matism, or at least for her complaint, on his own diagnosis and not under the supervision of a duly licensed physician and on his written prescription

"Defendant's office and office equipment and his conduct had all the indicia of a doctor's office and a doctor's treatment. When the People's witness cilled at defendant's office she met the defendant To her question if he was Dr. M. he replied that he was, he asked her what was the trouble and she told him she had been suffering with great pains in her hands, he took her family history and made an intimate personal examination of her, he tested her reflexes and looked into her throat, palpated her abdomen, took a specimen of her urine for examination and examined it and told her he found a trace of albumin took her blood pressure and was about to take a blood test but under her objection he desisted. He then had her place her hands under an electric lamp known as a thermolite

"After about half an hour of this treatment in came Dr A, who was a heensed physician wanted and tried unsuccessfully to examine the patient and he wrote a prescription. She refused his services She said, 'Who are you? I didn't send for you' She then pud defendant \$5 and got out of his office Asked by defendant's eounsel if she was not sore because Dr A had 'spoiled her game,' she said that her game was completed before he came. To account for the presence of Dr A we must take as true the evidence that he was summoned to defendant a office by or for the defendant. It might be assumed also that he in structed the defendant over the telephone what to do until he arrived, and it is not contended that such practice is unusual. The trouble is, however, that such practice has no sanction whatever in the law, which defines what a heensed physio therapist may do. To say that the statute contemplated that such a one may make a complete exammation of a patient, take his history, report the results to a heensed physician of his own selection over the telephone, act on his verbal instructions until the physician arrives, then have him go through the motions of handing the patient, who triples him, a prescription without any independent examination on his part, is to open the door so wide to exasion as to leave the statute a mere futility. All this procedure may be quite harmless but it is not permitted by the law.

"If on the People's evidence in this case the triers of fact could not find that defendant held lumself out as being able to diagnose and treat diseases, it is difficult to see wherein the statute affords any protection to those who may be attracted to the office of a physiotherapist by his advertisements in connection with rheumatism and like diseases, and into the hands of one who, without adequate medical training, essays to exanime them for human ills, say what treatment they need and administer it to them, without any prior supervision of a duly beensed physician and without a written prescription stating the type of treatment ordered. When such conduct is a fraud or a pretense, as it appears to have been in this case, the courts are not so blind and dumb as to be taken in by it It is no defense that the defendant acted in good faith or did what was eustomary The only question is whether he violated the statute Of this there seems to be no doubt "

The decision is unquestionably a right and just one. The attempted defense was a subterfuge and was given the shrift it deserved by the Court of Appeals.

BURN FOLLOWING USE OF CAUTERY KNIFE

In this case a doctor who specialized in surgery was consulted by a middle-aged woman complaining of an enlarged abdomen. The doctor examined her and diagnosed her condition to be a uterine tumor. He undertook to operate on her with respect to the condition, and in the operation made use of a radio cautery knife.

Before the doctor entered the operating room to proceed with the operation, one of the nurses prepared the patient for the use of the said apparatus, placing a wire mesh under the back of the patient just before the anesthetic was given to her The doctor then opened the patient's abdomen, separated the tumor from the walls of the uterus and closed the patient's abdomen. The operation was uneventful and the patient was returned to her room

After she came out of the ether, it was discovered that the patient had a burn on her back. The doctor examined her and found a third-degree burn about three inches in diameter, at

about the region where the mesh attached to the radio cautery machine had been applied to the patient's brek. The doctor dressed the burn regularly and it healed rapidly, and when the patient was ready to leave the hospital and recovered from her abdominal condition the burn was practically healed.

The patient instituted an action against the doctor charging that he had improperly placed an electric heating pad beneath her at the time of the operation and had thereby caused her to suffer a severe burn, which burn caused her to be disabled for a period of about four months. The action was brought on before a judge and jury, and at the close of all the testimony a motion was made on behalf of the defendant to dismiss the complaint on the ground that the plaintiff had not established a cause of action against the doctor. The said motion was granted by the judge, there by terminating the action in favor of the defendant doctor.

ALLEGED NEGLIGENCE IN PLASTIC SURGERY

A girl about seventeen years of age consulted a doctor whose practice includes a great deal of plastic surgery. She gave the doctor a history of having suffered from some severe burns on her face, which she had sustained about seven years before. His examination showed extensive burns on both sides of plaintiff's face including both lips, and a scarring and contraction of her upper left eyelid which prevented her from completely closing her left eye. She also suffered from a defect in breathing because of the deformity resulting from her severe burns.

The doctor told the patient that a series of operations might improve the conditions which he found, and at the request of the patient and her parents the doctor undertook to perform said operations. The treatment which he rendered to the patient extended over a period of about a year and a half and included nine separate operations which, briefly, may be summarized as fol-lows: First Operation: Scar tissue was excised from the right side of the face and skin was advanced to cover the defect. The left side of the face was repaired by rotation of skin from the neck. Second Operation: Skin was dissected from the neck, pulled up to cover raw areas and sutured in place. Third Operation: The tissues of the fact bilaterally were readjusted. Fourth Operation: The scar was excised from the left eyelid to relieve ectropion, and the defect was covered by tissue from the right upper eyelid. Fifth Operation: Hypertrophied scars of the face were treated by insertion of silk sutures under the scars to promote lymphatic drainage. Sixth Operation: Scar tisue was removed from the left side of the nose, and adhesions were excised between the left upper and lower eyelids. Seventh Operation: Face and neck were further repaired and a skin graft applied to the left upper lip. Eighth Operation: A further attempt was made to correct the condition of the left eyelids, transplanting certain skin. After each of said eight operations the patient progressed satisfactorily and the ninth operation was undertaken for the purpose of correcting the ectropion of the upper left eyelid. Said operation consisted of releasing of scars and inserting a Thiersch's graft on a mold, which mold was held in place by paraffin sutures. Before surgical intervention the eyelids were closed with sutures during this operation.

The patient's post-operative condition after the ninth operation was normal until the third day, when the plaintiff complained to the nurse in charge of her case of a severe pain in her left eye. One of the assistants of the surgeon in charge of the case was notified, and he removed

the dressing and sutures and found a discharge from the left eye. He called into consultation the hospital eye surgeon and the diagnosis was made of an infection of the cornea. Atropine and argyrol were administered to the eye. The surgeon who had performed the series of operations was called in and examined her, and he concurred in the manner of treating the condition and turned the case over to the attention of the director of the eye service at the hospital.

While the case was under the care of the said physician, a sloughing of the cornea developed and the ocular conjunctiva became swollen due to the infection. The vision at this time was considerably impaired. The upper and lower lids were edematous and congested, and the eyeball was covered with a serofibrinous secretion. The cornea was covered with a fibrous exudate which was adherent to the superficial area of the cornea.

The patient received very careful attention at the hospital with respect to the infection. From time to time sloughing areas were removed from the region as necessary, and about eight weeks after the ninth plastic operation the patient was discharged from the hospital. At the time of her discharge from the hospital the infection had disappeared and the eye condition had considerably improved.

Suit was brought against the surgeon in which it was claimed that the last operation performed by him and two of the earlier operations were negligently performed, so that as a result thereof plaintiff was caused to completely lose the sight of her left eye. The further charge was made in the complaint that in addition to being totally blind in the left eye, the plaintiff's right eye was affected and it was claimed that plaintiff would eventually lose the sight of said eye. In the plaintiff's bill of particulars the specific charge was made that during the last operation performed by the defendant, he negligently struck and injured the epithelium of the cornea. The case was brought on for trial before a Supreme Court Judge sitting without a jury, and at the close of the entire case the court held that the plaintiff had failed to show that the defendant in his treatment of the case had failed to follow proper practice and, therefore, directed a verdict in favor of the defendant. A notice of appeal was thereupon served on behalf of the plaintiff, but after several months had elapsed, the plaintiff having taken no steps to prosecute said appeal, an application was made to the Appellate Division to dismiss the appeal and said application was granted. thereby finally terminating the matter in favor of the defendant doctor.



NEWS NOTES



THE ANNUAL MEETING, APRIL 3-5, 1933

The plans for the Annual Meeting of the Medical Society of the State of New York, at the Waldorf-Astoria, New York City, on April third, fourth and fifth, are taking shape rapidly. What promises to be an unusual meeting is being arranged

On Mondry, April third, throughout the City, there will be operative and clinical demonstrations by the outstanding men of New York Dr. Peter Irving, who has this matter in hand, should be communicated with by those desiring to take

part in the Chinical Day

Fire Scientific Exhibit, in the limits of Dr Frederic E Sondern promises to be of an unnique exhibition. The fine cooperation of the men in New York is appreciated by the officers

The handling of the affairs of the State Society at the meeting of the House of Delegates needs no comment. This year weighty problems confront the profession, and reports, which will soon he published, will give an idea as to the scope and the multiplicity of the problems which will press upon the Delegates for solution

Dr Arthur J Bedell, of Albany, announces an unusual scientific program at both the general meetings and the section meetings. There will really be three general meetings. There will be one on Tuesday afternoon, April fourth at which scientific problems confronting both the medical and the dental profession will be threshed out. On Wednesday afternoon April fifth there will be a general meeting at which problems conjointly concerning surgical and medical aspects will be discussed. In addition to this there will be an

open forum meeting on Wednesday evening April fifth at wluch it is hoped the President of the American Medical Association will be present

The public will be told what they should know concerning such pressing problems as cancer diabetes, rheimatism gotter heart discase appendicutes and tuberculosis. These topics will be discussed by such authorities as Ewing, Joslin, Crile Herrick, William Haggard and Linisly R Williams. Of course this is a tentative program,

subject to change

There will be a Banquet held on Tuesday evening, April fourth, and no one who has the time free should fail to come. Outstanding national figures will talk on the pressing problems confronting our profession. Tickets will be sold in the order in which they are applied for Those asking for tickets will be seated in the sequence of their requests for them. It is expected that there will be many who will put off getting their tickets to the last minute, their names will not be listed as among the guests, nor will they get an assigned seat unless the request for the ticket is in the hands of the Committee before the Saturday preceding the meeting. Of course, tickets will be available at the meeting but those getting these last minute tickets must not feel aggrieved because they are seated at unlisted tables. Following the dinner there will be dancing for which no extra charge will be made

During the meeting, it is proposed to hold an educational program on preventive phases of medicine for the public. This will be broadcast

Samufi J Kopetzky, Chairman Committee on Arrangements

COMMITTEE ON PUBLIC RELATIONS

MEETING OF JANUARY 16, 1933

The Committee on Public Relations met on January 16 1933, at 1 30 PM at the Fort Schuyler Club in Utica There were present Drs Sadlier, Fisher, Hambrook, Mitchell, Cinningham, and Ross, also, Dr Lawrence, Dr J D Olii County, Dr Thomas H Gounty, and Dr S Lawrence and Lewis Counties There was no representative of Madison or Herkimer Counties

Industrial Health Talks—Dr Farrell reported for Oneida County regarding the Third Annual Series of Industrial Health Talks sponsored jointly by the Oneida County Medical Society, the

Utrca Dental Society, and the Industrial Relations Department of the Y M C A This health educational program ran from December 7th, 1931, through to March 10th, 1932 (Journal, Oct 1, 1932, page 1139)

Health information and guidance were brought to nearly three thousand men and women employees of the several industrial concerns where the talks were given Thirty-four noon-day health lectures were given by twenty physicians and dentists. This comprised the speaking personnel under the leadership of the Public Relations Committee

The Director of the Industrial Relations De-

partment of the Y.M.C.A. who comes into close and intimate contact with the employers and employees of these mills, declares the project has been eminently successful from the standpoint of results, although the total attendance at the thirty-four talks has sagged somewhat, due to the employment situation.

The lectures were presented by fifteen physicians and five dentists of the respective societies, each of whom devoted twenty-five minutes of volunteer service at each of the thirty-four sessions. Subjects covered in the Third Annual Series were "Heart Strain in Industry," "Visual Efficiency," "Coughs and Colds," "Wounds and Bruises," "Contagious Diseases," and "Care of the Teeth."

Dr. Farrell further said that this work entails a tremendous amount of detail which no busy doctor could do. It is essential, therefore, to hook up with some lay organization who will make contacts, and arrange dates.

Nurses' Organizations—Dr. Farrell reported regarding the organizing of nurses of the county into a group in which the physician would sit. Dr. Hambrook stated that in Rensselaer County and in Greene County they have the nurses organized under a county health committee. Dr. Cunningham stated that the same was true in Warren County. Dr. Sadlier stated that the same was in operation in Dutchess County. The purpose of this organization which includes all nurses outside of private nurses was to give nurses a medical viewpoint. Dr. Ross was asked regarding the organization in Suffolk and he said that there is excellent cooperation of the nurses with the physicians.

Dr. Fisher said that the close professional contact with the nursing associations in Oncida County was a valuable asset. The Social Agencies Association in Oncida County is made up of fifty health and welfare agencies.

Allied Professions—Dr. J. D. Olin, representing Jefferson County, reported regarding a series of talks before the Medical Society by representatives of the allied professions, such as dentists, pharmacists and nurses. The County Society had instituted health talks by physicians before other groups, including lay groups, such as the Grange, 4-H Clubs, and industrial groups. He said that it was hard to get physicians to do this in Jefferson County outside of the City of Watertown.

County Health Department—Dr. Olin stated that the Public Health Committee has a mandate from the County Society to advocate the organization of a county health department, but that a few members have balked the desire of the County Society. He stated that the Board of Supervisors was reluctant to support a health department this year.

County Nurses—The employment of county health nurses was abolished this year in Jefferson

County on the plea of economy. There is one public health nurse in Watertown and two in the county at large. Although the Public Health Committee of the County Society and other organizations protested, it had no effect. In some other counties of the state no appropriations have been made this year for county public health nurses. This is an unfortunate situation. It was suggested that the Journal publish an editorial on this subject.

The Family Doctor-Dr. Olin said: "The general practitioner must be recognized as the keystone in the arch of the foundation of medical The general practitioner is suffering from the high degree of specialization prevailing, and the people are often the emergency patients of a number of specialists, rather than the clients of general practitioners as they should be. There should be a readjustment of monetary awards for medical services so that a general practitioner might be raised from the position of an emergency man to that of director of the physical well-being of his client-a man who will make frequent appraisals of the condition of his client and obtain for him from time to time or in emergency such special advice and treatment as his case requires. Medicine will never serve the public properly if its practice is based upon the competition of specialists."

Choice of Medical Students—There was a general discussion of the selection of medical students. Medical schools are giving a great deal of attention to this subject. Medical students are selected for three things—first, intellect; second, character; and third, personality.

Dr. Sadlier said that he knew of a physician just now giving up a good and satisfactory practice in order to become a specialist and that he had tried and could not get any young man to go to the village where that successful practitioner had lived a number of years.

Dr. Hambrook observed that the need in medicine was to get the general practitioner back to his personal and intimate contact with the family.

Dr. Mitchell said that try as we may, it is not always possible to choose the best young man to practice medicine. Medical education has greatly advanced and we have no way of advancing education to the same degree in social and economic relationships. The social and economic status of the family is the important factor in medical care. Dr. Mitchell said that pre-medical training is a sort of screening process in the selection of the students of medicine. mittee on Admissions screens out a few more, and then the training in medical schools screens out a few more, and then finally the State drops off a few more. Dr. Mitchell said that he believed that humanity is better protected than ever in the history of mankind.

Health Survey-Dr. Sayer representing St.

Lawrence and Lewis Counties reported that the County Societies' Committees on Public Relations had worked on a survey of the county health, and the problem of tuberculosis among school children, and that no active work had been done other than that in some places a ray examinations of graduating classes would be done. The program of the Committees on Public Relations and Public Health had been submitted to the County Medical Society for apprival. In several coin

ties in his State health district he noted a new interest of physicians in their County Medical Societies

Speaking for Lewis County, Dr Sayer said that the nursing service had been abolished this year and that difficulties in the administration of the Lewis County state-aided hospital were being "ironed out" There is good cooperation with health officials in St Lawrence and Lewis Counties, but no cancer work was done

COMMITTEE ON PUBLIC RELATIONS

MEETING OF JANUARY 17, 1933

The Committee on Public Relations met in Syracuse at the Hotel Syracuse at 9 30 A M on January 17th 1933 There were present Drs Sadlier, Hambrook, Fisher, Cunningham, Mitchell, Johnson, and Ross, also, Dr Joseph S I awrence

Free Distribution of Cod Liver Oil—There was a long discussion regarding the free distribution of cod liver oil and the reaction of doctors to its distribution by health nurses, Red Cross nurses, or lay groups There was general approval of the free distribution of cod liver oil to children and adults when it had been prescribed by the physician in each individual case, but there was not approval of the promiseious distribution of cod liver oil by school physicians, by nurses, or by lay agents unless it was needed as a supplement to diet. This matter was brought up by Dr Iarrell. At the conclusion of the long discussion the opinion of the Committee on Public Relations was as follows.

"The free distribution of cod liver oil along with other food stuffs has given rise to some comment. This substance, so frequently thought of is medicine should be available and distributed if there is need of it in the diet. These are not normal times and liberal diets with wide choice of food stuffs cannot be made available for thou sands of our people. If for any reison the food supply must be restricted every effort should be made to have the amount and variety such as to avoid any immediate or future detriment to health. This responsibility rests with those in charge of food and distribution."

A communication was received from the Executive Committee of the State Society regarding a letter sent from the office of the Medical Society of the State of New York to the Governor with a copy to the Governor Elect, regarding the Governor's reference of the report of the subcommittee on medical problems to the Academy of Medicine, and called his attention to the fact that the Medical Society of the State of New York is the representative body of the medical

profession of the state and, therefore, the logical body to make recommendations and suggestions from a professional standpoint on problems that have to do with the medical aspects and adminstration of the Workmen's Compensation Act, with assurance that the Medical Society of the State of New York is willing and eager at all times to place its services at the Governor's disposal for the benefit of the State of New York This letter received the hearty approval of the Committee (Journal, February 1, 1933, page 169)

Climics in Factories—There was a long discus sion of the reference of a resolution received from the Council of the State Society regarding the matter of clinics in factories conducted by factory inspectors or others. It was decided to seek the advice of the officers of the State Medical Society before taking definite action.

The afternoon session was attended by all the members of the Committee on Public Relations and in addition Drs Larkin, Mitchell, Getman Groat Farmer, Flaherty, and Wynkoop of Syracuse Dr Lester of Seneca Falls and Dr Burns of Oswego

Dr Grint commented upon a readjustment of the expenses of the welfare department of Syracuse as an economy measure and stated that there had been no loss in efficiency, since an adult can be fed efficiently from \$1.10 to \$1.20 per week. The organized profession of medicine and the hospital dietitruis had been in great assistance in the administration of welfare relief in Syracuse.

Dr Turmer President of the County Society of Onondaga stated that his first object was to zet a strong Committee on Public Relations for the County Medical Society—men who had contacts with County Society problems and who would study the administration of the Public Welfare Law

Dr Farmer had a mild criticism of the SCAA in its apparently sponsoring a series of health institutes in the county. This should have been under authority of the County Society which

is ready to do this work, and he thought that this was a violation of the agreement with the S.C.A.A. in 1927.

Venereal Disease Control—There was some discussion and some criticism of the venereal disease program of the state. Dr. Sadlier of Dutchess County commended the work and said that a representative had activated the seventeen health officers in Dutchess County, particularly the eight health officers in the rural part of the county. It was brought out that there are forty-five venereal disease clinics in the State, most of them being in cities. The venereal disease clinic has been in operation in Poughkeepsie for fifteen years.

It was thought that no lay organization should undertake to lead in an institute on health when the County Medical Society could do it better.

Seneca County—Dr. F. W. Lester of Seneca Falls reported on the activities in his county. He said that they did not have any trouble with the S.C.A.A. He said that out of 4,968 days of treatment in the Seneca Falls Hospital, 1,098 days were paid for by private patients and the balance, 3,870 days, were paid for by public welfare or compensation. The County has a good Welfare commissioner who cooperates well with the

County Medical Society, and the County Society has a satisfactory cooperative relationship to the Board of Supervisors. All but two doctors in the county were members of the County Society.

Dr. Lester said that the health work in the county cost 25c per capita; that the County Society had studied the situation regarding a health department, modeling the plan on the plan of Cortland County and had concluded that \$18,000 would be a sufficient budget. The Society had not been able to establish a county health department because the seventeen health officers in the county had not been active in their support of the proposition.

Oswego Said that doctors of Oswego County will take up the study of the Welfare Law with the welfare officials. Formerly the City of Oswego had four doctors for the poor; now all the doctors are being paid for their work. The cost of welfare administration had increased in the city, and it was again proposed to have one doctor for the poor. The profession is now trying to settle the matter so as to have the physicians of the city do the work. He said that the hospitals are charging different rates. They should charge the per capita cost of \$4.50 per day.

LEGISLATIVE BULLETIN NUMBER 3

January 27, 1933.

No hearings have been announced as yet, nor has any action been taken on bills we are following.

NEW BILLS INTRODUCED

Senate Int. No. 365—Fearon; Assembly Int. No. 500—D. M. Stephens, to amend the Civil Practice Act by striking out provision if party to be examined in action to recover damages for personal injuries shall be a female, she shall be entitled to have examination before physician of her own sex. Referred to the Codes Committee.

Senate Int. No. 378—Cilano, to amend Chapter 798, Laws of 1931, relative to emergency relief administration to permit home relief for veterans and hospital care. Referred to the Finance Committee.

Senate Int. No. 426—Twomey, to amend the Education Law relative to sale of poisonous or habit-forming drugs or chemicals. Referred to the Education Committee. This bill includes barbituric acid with the habit-forming drugs.

Senate Int. No. 433—Crawford, to amend the Penal Law, providing hospitals supported at public expense shall not charge any fee for medical, dental or pharmaceutical services while operating clinic to which public is invited. Refererd to the Codes Committee.

Senate Int. No. 434—Evans, adds a new section to the General Municipal Law, for establishing a bureau in local public welfare or similar board, for supervising treatment of indigent ill. Referred to the Cities Committee.

Assembly Int. No. 395—Dickey, adds a new article to the Public Health Law, relative to habit-forming drugs, all acts inconsistent therewith being repealed. Referred to the Health Committee. Mr. Dickey has introduced the model drug bill that has been approved by the A.M.A. and sent to all states with the suggestion that it be substituted for whatever habit-forming drug law the state may have. We shall have copies of this bill available for any person who wishes to look it over, and we hope that we may have abundant advice regarding the action we should take. It is a very elaborate bill and should be studied carefully.

Committee of Legislation.

To County Society Legislative Chairmen:

Enclosed you will find the following bills:

Assembly Int. No. 328, by Mr. Close. This may not be of interest to many physicians, but it will have an informational value and it is primarily for that reason that we are sending it out. You will see that it provides that witnesses appearing before coroners or medical examiners

shall he paid the same as witnesses before any court. If it is of any interest to you, please give us your advice

Assembly Int No 329—Mr Cohen wishes to have a special study made of the Workmen's

Compensation Law

Assembly Int No 331-Mr Hayes includes

with the veterans, nurses who were attached to the regular Army as persons to have special consideration when seeking employment

Assembly Int No 342—Mr Messer's bill sumphfying the wording regarding those who should receive rehef under the Welfare Law

COMMITTEE ON LEGISLATION

LEGISLATIVE BULLETIN NUMBER 4

February 3, 1933

Action on Bills—Senate Int No 142—Berg, Assembly Int No 354—Rice, to permit restoration by regents of a license to practice medicine to a person pardoned after conviction of a felony, for insconduct in his professional capacity, has been reported out by the Education Committee in the Senate. You will recall our asking you in Bulletin No 2 for your reaction to this bill. If you are convinced it is a bad bill, it is important that you get in touch with your Senators at once and also register your opposition with the Assembly Education Committee, of which Mr. Rice is chairman

Hearings—February 7th—Assembly Int No 362—Bartholomew, permitting supervisors of a county not wholly in a city to terminate by two-thirds vote, all child welfare allowances in which ease the child welfare board shall be deemed abolished. Hearing before Assembly Judiciary Committee at 2 00 P. M.

Thus far the antivivisectionists, much to our surprise, have not asked for a hearing on either of the dog bills. The Assembly Codes Committee has announced its hearing calendar filled for the next

three weeks

New Bills—Senate Int No 456—Berg, to amend the Workmen's Compensation Law by providing compensation for any and all disabling diseases and disabling illnesses Referred to the Labor Committee

Senate Int No 487—Esquirol, Assembly Int No 705—Austin to amend the Public Health Law by providing Department rules and regulations shall be published at least once a week for two consecutive weeks, instead of six as at present Referred to the Health Committee The law at present demands that all rules and regulations relating to public water supplies shall be published in the local newspapers once a week for six weeks. This amendment is in the interest of economy and limits the number of times for publication to once a week for two weeks.

Senate Int No 604—Slater, Assembly Int No 780—Robinson, an amendment to the Criminal Code, providing that persons convicted of a violation of subdivision 4 of section 887, Code of Criminal Procedure, and found to be infected with

a venereal disease, shall receive medical treatment while imprisoned, and probation shall be granted only upon such terms and conditions as shall insure medical treatment of such disease and prevent the spread thereof. The law at present applies only to persons convicted in a city, the amendment deletes the words "in a city." Referred to Codes Committee

Senate Int No 622—Quinn, Assembly Int No 785—Robinson, to amend the Code of Criminal Procedure in relation to the inquiry into the insanity or mental condition of a defendant before or during the trial or before sentence. Referred to the Codes Committee. At present the law provides that a defendant may plead insanity, but the amendment, in addition to permitting this, would also give the court the right to interrupt a trial or delay pronouncement of sentence until after the examination of person, if the court is of the opunion there is a reasonable ground for believing that the defendant is insane. It provides for the appointment of a commission for the examining of the defendant.

Senate Int No 623—Quinn, Assembly Int No 784-Robinson, adds new section to the Mental Hygiene Law for certification of qualified psychiatrists by a board of examiners in Mental Hygiene Department Referred to the Health Committee This bill provides for the creation of a board of psychiatrie examiners composed of three persons, namely, the Commissioner of Mental Hygiene, the Commissioner of Correction and the head of the Department of Psychiatry of a medical college in New York State The board shall make its own rules and regulations and grant certificates to qual ified persons who must be physicians duly licensed to practice in New York State, with five years' experience in actual practice, and have had three years' full-time practice in an institution for mental defectives or have devoted five years to a practice confined wholly to the care of persons suffering from nervous and mental diseases

Senate Int No 624—Quinn, Assembly Int No 781—Robinson, to amend the Criminal Code relative to proceedings when a person in confinement appears to be insune or a mental defective Referred to the Codes Committee The amendment provides that if a person held in confinement appears

to be insane or a mental defective, the committing officer may commit such person to the care of a nearby state hospital or, in New York City, to the Department of Hospitals, for examination-and it found to be insane or mentally defective, treated in the same manner as if not held for a crime; if found to be of sound mind, to be returned to the original committing court. When a defendant charged with commission of a felony appears to the court of record to be insane, the court may, in its discretion, require an examination or observation of the defendant for a reasonable period; and if there is reasonable ground to believe the defendant is of unsound mind, he shall be examined by two physicians who shall have had a least five years' experience in actual practice and at least one of whom shall be a qualified psychiatrist, as provided by law. The report of the examination shall be submitted to the District Attorney or, if thought necessary, to a jury. The expenses of the medical examiners called as witnesses shall be paid by the county treasurer or by the comptroller of the City of New York, as the case may be, provided, however, the fees and expenses of the medical examiners shall not exceed in the aggregate the sum of \$200.00 each, unless there be a jury trial to determine the mental condition of the defendant, in which event there may be an additional allowance not to exceed \$50.00 per day for each day in actual attendance of the doctor as a witness.

Assembly Int. No. 692—Horn, to amend the County Law by providing no person not residing in Rockland County for at least three years, shall be admitted as a patient to Summit Park Sanatorium at Pomona. Referred to the Internal Affairs

Committee. Mr. Horn sponsored this bill last year.

Assembly Int. No. 772—Doyle, adds a new section to the Penal Law, regulating sale and manufacture of bichloride of mercury and compounds thereof and to prevent accidental poisoning. Referred to the Codes Committee. Mr. Doyle sponsored this bill last year and it was passed by the Assembly, but was not reported by the Senate Codes Committee. The Legislative Committee approved the bill last year; as a matter of record, it assisted Mr. Doyle in preparing the bill.

* * * * *

You have received from the Committee on Medical Research two pamphlets relating to antivivisection. More of these pamphlets are available and the Committee would be very pleased to have you give them to prominent lay persons. Such educational activity is very effective. Twice in the last week, Mr. Bernhardt has mentioned that he has been told by clergymen that this bill is bad. He now seems disinclined to urge further consideration of it and communications from prominent lay persons seem to have had greatest influence in bringing him to this decision.

We wish to correct a statement made in Bulletin No. 1 that Assembly bill Int. No. 102—Breen, is a duplication of the bill carried by Mr. Wallace last year, referring to the mistreatment of animals We were wrong; Mr. Wallace's bill was enacted into law. Mr. Breen's bill specifies a definite season in which it will be lawful to train dogs or hold field trials for game-hunting dogs. The point we want especially to emphasize is that this bill has no relation whatever to the antivivisection bills.

COMMITTEE ON LEGISLATION.

INTERNATIONAL GOITER CONFERENCE

The American Association for the Study of Goiter has arranged for a large representative American Delegation to go to the International Goiter Conference at Berne, Switzerland, August 10, 11 and 12th, 1933.

The Committee in charge of the trip has secured the low basic rate of \$215.55 for the round trip voyage from New York to Havre and return on the steamship *President Roosevelt*, with the privilege of returning on another vessel of the same line on the payment of an adjustment for the accommodations. The sailing date from New York is July 26th, and the ship should arrive in Havre on August 3rd, thus allowing a week of travel before the opening of the conference on August tenth.

A special feature of the going voyage will be a most attractive and educational round-table goiter discussion program. There will be daily sessions, each one of which will be conducted by some outstanding man.

A cordial invitation to join the delegation on the trip and participate in the sessions is extended to members of the medical societies of the States and Canadian Provinces. Proof of Society standing should accompany the formal requests for enrollment.

Applications for registration may be made to Dr. Martin B. Tinker, 404 Savings Bank Building, Ithaca, N. Y., who is the Geographic Delegate for the States of New York, Pennsylvania, Maryland and Virginia.

WASHINGTON COUNTY

The annual meeting of the Medical Society of the County of Washington was held at Hudson Falls, October 4, 1932, beginning at 4 p.m. and with 23 members present, as follows

Drs. Leonard, Borrowman, Vickers, Cuthbert, Samuel Pashley, Samuel J Pashley, Summer, Macarthur, Tillotson, Park, Ring, Davies, Casey, Bennett, Falkenbury, Heath, Prescott, Orton, Gillett, LaGrange, Holmes, and White

Visitors Dr James II Donnelly, Troy, Dr J W Stevens, Glens Palls, Dr Richard Kovacs, New York, Dr Carl Boettiger, New York, and G II IImey, DDS

The Treasurer reported \$115.26 in the treasury The following officers for 1933 were elected

President-Dr D E Macarthur

Vice President-Dr Roy E Borrowman

Secretary—Dr S J Brinker Treasurer—Dr C A Prescott

Censors—Drs S J Pashley, Jr, John Ring,

and C E Holmes
Chairman, Legislative Committee—Dr W A

Leonard

Chairman, Public Relations and Public Health Committee—Dr M A Rogers

Delegate to State Society-Dr D M Vickers

A motion was carried that our delegate be instructed to favor the passing of a law prohibiting the sale of fireworks on the fourth of July Dr Bennett presented the following resolution which was adopted "That this Society condemns medical radio advertising, and requests the State Society to follow up the matter in the American Medical Association, with the view of radically curtailing the vicious features of incidical propaganda"

Dr. Richard Kovaes read his paper on "Recent Developments in Physiotherapy," illustrated by lantern shdes The Doctor understands his subject and the paper was well received, and discussed

Dr John Ring read a paper on "Congenital Heart Disease," giving signs and symptoms for diagnosis and prognosis, of the different types

Adjourned for dinner

8 pm Dr Vickers, the President, gave as his address the prognosis and treatment of "Rup tured Gastric Ulcer" He gave the results of twenty cases at the Mary McClellen Hospital

Dr Carl Boettiger of New York gave his paper, "The Diabetic Patient and His Care" The methods used at the St Johns Hospital in Long Island City and the Mary Immaculate Hospital, Iamiica were described

Dr Boettiger and Dr Kovacs were given a vote of thanks

Meeting adjourned

S J BANKER, Secretary

ONEIDA COUNTY

An excellent account of the annual meeting of the Oneida County Medical Society, held on January 17, 1933, was printed in the *Utica Daily Press* of January 18 The following is an abstract of the report

"The meeting of the Oncida County Medical Society at Hotel Utica Tucsday afternoon demonstrated that the standing committees have been very active the past year. There were 45 doctors present who discussed the reports thoroughly and acted on most of them.

"Officers clected were President, Dr B P Allen Oriskany, vice-president, Dr L E Powers Ronie, secretary, Dr William Hale, Jr, treasurer, Dr H D MacFarland, librarian, Dr T Wood Clarke, censors, Dr W B Roemer, Dr B L Rockwell Oriskany Falls, Dr M D Graham, Dr E M Griffith, Chadwicks, Dr F M Miller, Jr, delegates to the House of Delegates, Dr G M Fisher, alternate, Dr Charles D Quinn, Dr Richard H Hutchings, alternate, Dr Dan Mellon, Rome

"Dr E M Griffith, the retiring president, spoke of doctors taking more interest in official

positions IIc cited the fact that Utica within a decade or two had doctors as mayors and they served well Doctors must fight vicious legislation at Albany each year. In the matter of health regulation doctors can wield a decided influence with their representatives. Doctors are in closer touch with the people and know their suffering and wants. The Legislature will heed the united action of the medical fraternity.

"Dr G M Fisher presented the report of the committee on costs of medical care. In it he says 'The medical profession asks for its practitioners freedom of opportunity to develop to the limit of their individual capacities. It asks a career of independence under conditions of free and dignified competition. It asks remuneration sufficient for reasonable comfort for the individual and for lus family. Medicine has a right to control its own affairs. Its history of capacity and altruism justifies this claim."

"Dr Halsey J Ball reported for the public health commuttee

"The report of the legislative committee was presented Dr Charles D Quinn offered this

which was adopted: 'That we repudiate the compensation practice of today; that we have a special legislative meeting in one month to decide on some plan whereby patient can decide whom he wishes to have treat him and to what hospital he wishes to go, with a governing board consisting of members from each hospital to decide on any

infraction made in the fee by the process of milking the insurance companies; and that the present contract method be abolished thus preserving the ancient policy of maintaining a close relationship between physician and patient.'

"Dr. T. H. Farrell reported for the committee

on public relations."

DUTCHESS-PUTNAM

The annual meeting of the Dutchess-Putnam Medical Society was held Wednesday, January 11, 1933, at the Hudson River State Hospital, Poughkeepsie, N. Y. The meeting was called to order by the President, Dr. William A. Krieger, at 8:50 p.m. Fifty-five members were present.

The following officers were elected for 1933:

President—Dr. Samuel E. Appel, Dover Plains. Vice-President—Dr. A. W. Thomson, Poughkeepsie.

Secretary-Treasurer-Dr. H. P. Carpenter,

Pouglikeepsie.

Associate-Secretary—Dr. E. Gordon Mac-Kenzie, Millbrook.

Delegate to State Society-Dr. C. Knight Deyo,

Poughkeepsie, 1933, 1934, 1935.

Alternate Delegate—Dr. Samuel E. Appel, Dover Plains, 1933, 1934, 1935.

Censors—Drs. A. L. Peckham, Scott Lord Smith, and C. V. Keating.

Counselor—Judge G. V. L. Spratt.

A questionnaire was read by Dr. A. W. Thomson, concerning sickness insurance and industrial medicine. Copies were ordered mimeographed and sent to each member.

The following report of the Cancer Committee was given by the Chairman, Dr. Helen L. Palliser.

"The Cancer Committee of the Dutchess-Putnam Medical Society submits the following report in regard to the educational activities which were undertaken after the appointment of the committee in April, 1932.

"In accordance with the plan submitted to this Society by your committee in June an intensive educational campaign was carried on during September and October and the early part of Novem-

ber. During the campaign a total of forty-four addresses were given, twenty-one in Dutchess county and twenty-three in the City of Pough-keepsie. The audiences numbered approximately 4,300. About six thousand pieces of literature were distributed, the literature being supplied by the American Society for Control of Cancer.

"Twelve local physicians participated in the campaign, and addresses were also made by Dr. John M. Swan, Executive Secretary of the New York State Committee for the Control of Cancer, and Dr. Burton J. Simpson, Chairman of the Committee. The Committee wishes to express its appreciation to all these physicians for their cooperation.

"We also desire to acknowledge our indebtedness to the Dutchess County Health Association and to the Poughkeepsie Committee on Tuberculosis and Public Health for their assistance and active co-operation in arranging the meetings throughout the county and city. Without this cooperation the campaign would have been a very

arduous as well as expensive task.

"Plans for the future were discussed and it was decided to complete the campaign by having addresses given during May in those districts throughout the county in which no addresses have yet been given on cancer. Tentative plans were also made to extend the campaign into Putnam County during the next fall.

"It is also recommended that a Committee be appointed in each hospital in the county in order to keep the cancer problem before our local physicians."

HELEN L. PALLISER, M.D., Chairman-JOSIAH COBURN, M.D. JAMES E. SADLIER, M.D.

KINGS COUNTY

The program of the monthly meeting of the Medical Society of the County of Kings, held on December 20, 1932, was as follows:

Address: "The Oldest Medical School in America," David Riesman, M.D., Philadelphia.

Address: "Tumors of the Thorax," George J. Heuer, M.D., New York City.

Presentation of a portrait of Dr. Ralph H. Pomeroy by Dr. Eliot Bishop. Unveiling by Wm. Sidney Smith. Acceptance for Society by Dr. E. P. Maynard, Jr.

The Bulletin of the Society says:

"Director of Activities—With December ends the first year of the experiment of establishing a

staff position, Director of Medical Activities, for the purpose of coordinating the possibilities of eooperative effort. At no time has the complexity of the problems confronting the community of which organized medicine is an integral and important part, been so great, the facilities to work with been so limited, the finances been so restricted.

"During this year, the County Society has maintained contact with the other neighboring counties of Long Island and the greater city, with the State Society officers and committee work, with the official departments of city and state, with the agencies engaged in health and welfare work-and with the public through radio, lecture and in-

formation service. "Cancer, diphtheria, child health, tuberculosis, venereal disease, diabetes, health centers, budgets, welfare relief, unemployment, nursing service,

medical care and other subjects have been considered.

"This involved, on the part of the Director of Medical Activities, more than 1,500 personal interviews with laymen and doctors in the Society office; over 3,000 telephone conversations; attendance at meetings requiring 500 day-time hours away from the building and an unmeasured amount of work in the preparation of material and correspondence."

The Endowment-The Board of Trustees announce the receipt of five thousand dollars from the estate of Dr. John Osborn Polak. In accordance with his wish and specific bequest, this sum has been placed in the General Endowment Fund in which he was so deeply interested, and which

he did so much to establish.

This bequest is the first large amount to be added to a fund, which, though new, must eventually become the most helpful and the most important of all our Society trust funds. Polak's generosity and confidence in the broader aspects of the work of our Society will help to make this possible.

The program of the meeting of the Medical Society of the County of Kings of January 17, 1933, was as follows:

hospital and dispensary problems, provision of

Inaugural Address: "Medicine-An Economic

Survey," John J. Masterson, M.D., Brooklyn. Address: "The Importance of Establishing a Conditioned Reflex (Pregnancy-Syphilis) in the Minds of the Medical Profession." Edward L. Keyes, M.D., New York City. Discussion by George W. Kosmak, M.D., New York City.

Presentation of a portrait of Dr. John O. Polak by Dr. Frank L. Babbott, Jr., and Dr. George Gray Ward. Unveiling by Dr. Alfred C. Beck. Acceptance for Society by Dr. Edwin P. Maynard, Jr.

The Inaugural Address of Dr. John J. Masterson, the President, dealt principally with methods leading to a solution of the economic problems facing the medical profession. "I believe that the sine qua non for the solution of many of our problems will be found in an efficient administrative body, backed by a united profession. I have no objection to the organization of any group outside our rank. But I am also of the opinion that in organized medicine, as exemplified in the County Society, we have the strongest body at our command to work out our local problems. I believe the five county societies should replace our coordinating committee with a permanent Medical Council, or Medical Business Bureau, call it what you may, having a full-time working personnel, and headed by a high class Medical Prime Minister, as it were, who would also devote his entire time to the Bureau. Let this be the body to whom

our city-wide problems may be referred for definite action after we have carefully studied a question and made our recommendations."

The Bulletin says:

Medical Relief .- The provision of medical relief through city departments and unofficial agencies has begun to operate. Physicians are being called upon to render medical relief and asked to realize that the original plan worked out a year ago was based upon the principle of treating illness at home where that would be more satisfactory than hospital care. Obviously the sick member of a family receiving relief in the form of food, rent, clothing and the like, needing medical care for serious long-term illness, such as pneumonia, contagious disease and the like, requires hospitalization.

Examination of High School Students.—The Co-ordinating Committee of the Five County Medical Societies has discussed the proposed plan for the examination of high school students unable to pay the private physician. The Committee on Public Health has also been studying this subject. It is expected that a uniform plan may be worked out through the Co-ordinating Committee whereby each county society will undertake to supervise and provide the examination of those high school students who are unable to obtain the required examination from a private physician. In this connection the practitioner of medicine is urged to examine all students in his private office and fill out the form provided for this purpose and give it to the student for presentation to the high school.

MONROE COUNTY

The annual meeting of the Monroe County Medical Society was held on December 20, 1932. The following officers were elected to serve during 1933:

President-Dr. J. P. Henry. Vice-President—Dr. Sol J. Appelbaum. Treasurer-Dr. John J. Rooney. Secretary—Dr. William A. MacVay.

The following appointments were made:

Committee Chairmen Public Health-Dr. E. G. Whipple. Legislative—Dr. L. F. Simpson. Post-Graduate Instruction—Dr. S. S. Bullen. Speakers—Dr. B. J. Duffy. Public Relations-Dr. A. G. Morris. Periodic Examination—Dr. S. J. Appelbaum. Nutrition—Dr. C. B. Gibbs. Membership-Dr. E. H. Burnes.

Sub-Committee Chairmen

Tuberculosis—Dr. J. J. Lloyd. Cancer-Dr. J. M. Swan. Child Welfare—Dr. John Aikman. Nervous and Mental-Dr. G. Kirby Collier. Health Education—Dr. W. A. Sawyer. Heart-Dr. R. B. Crain. Social Hygiene—Dr. F. J. Garlick. Communicable Disease—Dr. G. S. Price. Maternity Protection—Dr. L. E. McCaffrey.

The January News Bulletin of the Society contains the following extract from Annual Report of the chairman of the Public Health Committee:

"The Committee has established cooperative re-

lationships with the Rochester Health Bureau, the Tuberculosis and Health Association, the Public Health Nursing Association and the Rochester Dental Society; is represented in the Council of Social Agencies; and has been in conference with Hospital Superintendents, Town and Village Health Officers, and representatives of the State Department of Health.

"It has sponsored a diphtheria immunization program for preschool age children in the County area outside of Rochester, and has conducted educational activities to safeguard child health against threatened epidemics of measles, scarlet fever,

poliomyelitis and smallpox.

"Through the Heart Committee, a second survey of 100 High School students found in the Health Bureau Medical Inspection to have possible heart disease was made. A systematic follow-up of cardiac cases was recommended. The use of Type Classification in cardiac diagnosis including recording of Etiological, Anatomical, Psysiological and Functional Findings was recommended.

"Since the radio broadcasting program was initiated in May, 1930, 135 different physicians and 22 dentists have given talks. It has been necessary to mimeograph more than 48,000 copies of these talks to meet the demands of the radio audience and others interested. There has been a newspaper follow-up in the Monday morning Democrat and Chronicle of every one of the 120 broadcasts. At the present time there are more than 200 copies of the broadcast loose-leaf covers in physicians' offices and dentists' waiting rooms, and they are in constant use in the public libraries, the medical school, public schools, and the offices of health and welfare agencies."

SUFFOLK COUNTY

The first regular meeting of the Suffolk County Medical Society since quarterly meetings were authorized, was held in Roe's Hotel, Patchogue, on Thursday, January 26, 1933. Forty members assembled for a noon lunch, after which routine business was transacted, and the scientific program was carried out.

Dr. Louis F. Garben of Islip, who had been elected Vice-President, was advanced to the presidency, owing to the death of the Presidentelect, Dr. J. H. Marshall, last November.

Dr. Morley B. Lewis, Sag Harbor, was elected

Vice-President.

There was a lengthy discussion on the economics of the practice of medicine in Suffolk County, with tentative suggestions that the Society might form a credit or collection agency; but no action was taken.

The scientific program consisted of two papers on the reports of two national committees that are receiving wide attention by both the medical pro-

fession and the people.

Dr. William H. Ross, of Brentwood, read a paper on the report of the Committee on the Cost of Medical Care, dwelling especially on the manner in which economic and social conditions in a village or town affect the practice of medicine in that community. Doctors are already familiar with many phases of community action in medical practice, such as the care of the indigent and the control of contagious diseases. It will be to the interest of physicians to make an impartial study of the findings and recommendations of the Committee on the Cost of Medical Care, and to criticize them constructively rather than destructively.

Dr. Frank Overton of Patchogue gave a

twenty-minute informal address on the Report of the Committee on Medical Education, talking from an outline which was shown in a series of forty lantern slides. Dr. Overton discussed the points of view of five medical surveys of interest to every doctor in Suffolk County.

1. The report of the New York State Health Commission, which discussed the political aspects of the practice of medical administration, especially that by departments of health. It offered county health departments as a great step forward.

2 The report of the Committee on the Costs of Medical Care, which dealt with the economics of medical practice, and suggested group action as a solution of the economic problems in medical practice—the group to consist of

actice—the group to consist of

(a) Physicians in hospitals as medical centers (b) Guilds or insurance groups by the people

3 The report of the Commission on Medical Education, which dealt with the psychological and scientific phases of medical care, and emphasized the education of family physicians as an essential basis in the delivery of adequate medical care to the people. The report further suggested that each group of doctors study the needs of its own community, and devise additional methods to meet those needs.

4 The report given at the annual staff meeting of the Southside Hospital in Bryshore. This hospital is essentially a medical center for the 40 000 inhabitants of the southwest corner of Suffolk County and the forty doctors who practice there. The chiefs of each of its several departments outlined the needs of the community in that department of medical practice, and made suggestions for sipplying those needs. The reports constituted an excellent survey of medical practice in a semi-rural community, whose people are rated generally as fairly well to do

5 A survey of medical practice in Suffolk County to be made by the physicians themselves Each physician is the family doctor to a group of from 100 to 300 families and can give information regarding each one as regards the economic, social, and intelligence standing of its members, their need of medical service, and their acceptance of it, their needs of service beyond that received.

and their patronage of cults and quacks

The physicians were asked their reaction to such a survey of their own practice. While no formal action was taken, the sentiment of the doc tors was favorable to the plan. It was understood that an outline of procedure for making the proposed survey should be devised and submitted to the Society at its ownterly meeting in April

EDWIN P. KOLB, Secretary

MEDICAL ECONOMICS A CENTURY AGO

Group insurance for medical care existed one hundred years ago, as is shown by an agreement found by Dr Wickham F Case of Center Moriches, Suffolk County, among the papers of his grandfather, D W Case of Patchogue, who was one of its signers

"The undersigned heads of families and residents of Patchogue and its vicinity desirous of having a phisician resident amongst us whose character as a man claims our respect and in whose professional skill we have confidence and being well acquainted with Dr Wm S Preston and believing him worthy our confidence as a phisician and respect as a citizen do hereby contract with said Win S Preston to officiate as our family phisician for the term of two years from the seventh day of June one thousand eight hundred and forty, for which service we do each of us prom ise to pay annually for two years as above written in four equal quarterly payments to said Wm S Preston the sums set opposite our respective names in witness whereof we have hereunto set our hands this sixteenth day of May one thousand eight hundred and fort;"

This paper was signed by 39 householders, who subscribed \$557 annually Dr Preston practiced medicine in Patchogue for sixty years until his death in 1897, aged 87 years

Some thirty or more years previously a similar paper had been circulated in Patchogue, in which a number of householders had subscribed \$200 annually as a gift to Dr Nathaniel Miller of Brookhaven, in order to keep him from moving away to a more promising field of practice, but no one seems to have acted as collector, and the only person who paid up was the village innkeeper, who always paid his subscription of five dollars

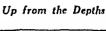
Dr Miller had received his original license to practice from the Suffolk County Medical Society in 1807 This license was reproduced in this Journal of Tebruary 1, 1931, page 164



THE DAILY PRESS



Mr. and Mrs.-











From the New York Herald Tribune, January 30, 1933.

VITAMINS

Man is monarch of all creation by virtue of conquest. He takes by force that which lower creatures produce, and gives them little credit for their work. This bit of philosophy may have

been in the mind of James J. Montague when he wrote the following verses in the section "More Truth Than Poetry" of the New York Herald Tribune of January 20th:

Essay on Man

The codfish lives his lifetime through Providing food for me and you; He's caught and dried And boiled and fried Our breakfast board to victual; And though his liver, lungs and fins Are simply filled with vitamins Which buck and brace The human race,

They help him very little.

Tomatoes, underneath their skins, Supply no end of vitamins, Which they convert From garden dirt To furnish forth man's uses. And if he rose before the dawn
And labored till the sun was gone,
He could not count
The vast amount
The spinach plant produces.

It seems to be great nature's plan
To make existence soft for man,
And yet he'll whine
When bright suns shine,
And wish that it was raining.
Although with all good things supplied,
The fellow's never satisfied;
The whole world's his,
And yet he is
Eternally complaining.

SURVEYS

The medical profession, like all other groups of persons, is subjected to all sorts of surveys. Doctors will agree with the following editorial in the New York *Times* of January 22:

"Today half of the world would seem to be engaged in surveying. People go about it in truly monarchic fashion. They dispose of mighty issues and huge rows of figures with a sweeping Louis XIV gesture. But there the comparison stops. Surveyors behave like monarchs, but they are not treated like monarchs. Instead of there

being nobody their right to dispute, there are plenty of critics. Half the world is engaged in surveying and the other half is engaged in challenging the surveyors.

"And what does it lead to? It leads to more surveying. This last week has seen the beginning of at least one attempt to survey a survey; and other demands for the right to survey said survey are pouring in. If these surveyors in the second dimension should happen to disagree with the first surveyors, then it is plain what will follow. The

friends of the original survey will demand a thorough survey of the second survey. But in that case the thing will never end, it will go on ad infinitum, you say Oh, no It will end all right,

and quite soon It will end as soon as the public gets tired of the whole business, and there are signs that the public is getting tired at the rate of ten million horsepower a day"

245

THE FAMILY DOCTOR

The New York Herald Tribine of January 7 used the inaugural address of Dr. Bernard Sachs as President of the New York Academy of Medicine to make the following plea for the family doctor

"Dr Sachs deplored the general practitioner's development in recent years of something like an inferiority complex and said. The general medical diagnostician, the man with broad vision, with calm judgment, with the human touch—the family physician—with the full appreciation of the needs of the individual under the present strain of social and economic stress, is sorely needed."

'Changes in medical practice,' says the Lowell report on nicdical education, 'lave not and can not modify the essential unit of medical service and training, which is the patient. And the in changing patient is a sick, and therefore unduly sensitive, human being who is not only under in spection, as a watch or a boiler might be, but who

has the doctor under as close and critical examination as the doctor has him. What the head of a family wants of a doctor is a thoroughly trustworthy friend who will take the members of the family under his unremitting care when they need it, and not an expert inspector who will refer each of their ailments to a different high priced stranger for impersonal treatment

"Forty per cent of the graduates of medical col leges now become specialists and half of these have no experience in general medical practice. The reason for this, as the Lowell report points out, is that specialization is easier and more profitable. Such views as Dr. Sichs has expressed have the support of all the leading medical organizations in the country, but it is the laity that has to convince the family doctor that these are its sentiments if the propaganda for impersonal medical care is to be silenced and if the best men are to be attracted to general practice."

LIFE IN METEORITES

The New York Herald I ribine of February 2 discusses life in meteorites and fossils in the following editorial

"Professor C B Lipman's announcement of living bacteria believed to have been found in side meteorites which reached the earth from outer space would be of extraordinary importance for theories of evolution and of life's origin could it be accepted unqualifiedly. There are, however, grave reasons for skepticism For some five years Professor Lipman has been testing rocks and other materials for supposedly ancient germs in side them These have been found he believes, in ancient sedimentary rocks, in anthracite coal at least 200,000,000 years old and in crude petroleum from the wells To this list now are added the meteorites The case would be stronger were it less perfect-had similar materials been tested with equal thoroughness and found not to harbor living organisms. The very ubiquity of these finds makes one suspect that the germs are slipping in somehow through a chink in the methods

of sterilization So far as we know, only one group of Professor Lipman's tests has been repeated by another expert These were the tests on coal, from which repetition Professor Homer G Turner, of Pennsylvania State College, found no proof of any germs except common living species which may have entered the coal through tiny cracks

"This is something which might have happened to all of the specimens, even the meteorites. Certain bacteria are known to possess tiny life forms, so small as to be quite invisible. All rocks and similar materials are somewhat permeable to water. There is every reason to imagine them also permeable to the timer varieties of life germs. Only a meteorite found immediately after its fall, wrapped in some sterile germ proof covering and then sibmitted successfully to Professor. Lip man's tests could be considered really strong evidence. Life germs are so widespread in the air, the clouds, the soil and every where that even this would scarcely be conclusive."



BOOK REVIEWS



CHILD CARE TODAY. By BÉLA SCHICK, M.D. and WILLIAM ROSENSON, M.D. 12mo of 320 pages. New York, Greenberg: Publisher, [c. 1932]. Cloth, \$2.50.

The strongest impression made on this reviewer by Dr. Schick's book is the standardization of modern life.

In all essential particulars, the reviewer or any other pediatrist whom he knows, might have written much as Dr. Schick has except for the words he chose; but the words, and the ideas expressed by them regarding physical care and mental management, are well chosen.

Any criticisms therefore would be on trifling matters rather than the important items. Certain materials, it seems to this reviewer, were included because of the writers' enthusiasm for them, for instance, who would recommend to any mother, except by direct personal advice, a butter-flour formula; and of course Dr. Schick's intimacy with the charming and capable Pirquet almost demanded the inclusion of the "nem" though the reviewer thinks it of no small value to a mother.

The book can be recommended as another good guide W.D.L.

for mothers.

NURSES ON HORSEBACK. By ERNEST Poole. Octavo of 168 pages, illustrated. New York, The Macmillan Company, 1932. Cloth, \$1.50.

The organization and work of the Frontier Nursing Service in isolated regions of the mountains of Kentucky have been told by Ernest Poole in his book, "Nurses on Horseback," written after a visit to that region. He tells of the adventurous spirit and the willingness to suffer hardship of these pioneer nurses, and of their courage and indomitable will, believing no matter how difficult hopeless even—a situation may appear there is a way out of it.

The individual trips taken with members of the staff in fording swollen rivers, "over winding mountain trails, up rock creek beds to the gaps and down steep treacherous paths," and carrying injured and sick patients on horse or mule back for treatment, are beyond the everyday aspect of the average layman and nurse and are so far removed they seem like life on another plane.

Seven years ago the organization of the Frontier Nursing Service was started by Mary Breckenridge with two nurse-midwives working from one center. The author tells of the rapid growth during these years with twentyeight nurses now in the field and three supervisors working from eight centers and covering nearly eight hundred square miles. Mrs. Breckenridge said "nearly eight thousand people, most of them women and children, are in our care, and we serve about fifteen thousand in all in various ways from time to time," and this is accomplished by the "nurses on horseback." "Only the ablest women carefully trained are adequate" for the service and the nurse is tried for six months in Kentucky and if acceptable sent for midwifery training.

The author tells of the work done by the nurses during the "Great Drought" and the famine; of the continual fight against hookworm, tuberculosis and typhoid. There are many pictures showing the stoicism, endurance and faith of the mountain women in the face of suffering and privation that no woman should be called upon to endure, and showing a heritage and strength of character not met with in the experience of many nurses.

"Nurses on Horseback" is picturesque, dramatic and fascinating; should be read by all nurses and would prove a thrilling tale to doctors and social workers.

GERTRUDE R. SMITH.

THE HEART RATE. By ERNST P. BOAS, M.D., and ERNST F. GOLDSCHMIDT, Ph.D. Octavo of 166 pages, illustrated. Springfield, Ill., Charles C. Thomas, 1932. Cloth, \$3.50.

In 1928, E. P. Boas designed an instrument, the cardiotachometer, with which to record the heart beats continuously during periods of work, sleep, rest and play. This monograph presents the deductions of himself and co-author, E. F. Goldschmidt, based on a study of 356 patients of the Montehore and Mt. Sinai Hos-

Considering that the very first watch with a second hand was not made until 1665, it is not surprising that the pulse rate per minute was not determined for many years. Sir John Floyer in 1707 had a special watch made for his studies, but not until the early 1800's was much clinical data reported on. The Chinese had established the normal pulse—respiration rate of 4-1 to 5-1, but pulse rates in relation to disease were not cited in medical writings before the ease reports of Graves, Louis of Paris, Allan Burns, Nick, Bruillaud, and Stokes in the period of 1808-1854.

Such a book as this is necessarily filled with tables and charts, but also there is spread on its 166 pages much interesting clinical data. As the pulse rate could be determined at any time and under any and all conditions, the text, chapter by chapter, records the heart rate during sleep, during activities of the day, during

anesthesia and operations, and in disease.

In a brief review, these various pulse rates cannot be quoted in toto, but we should know that the basal pulse rate was determined as 61 for men and 69 for women, thus substantiating the findings of Sutliff and Holt in The basal rate was determined at rest, in the early morning before breakfast.

Fatigue, nervous tension, anxiety, and emotions all tended to increase the pulse rate, even in subsequent sleep, although sleep, as such, was found to lower the rate. Restlessness and loud noises, even a thunder storm, elevated the rate during sleep, thus constituting an argument for quiet sleeping quarters. In day naps, the rate did not drop as during night sleep.

In women the pulse rate is at its lowest level during The highest rates in men and women menstruation. were observed during sexual orgasm. These observa-tions, like many others in the volume, have a practical value to clinicians. FRANK BETHEL CROSS.

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION. Vol. 23, 1931. Edited by Mrs. MAUD H. MELLISH-WILSON and RICHARD M. HEWITT, M.D. Octavo of 1,231 pages, illustrated. Philadelphia, W. B. Saunders Company, 1932. Cloth, \$13.00.

Of these, 99 Papers written in 1931 numbered 577. are reprinted in full, 36 are abridged, 43 are abstracted, and of 399 only the titles are given. As stated in the Foreword, the aim in selecting the material for this volume has been, as in previous years, to produce a work which would be useful to the general practitioner, diagnostician, and general surgeon. For this reason, many papers, important in themselves, but mainly of interest to specialists in some branch of medicine, surgery or pure science, have been included only by abstract or

by title.

The papers are classified under gross anatomical divisions, with a chapter devoted to Technic and to Miscellaneous Subjects. There is a complete bibliographic index and an index of subjects. Such a volume includes a wide range of discussions with the most recent of

opinions on the subjects considered. It represents the Progress of Medicine, not only from the viewpoint of the workers at the Mayo Clinic, but from that of medicine in general. This volume will astonish the easual reader and delight the many Mayo enthusiasts.

J. RAPHAEL.

NURSING IN NERVOUS DISEASES. By JAMES W. Mc-CONNELL, M.D. Octavo of 153 pages, illustrated. Philadelphia, F. A. Davis Company, 1932. Cloth, \$1.50.

The contents of the book are the substance of a series of conversational clinical lectures delivered to classes of curses at the Philadelphia General Hospital. The author was prompted to write the book by the knowledge that nursing the organic neurological patient was an extremely important subject with which pupil nurses must become familiar. He found that most nurses' text books did not cover that phase of ill health, and generally the subject was given but a few limited pages in books on mental illness. He has written an excellent little book, covering the most important types of neurological disorders in the chronic neurological wards.

IRVING T. SANDS.

PSYCHOLOGY IN GENERAL NURSING. By ISABEL G. II. WILSON, M.D., D.P.M. 12mo of 216 pages. New York, Longmans, Green & Co.; London, Edward Arnold & Co., 1931. Cloth, \$1.60.

The book is based mon a series of lectures given to nurses. It is a practical little volume, worthy of consideration for any group of pupil nurses. There is a vein of common sense and practical facts mingled with really scientific data. The more modern approach to medical psychology is covered in a very concise and yet thorough manner. The book is written in a style that is both appealing and instructive, and is a valuable addition to the large number of nurses' text books.

IRVING J. SANDS.

HANDBOOK OF THE VACCINE TREATMENT OF CHRONIC RHEUMATIC DISEASES, By H. WARREN CROWE. Second edition. Octavo of 79 pages. New York, Oxford University Press, 1932. Fabrikoid, 80¢.

One of the easiest things in medicine is to provide an hypothesis, however fanciful it be, and then to institute a method of treatment based on this supposition. One of the fallacies of medical practice is to swing from one extreme to another when an existing system of therapy is not reaping its expected results. That the theory of focal infection is not working out so accurately in actual practice is continually coming to our attention. Instead of looking at the facts in a straightforward manner and admitting our shortcomings we are beckened to accept other procedures which are often as unsound in theory and as unsuccessful in their results.

The writer of this book is "more and more coming to the conclusion that foci of infection should it possible dealt with after and not before the treatment of the disease by vaccines." He also tells is "hat the removal of a focus may so stir up the condition or debilitate the patient that it renders later treatment very difficult and much more prolonged." The reader must surely take notice when he claims that "between 80 and 90 per cent received benefit." It is improper for one physician to fatly disparage the work or the report of another. We depend too much on the element of time which so mellows criticism as to make it seem almost praiseworthy.

THE CHEMISTRY OF TUBERCULOSIS By H. GIBEON WELLS, M.D., Ph.D., and ESMONN R. LONG, M.D., Ph.D. Second edition, revised. Octavo of 481 pages, illustrated, Baltimore, Williams & Wilkins Company, 1932. Cloth, \$7.00.

This is a highly authoritative volume written by two

of the most prominent research workers and investigators in this particular field in America. Highly technical in character, its appeal is necessarily to a rather limited clientlee, but to those few a most valuable and indeed indispensable presentation. Every director of a bacteriological laboratory will soon have this on his shelf not far from his chow.

FOSTER MURRAY,

Bony Mechanics: Education and Practice. Report of the Subcommittee on Orthopedics and Body Mechanics, Robert B. Osgood, M.D., Chairman. White House Conference on Child Health and Protection. Octavo of 166 pages, illustrated. New York, The Century Company, (c.1932). Cloth, \$1.50.

This is a report of the investigation made by the White House Conference on Child Health and Protection, into the relation of the body mechanics and posture of the health and well-being of children; Dr. R. B. Osgood being chairman of the special subcommittee.

The report includes the investigation of what is now being taught about body mechanics, and an analysis of statistics as to the incidences of poor body mechanics in children.

General recommendations are made on how the incidence of poor body mechanics in children may be lowered; it now being very high throughout the population of the United States.

The Committee recommends the use of the term "Body Mechanics," instead of the term "Posture," and defines Body Mechanics as "The mechanical correlation of the various systems of the body, with special reference to the skeletal, muscular, and visceral systems, and their neurological associatious. Normal body mechanics may be said to obtain when this mechanical correlation is most favorable to the function of these systems."

The book contains a wealth of information. It should be read by all interested in physical education, and particularly those who teach physical training in medical schools; schools of physical education, public, parochial, private schools, etc.

J. B. L'Eriscoro.

A TEXT-BOOK OF PATHOLOGY. An Introduction to Medicine. By William Boyd, M.D. Octavo of 946 pages, illustrated. Philadelphia, Lea & Febiger, 1932. Cloth, \$10.00.

The third book on Pathology written by Boyd has superseded the expectations foreshadowed by his offerings of Surgical Pathology and the Pathology of Internal Diseases.

Beginning with the preface, which is a masterpiece of expression of what pathology really stands for today, to the end of the book it is replete with information founded upon actual lahoratory experience. Seldom has it been the pleasure of the reviewer to be overcome with the desire to read a book from cover to cover. In this instance, the desire has been transformed to actual performance. The work is well classified and presented in such a manner that both the medical student may understand and remember the information and the pathologist may secure much material for thought.

The inclusion of discussion of relation of symptoms to lesions is so well done that it scarcely needed the explanation for its presence in the preface.

The reviewer is tempted to write of the many nice things which this book contains but fears that they are too numerous to mention. An occasional item of criticism might be mentioned, such as the misquotation of Connheim's theory and the rather loose manner of speaking of infection in relation to cancer. The English is in the author's usual entertaining, interesting and pleasant style. All in all the reviewer can find no book which is to be so heartily recommended to the student, general practitioner and pathologist. It is well worth including in the library of any medical man.

M. Lenerer.



OUR NEIGHBORS



ANNUAL REGISTRATION IN TEXAS

The Texas State Journal of Medicine for January has an editorial discussion on the results of the annual registration law of Texas. After discussing the lack of classification of the records of licenses, the article says:

"What this means may be appreciated when we consider that 8,621 licenses were issued to doctors who claimed to have practiced medicine in Texas prior to 1907, when the present Medical Practice Act was enacted. Of this number, 226 were listed as Eclectics, 134 as Osteopaths, and 82 as Homeopaths. The licenses of the Regulars, Eclectics and Homeopaths came from three separate boards that existed at the time. The records of the Osteopaths were accumulated at the time, under the provisions of the new law. Since that time, 8,621 have been licensed. The Directory of the American Medical Association for 1931 showed 6,475 practitioners of medicine in this State. The Board has transferred all of these records from several books to a single large book, so prepared as to show all of the data called for under the present Medical Practice Act. There were 15,560 of these. The book will hold 50.000 individual records.

"In addition to these records, there have been compiled complete files of 1,250 medical crooks. fakers, fake scientists and health lecturers, imposters and swindlers of a large variety having to do in some way with the practice of medicine, practitioners of medicine who have been outlawned in this and other States because of violation of narcotic and alcoholic laws and certain criminal activities, not to try to mention all of the possibilities in the field of criminal quackery. Through the use of these files, incidentally, a number of fakers have been caused to desist from their activities in this State, some of them quite precipitately. a knowledge of how to go about this sort of thing and with the full cooperation of the medical profession on the spot, the State Board of Medical Examiners can prevent much financial, physical and mental injury of the unsuspecting public by such conscienceless imposters. Many of our readers will recall seeing the display advertising of some of the wonderful lectures on health subjects,—even, be it said to the shame of school boards, in the auditoriums of some of our public schools. The activities of the State Board in this connection has resulted in a widespread sentiment of support among our prosecuting authorities and our courts, not to mention newspapers, chambers of commerce, better business bureaus and the like.

"There are those who have expected the State Board to run all of the illegal practitioners, quacks and cults out of the State forthwith and immediately. No such thing was possible, of course, nor was any reasonable approach to it expected. The record is good enough as it is, and not to be complained about. It will show that during the past year there have been 40 convictions of violations of the Medical Practice Act and 8 acquittals. Eighteen licenses have been revoked. Eighty-five cases are now before the courts, and 220 under investigation. During the year, a representative of the Board helped to arrest itinerant fakers who were, it has been estimated, taking from \$150,000 to \$300,000 per year out of the State. A notorious group of swindlers, claiming to be eyesight specialists, have been apprehended, very largely by the investigator for the State Board, and brought to punishment in other States, where opportunities for heavy penalties were greater than they were in Texas. This group swindled one Texas woman out of \$7,400.00 by pretending to remove a cataract from her eye. The investigator for the Board, through his individual and unaided efforts, captured two leaders of a dangerous criminal gang who were operating in Texas, and returned them to other States for prosecution. They are both now in the penitentiary. In addition, an undetermined but relatively large number of practitioners, held to be practicing either without sanction of the law, or engaging in practices which lay them liable to prosecution, have been induced to leave the State in order to avoid prosecution. The certificates of some of these have been taken up and the Board has the certificates in its possession, together with releases signed by the individuals concerned."

SURVEY OF HEALTH AGENCIES IN MICHIGAN

The Michigan State Medical Society has a special committee which is making a survey of all health agencies, both medical and lay in the State of Michigan, as has been described

in this Journal of December 1, 1931, page 1480, and February 15, 1932, page 246. A progress report on the survey is contained in the De(Continued on page 250—adv. xiv)

In Cases of Boils

Fight the Staphylococcus with

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Stannoxyl is effective in the treatment of the following staphylococcic infections:

- (1) Boils.
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- (8) Mixed infection of tuberculosis.
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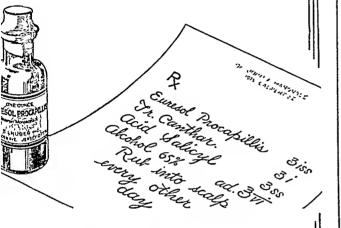
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(Continued from page 248)

cember, 1932, Journal of the Michigan State Medical Society. The major part of the report refers to the slowness of physicians to respond to the questionnaire. The report says:

"With certain exceptions public relations committees have been appointed by the local societies and have supplied the necessary information preliminary to the local studies. In certain cases no replies have been received from the secretaries of these societies; and in one case the public relations committee appointed has been inactive. Since these societies include sixteen counties it means that we now have returns from sixty-seven of the eighty-three counties in Michigan."

The Journal gives a table showing the responses of individual physicians. There were 3,386 blanks mailed, of which 1,233 were returned. The percentage of physicians responding ranged from a maximum of 60 in some of the smaller counties to only 29 for the largest,—Wayne, in which the City of Detroit is located. The report continues:

"Following the original plan, lists of those physicians who have failed to return a schedule have been mailed to public relations committees of local societies. These committees are asked to designate the approximate incomes, within very broad limits, of each physician who has failed to make a return. While these figures will not be included in our analysis they will serve the purpose of determining whether or not those who failed to cooperate are to be found largely in only one income group.

"The study of population and income is now making good progress and should be completed before January 1. This study is regarded as fundamental to the committee's final conclusions and must form one of the major pillars upon which the recommendation will rest.

"The study of public health agencies has reached the stage where practically all of the material has been collected and the major part of this material has been analyzed for presentation. At present the report on these activities is being prepared and will be presented to the sub-committee for its consideration approximately December 1. The recommendations from the sub-committee will be transmitted with the report to the state committee

"The sub-committee on hospitals is now revising the main hospital schedule and the collection of information will start about November 15. In addition, data are now being prepared concerning the governmental expenditures for hospitals in Michigan. These expenditures will include the hospitals for mental diseases, tuberculosis, and other communicable diseases.

"As soon as the studies of physicians and

(Continued on page 251-adv. xv)

(Continued from page 250—adv. xiv) hospitals are completed, the remainder of the studies will be brought to a close rapidly, so that the committee may begin to draft its conclusions at an early date. According to the present plan the committee will start its regular sessions during the early part of December. The task of digesting the information will be a tremendous one and the value of the entire series of study will very largely depend upon

CRIPPLED CHILDREN IN ILLINOIS

the time permitted for this process.'

The December number of the *Illinois Medical* Journal contains the following report of the commission on physically handicapped children ap-

pointed by the Legislature:

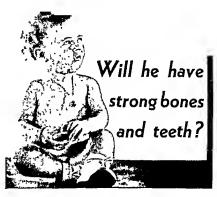
"Pursuant to Joint House Resolution number 20, adopted by the House, March 21, 1929 and concurred in by the Senate, May 21, 1929, wherein was designated as a commission, the Director of Public Welfare, the Director of Public Health and the Superintendent of Public Instruction to report to the Fifty-seventh General Assembly its findings and recommendations pertaining to the conditions of the Handleapped children of Illinois, their hospitalization, their education and all other facts pertinent to their welfare, the Commission begs to submit the following report:

"The Commission wishes to acknowledge its obligations to the fine spirit of co-operation of those helping to make the survey throughout the State. In each county a local commission consisting of three members was appointed, one by the Director of Public Welfare, one by the Director of Public Health and one by the Superintendent of Public Instruction. Usually the County Superintendent of Public Schools, a social worker, if one was available, and a physician of repute made up the county commission. The local commissions worked through school teachers, social workers, fluress and physicians and others who were available.

"Sixty-four counties made fairly thorough surveys, thirteen made partial surveys and twenty-five made little or no response Ten thousand nineteen children have been listed with their addresses, ages, school attendance and a probable diagnosis. When the partial and non-reporting counties have made their reports the number of children will exceed twelve thousand. It is also evident that there will be five thousand others who have not been located. This will bring the total number of handicapped children in the State up to seventeen thousand.

"The percentage of crippled children under twenty-one in this State has been figured conservatively at 22 crippled children to each one thousand of the general population. This average was taken from the listing of eight of the well worked counties Williamson County, however, has only 1.8 crippled children per thousand of

(Continued on page 252-adv. xvi)



So much depends on his mother's diet during pregnancy and lactation

AT NO TIME is the need for a protective diet so great as during pregnancy and lactation. All elements required for the child's developing body must come from the mother's food—or from her own body.

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Prescribe

KNOX GELATINE



in Nutritional Therapy

(Continued from page 251—adv. xv)
population while Edgar county has 3.4 and 5

gamon county 3.5.

"There are two thousand, sixty-four child who are listed as not attending school at al whose attendance is very irregular. Almost even one of these can learn if they be given the optunity. Education should be made available every crippled child in the State.

"There are twelve hundred twenty-six yo of high school age in Illinois who need vocati training. A wide choice of trades is possible these young people can be taught to earn t living, thus relieving counties of their support

"The following list shows the numbers kinds of handicapped children revealed by

State-wide survey:

Infantile Paralysis	. 2,308
Bone Infection	. 907
Club Feet	. 418
Flat Feet	. 268
Spastic Paralysis	.1,062
Dislocated Joints	
Rickets	
Arthritis	. 197
Accidents	. 555
Birth Defects	. 497
Spinal Defects	
Miscellaneous	

"The tragic report of one thousand, sixty children listed as having spastic paralysis, pict a long, long trail of little folks with frequeseless bodies and often defective speech, we forms a barrier to every avenue of self-exision. Everyone of these must have special metraining and many will need surgery. Cert Illinois should give more attention to the pretion of the causes of spastics. The question mid-wives, delivery injuries, breeding of selitics, alcoholics, the insane, the prevention of fevers and spasms in the young should be fully investigated and remedies proposed by pert advice.

"These are nine orthopedic surgeons or staff of the Illinois Elks Crippled Children U throughout the State, co-operating with physicians and surgeons. Only cases of duration can usually be handled in local hosp prolonged stay is impossible. The Shrine hos and other hospitals of Chicago for children perhaps two hundred fifty beds but what are among nine thousand children who are wai One hundred beds for down-state children w reach a great many and save them. The versity of Illinois College of Medicine with clinic possibilities would soon become v known for the excellent training of ortho surgeons. It should lead the nation in its coveries for the prevention of crippling dis and its success in involving curative treatm

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necessary for the synthesis of secondary vitamin A by the liver. Carotene is to vitamin A therapy what simlight is to vitamin D therapy.

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ALONE or with any of these products:

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a 0.3% solution of earotene in vegetable oil . . obsolutely no fishy toste . . deep red color . . 15 c.c. and 50 c.c. protectively colored bottles . . smoll five to ten drop dosoges . . high potency . . use olone or with other forms of vatamin therapy.



.... for the greatest ECONOMY, prescribe Smaco Cod Liver Oil fortified with carotene and natural vitamin D, Product No. 510

High grade cod liver oil fortified with caroteoe (primary viramio A) therefore cootains both primary and secondary viramin A . . also fortified with Columbia-Zucker natural viramin D . . . three times as potent io both A and D, one reaspoon equivaleor to three teaspoons of standard potent cod liver oil . . . improved flavor, more palatable . . . smaller doses . . . minimum cost to the patient.



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they do contain, cannot be converted into primary vitamin A. Carotene should be prescribed either alone or with other vitamin products.

for patients who object to taste or bulk of cod liver oil, prescribe Smaco Vitamins A and D. Product No. 525

Highly potent combination of primary vitamin A (carotene) and Columbia-Zucket natural vitamin D . . . absolutely free from fishy taste . . . ten drops may be substituted for three traspoons of standard potent cod liver oil.



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THE INDIGENT IN NEBRASKA

The medical care of the indigent is discussed in the following editorial in the January number of the Nebraska State Medical Journal:

"Press reports indicate a willingness of an increasing number of county boards to assume responsibility for the medical and surgical care of indigent persons, which is very encouraging. A hitch seems to develop in some cases over the basis of payment and on this matter there seems wide divergence of opinion that threatens agreement. Taking rural Nebraska for example-In one county the county medical society offered to take care of paupers and indigents on a basis of \$3.00 per call, plus mileage, other work in proportion; in another county the county board offered to pay on a basis of \$1.00 per call. This is a rather wide difference and probably both parties would be willing to some modification of the suggested basis.

"Let us not forget that we are in a period of economic stress the like of which none of us has ever experienced; that county boards, willing though they may be to pay, are hampered by shortage of funds due to the inability of the taxpayer to meet his obligation to the county and state; that when county boards agree to a willingness to assume the financial obligation of medical and surgical care of pauper and indigent, the

financial reward is certain and half a loaf is bette than no bread. In other words, it is better to work for a smaller fee sure to be paid, than to get nothing."

The same journal prints another editorial re lating to the Board of Supervisors of Holt County and says:

"What the Holt county profession thinks abou it is evidenced by the following resolutions presented to the county board at a recent meeting:

"Resolved, that \$2,336.00, which is the total amount expended in Holt county for medical hospital, and nursing fees is a very nominal sum Of this amount \$1,700.00 is the total amoun spent for medical fees. Thus the per capita ex penditure in Holt county, which has a populator of 16,000, is about 10 cents per head. An addi tional \$636.00 was expended for hospital and nurses fees in the care of the poor. Thus the per capita expenditure for medical, hospital and nursing fees is less than 11 cents per head.

"Be it resolved, that when a physician calls: inember of the county board regarding medica attention to an individual or family unable to pa and the county commissioner agrees to accept th case as a county medical or surgical charge that he issue an order to the doctor granting authorit for such treatment, said order to accompany th

(Continued on page 257-adv. xxi)

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is necessary. Your diabetic patients will do well and enjoy these easily made starch-free muffins, biscuits, bread.

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(Continued from page 256-adv. xx)

doetor's claim to the County Board, the same to be paid without further argument providing the charge is in conformity with those established by these resolutions."

"The following is the medical fee schedule for Holt county and now enforced:

"House visits, \$3.00, plus mileage.

"Confinement, uncomplicated, \$25.00 plus mileage. Additional charge for complicated eases.

"The county board has refused to pay any medical bills whatever."

SOCIAL MEDICINE IN NEBRASKA

The Nebraska State Medical Journal for January contains the following editorial comments on social medicine and contract practice:—

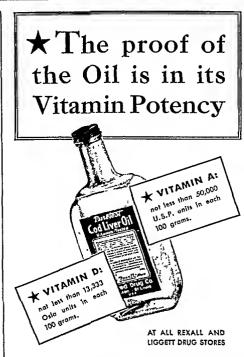
"After attending the secretaries' and editors' conference in Chicago the 18th and 19th of November it is evident to us that we in Nebraska have little first hand knowledge of contract practice. The extent to which it exists in this state has not made a notable impression on us as it has in most other states.

"The program of the three sessions was almost wholly devoted to contract practice and to state medicine. No more interesting meeting was ever held, but the net result was an adjournment without arriving at any concrete plan of attack to the disappointment of many of those present.

"The problem is very complex. Some of the outstanding propositions advanced were: Outside of the industries 405 groups are offering contract service in the United States. Contract practice as such is not unethical unless freedom of action of the individual affected, is disturbed. The patient has the inalienable right to choose his physician. Diagnostic laboratory groups have overreached the physician. They should not compete with the physician-they should assist him. Laboratory diagnosis has been over-emphasized. training must be reemphasized and diagnosis made much more simple and at less cost to the patient. We have indulged in a debauch of hospital construction with too many stately columns and marble halls and useless glitter, and have forgotten the needs and financial capacities of the white collar man.

"The Georgia plan of regulating contract practice appealed strongly to many delegates. Physicians desiring to engage in contract practice submit their plan to the censors of the county society for their approval and by conference between the parties the objectionable features, if any, are removed before the plan is approved. This plan is said to work very well in Georgia and is worthy of consideration in other states.

"It seems to this writer that social medicine is upon us and that some of our energies should be enlisted toward its direction rather than to adopt the tactics of the Pope's Bull against the Comet."



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Used essentially for the treatment of WHOOPING COUGH. Other
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NEW YORK STATE JOURNAL of MEDICINE

PUBLISHED BY THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

Vol. 33, No. 5

NEW YORK, N. Y.

March 1, 1933

MEDICAL SOCIETY OF THE STATE OF NEW YORK ANNUAL REPORTS, 1932-1933

REPORT OF THE PRESIDENT

To the House of Delegates:

ientlemen:

With the convening of this House of Delegates here has passed another year in the history of ie Medical Society of the State of New York, he Society year of 1932-1933 will probably stand i historical perspective as the end of an epoch nd the beginning of a new era. The social forces hat have been germinating for the last twenty ears and reached their apogee shortly after the Var period were bound to produce fundamental ffects in the social condition of our people and pon the medical profession. With the tremenous accumulation of wealth, derived from the atural resources of our country and the superlaive development of industrial machinery, it is not urprising that large sums of money were betowed for the purpose of creating foundations hat were interested in social progress. The genral wealth and well being of the people attained uch a degree of prosperity that an university ducation became the common or habitual amation of most of the households of this country. There resulted from this a huge influx into our miversities, with a tremendons number of young people anxious to enter the professions.

In 1900 there were 160 medical schools. There are at the present time 66, giving a standard four-ear course. Yet it is interesting to note that the 66 schools now graduate 5,700 doctors a year, which is equivalent to the number of graduates urned out in 1900. The reason for this is that while the population from 1890 to 1930 increased 15 per cent, the admissions to colleges for acalemic degrees increased over 770 per cent. To-day there are about 16,000 applicants for bout 5,700 medical matriculations, so that approximately 10,000 boys per year are tmable to enter a medical school.

There is in the State of New York one doctor to approximately 620 of the population and in the United States probably 156,000 physicians, and yet this tremendous number of physicians consti-

tute only 10 per cent of the people who are engaged in the national health program, so that fully nine times as many more individuals who are not doctors are engaged in some form of other in a medical or health program and these individuals must of necessity be coordinated into the health activities of the country.

The year just passed has been significant in a variety of ways, and in particular by the publication of the reports of various commissions, committees, foundations, social uplifters, philanthropies, social reformers, and others too numerous to mention. Obviously, some of these reports were frankly critical of the medical profession and not a few represented a determined attack upon the quality and distribution of medical services in this country. A few were definitely protagonists and advocates of full and complete state medicine and believed that a medical Utopia would be produced by the State becoming a medical colossus and directing all curative and preventive medicine. It became necessary for your Executive Committee to receive these various reports, criticisms and pronunciamentos, and submit them to careful, deliberate, critical analyses. This policy has been followed in regard to the two major reports and the result of the deliberations of the special committee of your members will be presented to you.

The continuing, deepening economic depression necessarily reacted upon the financial competency of our members and the majority of the members of this Society have had varying degrees of difficulty in obtaining a fair financial return for their services during the recent depression years. The financial disability of our members in the large cities has, in many cases, been acute and by reason of the very tenuousness of renumeration in the private practice of medicine it would seem that our profession suffered disproportionately in comparison with other professions of similar degree of attainment.

Every component society has had a number of

its members unable to pay their State assessment. There has arisen from this a desire to both lessen the dues and to memorialize this House of Delegates for a reduction in the per capita, per annum Your Executive Committee were assessment. deeply sensitive to this condition of affairs and recommended to the Board of Trustees that there be disbursed to the component societies an amount of money equal to one dollar per member as of June 1, 1932; the funds of your Society have been wisely invested and it was possible to declare, so to speak, a dividend out of investment income. The purpose of this allocation of funds to the component societies was to enable them to devise a method whereby their delinquent members, temporarily financially embarrassed but loyal to the Society, could be financed on part payment basis. In my opinion, this was a wise step. It indicated that the State Society, by reason of superior managerial ability, high capital income, could invest and create investment income quite beyond the resources of the local society. It is axiomatic that the directional capacity of your Society is primarily determined by the caliber, character and ability of the men you elect to office. I believe it is also axiomatic that in the final analysis the activity of your Society will be expressed by a composite of the intelligence of its members. Granted, however, a wise policy and competent effective officers, there are still required funds to maintain your Society. In addition, the last three years have demonstrated that an organization or institution without cash reserves is in such an unstable and weak financial condition that it might fail from inability to sustain itself during a prolonged financial depression. It should be the object of this Society to create the power for proper medical service, and to safeguard their members in the distribution of medical service. To do these things it is more and more essential that your investment fund, instead of being \$125,000 should be at least \$250,000 and possibly \$500,000. The income from such a fund would provide the revenue necessary for a more complete fuller business administration.

The problems before medicine to-day are not alone the problems of medical treatment, but are the problems of the contacts of the medical profession with a highly mechanised society. What was originally the main desideratum of medical societies, namely, the practice of medicine, has become only one aspect of a tremendously intricate problem of medico-social adjustment. Aside from the salaries of secretaries and the maintenance of a competent office staff almost the entire work of your Society is based upon the voluntary labor of your Officers. Judging from the experience of your retiring President this embraces such an tion if in the near future your Society will not, of necessity, need more paid executive assistants. amount of detailed work that it is a serious quesAll great institutions are the lengthening shadow of a personality and this House of Delegates was the reflection of a very distinguished gentleman. Few of us realized that when this House met a year ago in the City of Buffalo that the Speaker of the House, Dr. John Card, would be called away before this House convened again It is fitting that your President should record in his report the obligation this Society owes to the labors, personality, and the judicious temperament of the late lamented John Card.

Considerable progress was made in the simplification of your executive structure in the con solidation of the Committee on Physiotherapy and on Periodic Health with the Committee on Public Health and Medical Education under the Chairmanship of Dr. T. P. Farmer. It is believed by most competent medical pedagogs that medical education is a continuing and continuous process and that your Society has but started upon a larger program of itineraries of graduate medical instruction. Thoughtful students of graduate instruction believe that this type of instruction should be brought to the doctor in his own environment and the possibilities for this formal activity upon the part of your Society are indeed promising.

During the past year the administration of the Workmen's Compensation Law has been subject to a survey by a special commission appointed by the Governor of the State. The abuses in the administration of this type of medical service have been great and the professional and ethical turpitude of some of the physicians giving this service has been appalling. Your Executive Committee. early in the year, asked the Committee on Economics, under the Chairmanship of Dr. Charles II. Goodrich, to make a study of the medical and professional aspects of this question. The result of their deliberations will be presented to you for your study and consideration. In this connection your Society, together with the Academy of Medicine of New York, jointly requested the Governor of the State of New York to appoint a medical committee to make a complete study with the ob ject of amending or changing the law in order that the grave abuses of commercial clinics would be obviated.

In an era of financial depression one is impressed with the amount of projected social legislation. Well intentioned individuals, on seeing a condition that by and of itself is depressing, immediately proceed to ask for legislation and as many of these prospective legislative acts concert themselves with medical practice or with social service it has been necessary for your officers to be ever on the alert in anticipating socially bad legislation or measures that are distinctly an invasion into the field of the practice of medicine. The Legislative Committee, under the Chairman ship of Dr. Harry Aranow, and the Committee on

Medical Research, under the Chairmanship of Dr Frederic E Sondern, assisted by the Executive Officer, Dr J S Lawrence, have been particularly zealous in anticipating such legislation and in marshalling the proper forces to expose its defects

This forthcoming 127th Annual Meeting of your Society will demonstrate the remarkable scientific work of the membership and the complete manner in which the scientific program his been arranged by the Committee on Scientific Work under the Chairmanship of Dr Arthur J Bedell We are beholden to the Medical Societies of the Counties of New York, Brons, Kings, Queens and Richmond for their very warm well come for this meeting in the City of New York and in like measure to the Committee on Arrange ments under the Chairmanship of Dr Samuel J Kopetzky

During the last year there has been a tendency for certain component societies to initiate certain movements within their ranks without due regard for the State Society Every physician must look upon the medical profession in the State of New York as one organized whole and any policy that is in the slightest manner divisive to that extent diminishes the prestige of the Society Medicine, both organized and individual, is under eriticism and there is a spirit manifest throughout the country to place most of the social burdens of medical practice upon the medical profession. The medical profession are in no way responsible for the lessening of the national income from 82 bil lion dollars in 1929 to 37 billion dollars in 1932 We are, however, very much concerned with the fact that one third of the physicians in this country are living on a gross income of less than \$2 500 a year, and that 50 per cent of the doctorof this country gross \$3,500 a year or less per We are disturbed by the fact that 65 per cent of the people of the United States own but 15 per cent of the wealth of the country and that two per cent of the people own 40 per cent of the total wealth of the country We view with apprehension the fact that about 85 per cent of the peo ple of this country subsist on incomes of less than \$2,000 a year

We have grave doubts about the value of the extension of individuals into the domain of medicine and view with alarm the crippling of society with a health incubus of bureaueratic control when it is amply demonstrated that mass production in indicine cannot be applied to such discased conditions as Nephritis, diabetes, and cardio vascular disease. We may well question the wisdom of the instituble governmental activities in social service based upon a false premise of the infallibility of statistics and the irrefutable validity of surveys. The cost of social service exclusive of education to day represents one-fifth or more of the total expense of our cities, and in one of the most enlightened stries.—Massachusetts

—the cost of this service represents nearly two fifths of the total outlay by the State —The cost of State government has increased per capita from \$3.97 in 1913, to \$16.38 in 1929, and the cost of city and local government per capita has increased from \$19.10 in 1913 to \$58.64 in 1929. In this field the Committee on Public Relations under the Chairmanship of Dr. James E. Sadler have contributed significant and distinctive services.

One out of eleven of our membership are be ing, or will be sued for malpractice and if there is any one particular function of this Society that must be preserved intact, under resolute and forceful administration, it is legal defence and malpractice protection It seems to your President that as a means of creating a united medical front and medico-legal solidarity, defence and indemnity should go hand in hand and that legal de fence by the Society should be withdrawn from those members who insure in companies other than the official carrier of the Society To be long to the Medical Society of the State of New York is a high privilege and we should be zealous in the maintenance of an esprit de corps and an organized front against any and all invasions into our particular field of social usefulness

Fundamental economies have been made in the management of your funds. Your Trustees and your Treasurer have been unrelenting in the safe guarding of your investments and the control of your funds. A perusal of the report of the Treasurer will show significant reductions in the expense of your major activities.

Without the ever valuable help and experience of the Secretary, Dr Daniel S Dougherty, and the fine spirit of cooperation by the Assistant Secretary, Dr Peter Irving, together with the aid given by Miss Baldwin and the staff at the So ciety's offices in New York City, the duties of your President would have been arduous in the extreme. Your President takes this opportunity to express his great personal appreciation for their many kindnesses and their willingness to help him at all times.

Your retiring President feels that the year just past has been all too short for some of the many projects that press forward for solution. He would have liked to have attempted more and to have completed more but he is happy in the thought that in the midst of universal gloom, financial depression, poverty and the breaking down of personal and social integrity the Medical Society of the State of New York has been true to its history, accepted its traditions and carried them forward with added lustre and prestige

Respectfully submitted,

CHAS GORDON HELD, President

February 15, 1933

REPORT OF THE SECRETARY

To the House of Delegates: Gentlemen:

Your Secretary has the honor of submitting his eighth annual report.

He has in former reports stressed the fact that the office of Secretary is an executive one rather than merely clerical and as yet nothing has occurred to induce him to change his opinion.

When the House convenes and faces the Speaker's chair, it will no longer look into the happy, genial face of its Speaker, for he who presided over its destinies during the past few years is no longer with us. The Society has sustained a great loss and will miss his intelligent, carnest and enthusiastic leadership. To all of the officers and members who came in contact with Dr. John A. Card this loss has been felt as a personal one, for his kindly character had endeared him to all.

The Secretary suggests that the members of the House rise and stand in silence as a tribute to his memory.

THE SOCIETY

It is a matter of congratulations that despite the prevalent business depression the Society has held its own both numerically and financially as can be seen from the statistical report. The membership has dropped but very little compared to this time last year and even this decrease may be discounted when we consider that last year's report included the figures to May 1st whereas this year ends with March 1st.

Owing to rumors that the membership and income of various so-called "up-state counties" have been considerably diminished, your Secretary made a thorough investigation into this situation and he is pleased to be able to report to the contrary.

Six of the county societies have raised their dues and everywhere there are indications of an increased interest in organized medicine, not only among the members but among those who have not as yet availed themselves of the privilege. Requests for application blanks are more numerous than ever and even at this early date several societies are almost 100% paid up.

Nor has there been any let-up in the strenuous and excellent work of the officers and committeemen.

The Secretary is pleased to note that the Special Committee appointed by the 1932 House of Delegates to further cooperation and coordination of activities has presented a report entirely in consonance with the report of the Secretary under date of April 15, 1928, which states, "that there exists today an almost harmonious co-relation of all the elements and component units that com-

prise the corporate body, a considerable lessening of the overlapping and encroachments of the duties of officers and committees and a sincere cooperation of all toward the upholding of the ideals and purposes of the Society."

THE SOCIETY'S OFFICES

There has been no change during the past year in the personnel of the office force. The same competent, willing and obliging staff continues its excellent work under the direction of Miss L. D. Baldwin whose efficient management, wonderful grasp of details and knowledge of the Society's affairs past and present are of incalculable value, not only to the Secretary but to the Society in general.

LEGAL DEPARTMENT

Of this department suffice it to say that our counsel, Mr. Lorenz J. Brosnan, has continued to prove himself worthy of every confidence reposed in him. Apropos of this, it would be well to cite the incident of a lawyer who, having called on your Secretary as Secretary of N. Y. County for assistance in a certain case, made the plea "that he was up against one of the brightest and shrewdist trial lawyers in the state".

CONFERENCES AND DISTRICT BRANCHES

Owing to illness your Secretary was able to attend but four of the District Branches and for the same reason was unable to attend the Conference of Secretaries in Chicago. While he regrets all of these enforced absences he very keenly regrets not being able to participate in the Chicago meeting as the reports show a complete change of feeling and an acceptance of the views expressed by him at several of the former conferences.

The attendance and enthusiasm at the District Branch meetings were on a par with those of several years past and the programs were of considerable worth. Comment should be made here of the Tristate Conferences which have twice presented important and timely topics for discussion.

REPORTS AND COMMUNICATIONS

The Secretary renews the plea of former years regarding the necessity of devising some plan whereby the work of the Reference Committees could be so handled as to expedite the business of the House and of avoiding the rushing through at the last moment of reports and resolutions without giving them proper attention and discussion. The old and unbusinesslike custom of submitting last minute reports to the Executive Committee still prevails despite the fact that three Houses of Delegates have adopted a resolution

requiring that they shall be in the limids of the Secretary at least 48 hours before the meeting of the Body for which they are intended. Attention is also called to the importance of having all reports and communications go through the limids of the Secretary with the exception of those which should more properly be sent to the Legis lative Bureau.

The Secretary extends his sincere thanks to those officers members and employees for the sympathy and support expressed in various ways during his illness. It was indeed fortunate that he had such a willing, able and efficient assistant as Dr. Peter Irving and that the President, a man of sterling worth, keen judgment, earnest and euthusiastic, with an insight into the problems that confront the profession granted but few, resided in New York City where he was in constant intimate touch with the husiness of the Society

To Dr Irving he extends his sincere thanks, to the President he owes his thanks for many acts of kindness and friendship and a debt of gratitude that can never be repaid for his prompt action in bringing him home when taken ill up the state, an action which probably saved his life

He thanks the Executive Officer for his sup

port and cooperation

MEMBERSHIP STATISTICS

MEMBERSHIP SIMISIOS	
Memberslup December 31, 1931 12,586 New members, 1932 807 Reinstated Members 1932 241	12 621
Deaths 166 Resignations 55	13,634
Resignations	221
Dramed for non-nument of ducs De-	13 413
Dropped for non payment of ducs December 31, 1932	*760
	12,653
Flected after October 1, 1932 and cred- ited to 1933	215
	12,868

*It is of much interest to note that in spite of the depression there are only about two hundred more de linquents than last year which number will be materially decreased by the time of the Annual Meeting as 1932 dues are being received daily

The list of honor counties is as follows Allegany, Cattaraugus, Chenango, Fulton Madison, Scholarie Seneca, Tioga and Tompkins

Respectfully submitted,

DANIEL S DOUGHERTY, Secretary

February 15, 1933

REPORT OF COUNCIL

To the House of Delegates Gentlemen

The Council has the honor of presenting the following annual report which includes those of its Executive Committee Committee on Publication and Committee on Insurance

In accordance with Chapter IV of the By Laws the Council convened in the Hotel Statler, Buffalo, May 24th, 1932, for the purpose of or-

ganizing for the ensuing year

Physiant to the provisions of the By Law governing the constitution of the Executive Commit tee, the following members of the Council nominated by the President, were elected to serve with the officers therein specified as said Executive Committee John A Card, Arthur J Bedell, Charles D Kline, Loms A Van Kleeck, and James M Flynn

The appointment of members of the Standing Committees was referred to the Executive Committee

Dr Frederic E Sondern was appointed Chair man of a Special Committee on Medical Research with power to nominate members of the Committee who need not necessarily be members of the Society

A regular meeting was held at the State Society rooms, New York City, on December 8th, 1932

Dr Flaherty, Chairman of the Special Committee appointed in accordance with the resolution of the House of Delegates to further cooperation and coordination of activities and make the collective thought of the State Society effective and powerful, reported

'That no further action was necessary as a study of the work of the State Society amply demonstrated that there is already a wonderful cooperation and coordination between the Committees through whose activities and contact with Medical and Lay Organizations the collective thought of the State Society is becoming more and more influential and powerful."

Arthur W Booth was appointed Chairman, James T Rooney Nathan B Van Etten, George W Cottis Saminel J Kopetzky, Charles H Good rich and Edward E Haley, members of a Special Committee to study the Report of the Committee on the Costs of Medical Care and the Report of the Commission on Medical Education and report to the House of Delegates—Owing to the resignation of Dr Van Etten, Floyd S Winsley was appointed to fill his place

James E. Sadlier was appointed to draw up resolutions on the death of Dr. Card to be pre-

sented to the House of Delegates.

Alec N. Thomson was appointed the President's special representative to go to Detroit and study the Detroit Plan of Medical Participation in Public Health Work.

EXECUTIVE COMMITTEE

The Executive Committee has held regular meetings on the second Thursday of each month, at the first of which it organized by electing Chas. Gordon Heyd, Chairman, and John A. Card, Vice-Chairman. At this meeting, Orrin Sage Wightman was appointed Editor-in-Chief, Frank Overton, Executive Editor, Lorenz J. Brosnan, Legal Counsel and Thomas H. Clearwater, Attorney; also as Publication Committee, John A. Card, Daniel S. Dougherty and Frederic E. Sondern; as Committee on Budget, the Speaker, the Secretary and the Treasurer.

Much of the business transacted during the year has been necessarily of a routine character, the Committee acting as Council ad interim being essentially the business and administrative body

of the Society.

Although the work of the Executive Committee is routine, it is extremely important and the Committee has at all times given serious consideration to the many important problems which have been brought before it.

As a detailed report would be unnecessary waste of time and space, only the more important

decisions and actions can be mentioned.

Under date of June 16th, the annual budget submitted by the Budget Committee was approved and ordered submitted to the Trustees.

The renewal of the contract with the Executive Officer was approved and referred to the

Trustees.

The following nominations of committee men were made by the President and endorsed by the Committee:

Scientific Work-Frederic E. Sondern.

Public Health and Medical Education—George W. Kosmak, Mahlon H. Atkinson, Leo F. Schiff. William A. Groat, Martin B. Tinker, Clayton W. Greene, Edward G. Whipple and Nellis B. Foster.

Legislation—John J. Buettner, Bernard B. Berkowitz, B. Wallace Hamilton and Edward E. Haley.

Arrangements—Samuel J. Kopetzky, Chairman.

Medical Economics — Frederic E. Elliott, Joseph P. Garen, Frederick M. Miller, Homer L. Nelms, Joseph C. O'Gorman, Cassius H. Watson, Terry M. Townsend, Frederick S. Wetherell and Edward R. Cunniffe.

Public Relations—William H. Ross, George M. Fisher, Oliver W. H. Mitchell, Augustus J. Ham-

brook, William D. Johnson and Thomas H. Cunningham.

Medical Research—John Wyckoff, S. R. Detwiller, George Baehr, G. Canby Robinson, Augustus B. Wadsworth, Edwin MacD. Stanton, Herman G. Weiskotten, John J. Morton, Jr., Winfield W. Scott, Burton T. Simpson, F. A. Hartman, James L. Gallagher, Simon Flexner and Peyton Rous.

Insurance Committee—John A. Card, Chairman, and Frederic E. Sondern.

Prize Essays-Henry H. M. Lyle, Chairman.

Martin Cohen and Joshua E. Sweet.

Press Publicity—Alec N. Thomson, Chairman, Edward C. Podvin, James N. Vander Veer and Louise W. Beamis.

To Prepare a History of Medicine in the State of New York—Frederic C. Curtis, Nathan B. Van Etten and Alvah S. Miller. Owing to the inability of Dr. Curtis to act, Dr. Ross was appointed in his place.

John A. Card and Frederic E. Sondern were appointed to act as a Special Committee to consult with the Saratoga Springs Commission in its effort to develop the mineral water resources of

Saratoga Springs.

James N. Vander Veer was reappointed Liaison Officer to act with the State Department of Health in the campaign against Venereal Disease.

The Executive Committee also passed a resolu-

tion:

"Appropriating from its investment surplus to each County Society a sum equivalent to One (\$1.00) Dollar per capita as of July 1st, 1932, which action is in no way to be considered as de-

termining or establishing a precedent."

Under date of September 8th, Dr. Frederic E. Sondern was appointed Chairman of the Insurance Committee and the Committee on Publication, and Vice-Chairman of the Executive Committee to fill the vacancy left through the death of Dr. Card. Louis A. Van Kleeck was appointed a member of the Insurance Committee and James E. Sadlier of the Executive Committee.

Frederick H. Flaherty was appointed ex-officion member of the State Charities Aid Association's Committee on tuberculosis. Dr. Flaherty later resigned and the President was granted permission

to act in his stead.

It was decided to hold the next Annual Meeting at the Waldorf-Astoria Hotel, New York City, on April 3rd, 4th and 5th, 1933.

Under date of October 13th the Committee went on record as endorsing the Special Bond Issue for New York State to provide aid for the unemployed.

Some doubt having been expressed as to the resolution passed by the last House of Delegates concerning the division of fees, the Legal Counsel's advice was sought as to whether this might not be in conflict with the Principles of Profes-

sional Conduct—The Counsel's opinion was that it constituted an extremely dangerous precedent and was repugnant to and in conflict with the meaning and purposes of Section 32 of the Principles of Professional Conduct.

Under date of November 10th a resolution was passed:

"That the Insurance Company should investigate all complaints, errors or accusations regarding malpractice defense received by them in writing."

In accordance with Section 1265 of the Medical Practice Act, Martin B. Tinker, James E. Sadlier and Frederic E. Sondern were nominated to fill the vacancy on the Grievance Committee left through the expired term on December 31st, 1932, of Dr. Tinker.

Under date of January 12th the following rules governing Malpractice Defense and Group Insurance prepared by the Insurance Committee were approved by the Executive Committee and referred to the House of Delegates for endorsement,

RULES GOVERNING MALPRACTICE DEFFNSE AND GROUP INSURANCE

MEMBERS NOT INSURED UNDER THE GROUP PLAN

The Medical Society of the State of New York will furnish to its members the services of the Counsel of the Society in actions brought for alleged malpractice, error, or mistake done or claimed to have been done in the legitimate performance of the duties of their profession as physicians under the following regulations:

The Counsel of the Society will serve as attorney in all actions for alleged malpractice, brought against members in good standing, who must be so certified by its Secretary, excepting as follows.

Members shall not be entitled to malpractice defense if the acts in the suit for which they make application for defense were committed prior to their admission to membership in the State Society.

Members shall not be entitled to malpractice defense if the acts in the suit for which they make application for defense were committed during a period when they were not in good standing, according to Chapter XIV, Section 4, of the By-Laws.

Members shall not be entitled to malpractice defense while residing and/or practicing medicine or surgery outside of the territorial limits of the State of New York.

The Society will not undertake the defense of any member who, after consideration by the Executive Committee, is believed guilty of criminal abortion, feticide, homicide, or any criminal act or who has not complied with the recognized ethical laws in regard to these cases.

Members shall agree not to compromise any claim against them, nor to make settlement in any manner without the advice or consent of the Society given through its attorney.

In the event that a member sued or threatened with suit shall, without the advice or consent of the attorney of the Society, determine to settle or compromise any claim against him, he shall reimburse the Society for the expense incurred in undertaking his defense, and in default thereof, he shall be deprived of further privilege of malpractice defense.

The Society shall not assume any responsibility for the payment of any sum agreed upon by arbitration in the settlement of claims, or awarded by court verdicts, or for making payments for any purpose whatsoever.

Members of the Society desiring to avail themselves of the privileges of this act shall make application therefor in writing to the Secretary of the Society, and it shall be shown to his satisfaction that they are members in good standing. They shall also furnish the Legal Counsel a complete and accurate statement of their connection with, and treatment of, persons upon which complaints against them are based, giving dates of attendance, names and residences of nurses and of other persons cognizant of facts and circumstances necessary to a clear and definite understanding of all matters in question, and shall furnish such other relevant information and execute such papers as may be required of them by the attorney of the State Society.

In the event of any difference of opinion between a member of the Society and the Counsel concerning the eligibility of a claim for defense, or any other matter having to do with inalpractice defense or indemnity, all details shall be presented to the Insurance Committee to be referred with recommendations to the Executive Committee of the Council for its decision.

The foregoing regulations are subject to such a change as may from time to time be authorized by the Executive Committee of the Council or the House of Delegates,

MYMBERS INSURED UNDER THE GROUP PLAN

All members in good standing shall be entitled to malpractice defense and indemnity in the Group Plan of Insurance on payment of the premium due on the policy selected but the amount of insurance protection granted to any member may be limited at the discretion of the Executive Committee of the Council, subject to petition for reconsideration.

If an assured shall fail to maintain in good standing his membership in the State Society, according to Chapter XIV, Section 4, of the ByLaws, the policy, so far as it applies to such assured, shall be cancelled as of the date upon which he ceased to be a member in good standing. A notice to this effect shall be mailed to the member's last address, and the Company will return upon demand and surrender of his certificate, the unearned premium due him on account of such cancellation. If the member is reinstated by payment of dues, the former policy cannot again be put in force but the member can secure a new policy under the same conditions as if he were a new member of the Society. This rule shall become operative if and when it is written into the policy of the Group Plan.

The Group Plan of Insurance shall insure a member within the limits of his policy against loss growing out of suits or claims for malpractice, error or mistake, committed or alleged to have been committed by an insured member in the legal practice of his profession or by any assistant of such a member, in the treatment or care of a patient previously seen and diagnosed by such a member and for whom the member has directed

a course of treatment or care.

The Group Plan of Insurance shall not cover the liability of an insured member on account of the use of x-ray for therapeutic treatment, the employment of partners, associates, assistants, technicians or nurses to practice medicine in his name independently of his personal diagnosis and specific instructions as to the treatment or care to be given, nor shall it cover the liability which such a member may have by reason of his participation in or ownership in whole or in part of any association, partnership, clinic, hospital, sanitarium, dispensary or any enterprise other than his private practice of medicine. The liability for such participation or ownership constitutes additional hazards not contemplated under the Group policy or rates, and losses on account thereof shall not be charged against the experiences of the Group Protection against these hazards shall, upon request and the payment of an additional premium, be furnished by the carrier by endorsement upon member's Group Plan Certificate or under an additional policy of insurance when

The Group Plan policy shall not cover the liability which an insured member may have on account of injury to patients from causes other than medical treatment, care or advice, nor for injury to persons other than patients from any cause whatsoever. Protection on account of such losses can only be had under general liability or workmen's compensation insurance.

When in the course of duties imposed upon him as a medical officer of the State, or any political sub-division thereof, an insured member shall be required to render medical opinion, he shall be fully protected under his Group Insurance against the consequences of such an opinion pro-

vided it shall have been given to competent authority and not made public by him.

All members in the Counties in Greater New York and Rockland, Westchester, Nassau and Suffolk, desiring insurance protection in the Group Plan of the State Society, shall secure that protection through the Authorized Indemnity Representative of the Society, Mr. Harry F. Wanvig.

MEMBERS INSURED BY COMPANIES OTHER THAN THE CARRIER OF THE GROUP PLAN

A member who elects to secure malpractice insurance protection from a company other than the Carrier of the Group Plan shall have the same right of defense by the Counsel of the Medical Society of the State of New York as those members not insured provided said carrier is authorized to do business in the State of New York. If the member desires this service under the circumstances, all the regulations as detailed above applying to members not insured under the Group Plan must be observed. At the time the action is begun and not later the Secretary of the Society shall be furnished with the name of the Insurance Company, policy number, date of policy and amount of insurance carried. There shall also be presented at the same time a letter from an authorized officer of the Insurance Company certifying that the Company will assume the full cost of the defense including the fees of the Counsel of the Medical Society of the State of New York similar to those paid by the Carrier of the Group Plan in like instance. Also that he shall not be required to consult with or receive instructions from the Company as to the manner of defense and that the Company will accept his opinion on the final disposition of the action.

As Companies other than the Carrier of the Group Plan usually compel the holders of their policies to accept defense by the Legal Counsel of the Company concerned, the above would not apply. It is essential, however, that members so insured shall also enjoy the benefits of the services of the Counsel of the Medical Society of the State of New York if desired but it is obvious that such service will be restricted by the rule of the Insurance Company cited above. Thus while the Legal Counsel of the Medical Society of the State of New York cannot be required under these circumstances to assume control of the defense or to appear as associate counsel, he shall be ready to render to the Counsel of the Insurance Company, if requested, a consultant's opinion and advice provided the Company concerned will compensate him for this service in the same manner as the Group Plan Carrier would do if the member was thus insured.

All previous resolutions heretofore adopted, pertinent to malpractice claims and defense, are hereby rescinded.

Under date of February 9th, Louis A Van Kleeck, Harold L Barnes, George W Kosmak and Walter Lester Carr were appointed a Special Committee to consider the question of State Control of Certified Milk

James N Vander Veer was appointed Chair man Hyzer W Jones and Albert G Swift members of a Special Committee to confer with Commissioner Parran in regard to the Problem of Emergency Unemployment Relief in New York State

Daniel S Dougherty and Arthur W Booth were appointed a Committee on Transportation to the American Medical Association

A resolution presented by the Medical Society of the County of New York regarding the rendering of Joint Bills was not approved, as it was not deemed advisable for the Executive Committee to assume such a responsibility, as the resolution was considered to be in conflict with the Fellowship Pledge of the American College of Surgeons which provides that the practitioner obtain his compensation directly from the patient

The following resolutions were passed

That Dr Rypins, Sceretary of the State Board of Medical Examiners be written that the State Society is now ready to carry out the resolution of the House of Delegates, and asks that action be taken immediately against the Life Extension Institute

That the House of Delegates be memorialized concerning the continuation of the Committee To Prepare a History of Medicine in the State of New York and the Committee to Consult with the Saratoga Springs Commission in its Effort to Develop the Mineral Resources of Saratoga Springs

THE JOURNAL

The New York STATE JOURNAL OF MEDICINE for the year 1932 has continued its established policy of being the official organ of the Medical Society of the State of New York and of its com ponent units-the eight District Branches and the sixty County Medical Societies It covers the field of the practice of the individual physician, and also the field of activities of the Medical So It has maintained a proper balance of space devoted to these two fields and to commercial advertising, so that approximately one third of the Journal consists of scientific articles relat ing to the individual practice of medicine, one third to the activities of the medical societies, and one third to advertising. This allotment of space has not been the result of deliberate planning, but it has come about because the available material comes to the editorial office in surprisingly regu hr flow and uniformity of range. This division of space by pages during the last three years is shown in the following table

	1930	1931	1932
Seientific	537	573	576
Editorial	74	73	64
Medical Progress	96	96	96
Legal	62	70	66
News	220	272	270
Our Neighbors	137	153	129
Daily Press	48	48	44
Book Reviews	46	44	46
Advertising	615	633	565
	1835	1962	1856

The choice of articles in the scientific department of the Journal has been made from the point of view of the general practitioner in accordance with the opinion frequently expressed by outstanding medical leaders, such as Dr Frank Billings, that 'Tamily doctors should be able to give the best scientific service to ninety-five per cent of all sick persons" Most papers read before the several scientific sections of the State Society are addressed to general practitioners, for what is the advanced practice of specialists to day becomes the ordinary practice of family doc Many authors of the State papers tors tomorrow in the specialties ask the privilege of editing them so as to adapt the articles to general practitioners, and the other authors have edited the papers on being asked to do so The peculiar function of the scientific department of the Journal is to take up what the Commission on Medical Education calls the "Lag" between the production of knowledge by research workers and its distribution to general practitioners of medicine

The amount of space devoted to the several divisions of medical practice has been well bal anced as is shown in the following table

Analysis of the Subjects of Scientific Articles in the Journal for 1932

THE COME IN THE	Jookin	T JOR I	752
Nu	Number of		
Subject A	rticles	Pages	of Space
Medicine	50	215	37
Surgery	24	93	16
Genito-Urinary	13	45	8
Gynecology and Obstetrics	11	39	7
Pediatrics	13	49	8
Mental	2	6	
Laboratory	2	6	
Skin	8	40	7
Eye Ear Nose and Throat	7	24	4
Economics & Administrative	19	75	13

An analysis of this table shows that articles on Internal Medicine have filled about one third of the scientific department of the Journal, articles on surgery, about another third, while articles

on the other specialties and on economics, and medical administration fill the other third.

The subjects of Medical Economics and Medical Administration are set forth in a concrete way in the two departments of News Notes and Our Neighbors. The articles in these departments record the actual practice of the activities of Medical Societies in distinction from an exposition of the science, philosophy, and history of those activities.

The size and importance of the news depart-

ments of the Journal have kept pace with the phenomenal growth of the interest which physicians have taken in the practice of public medicine. The time is rapidly approaching when this branch of medical activity will be practiced to such an extent that a special department of the Journal may be assigned to it.

Respectfully Submitted.

Daniel S. Dougherty, Secretary.
February 15, 1933.

REPORT OF THE COMMITTEE ON MEDICAL RESEARCH

To the House of Delegates: Gentlemen:

In behalf of your Committee on Medical Research I have the honor to present the following report:

For six months prior to the current session of the Legislature sporadic newspaper publicity made it apparent that a new society headed by Miss Mabel Orgelman and called the New York Committee Against Vivisection on Dogs had entered the field of objectors to scientific experimentation on animals. This in addition to the older New York Antivivisection Society of which Mrs. Diana Belais has remained President.

Soon after the opening of the Legislature. Assemblyman Vaughan introduced his perennial bill to exempt the dog from all experimentation, which measure is sponsored by the N. Y. Antivivisection Society. Some day later, Assemblyman Bernhardt introduced a new bill, with exactly the same object and sponsored by the N. Y. Committee Against Vivisection on Dogs. Both of these measures are now in the hands of the Assembly Committee on Codes and a hearing on them is scheduled for March 14 next. Assemblyman Bernhardt also introduced a resolution for the appointment of a Commission to investigate all laboratories in the State and report to the

Legislature on or before February 1, 1934, with an appropriation of \$2,500. This resolution is it the hands of the Assembly Committee on Ways and Means.

Your Committee has made the usual endeavor to inform the legislators and the public of the danger to public health and medical progress the enactment of the proposed laws would entail. To aid in this purpose, two pamphlets were distrib-The one, a reprint of the Cannon and Drinker article, "The Dog's Gift to the Relief of Suffering," which details the latest achievements in medicine which are the result of experiments on dogs. The other, "Why Animal Experimentation is necessary for the General Welfare," includes a collection of letters from outstanding citizens of the State, among them the Presidents of the various universities, uniformly condemning any interference with properly conducted animal experimentation.

Your Committee will be suitably represented at the hearing on the measures in question and hopes to succeed in convincing the legislators that these proposed laws are contrary to the best interests of the public.

Respectfully submitted,
FREDERIC E. SONDERN, Chairman.
February 15, 1933.

REPORT OF THE COMMITTEE ON ARRANGEMENTS

To the House of Delegates: Gentlemen:

Your Committee on Arrangements announces the following arrangements for the Meeting of the Medical Society of the State of New York, to be held on Monday, Tuesday and Wednesday, April, third, fourth and fifth, at the Waldorf-Astoria Hotel, New York City.

All arrangements are completed for the meeting of the House of Delegates. Fine exhibits, both technical and scientific, will be given.

The Delegates Dinner, which will be held on the evening of the meeting of the House of Delegates, will be a little unusual this year insomuch as the President has arranged for two guest speakers to present two issues of vital importance to the profession. One is "Compulsory Health Insurance and Panel System" by Dr. Emil Koffler; and the second is "The Participation of the Physician in Public Health Work" by Dr. Henry Vaughan of Detroit. There will be present at the dinner Dr. George C. McCleary, of London, who is Deputy Senior Commissioner of Health.

On Tuesday, the Annual Banquet-Meeting of the Medical Society of the State of New York will be held, under the presidency of Dr. Chas. Gordon Heyd. At this dinner, a few men of national reputation and authority will speak on the future of medicine and the responsibility of the community to the physician. The details of the program wil be published in the STATE JOUR-

NAL at the proper time.

There is an additional feature which we have arranged for this year; namely, dancing on the roof garden of the Waldorf-Astoria after the dinner speeches, which are going to be definitely fixed for certain hours. It is hoped that the members and their wives will utilize their dinner tickets to come to this social gathering.

Arrangements are completed for the Section Meetings and for two General Meetings in the Grand Ballroom on Tuesday and Wednesday afternoons. On Wednesday evening, there is to be an Open Forum Meeting, to which the public will be admitted on presentation of tickets. Very short addresses, on questions the public should know, are to be given by men of national reputation and authority. All in all, we look forward to

an enjoyable and instructive meeting. All who ean should arrange to be present.

The Committee on Arrangements desires the profession to know that the tickets for the dinner are expected to be in demand; and seating lists will close the Saturday evening preceding the meeting. There will, of course, be unassigned seats in the back of the room. Seats will be reserved in the order in which applications are received. It is respectfully suggested that all who read this send for their reservations by mail to The Medical Society of the State of New York, 2 East 103rd Street, New York City. The tickets for both the dinner and the dance are five dollars.

Respectfully submitted
SAMUEL J. KOPETZKY, M.D.,
Chairman,

February 15, 1933.

REPORT OF THE BOARD OF TRUSTEES

To the Members of the House of Delegates:

The Board of Trustees met regularly at two month intervals during the past year. Realizing the responsibility of conserving resources and maintaining a balanced budget, all proposals for the expenditure of funds of the Society were carefully weighed before given approval. It is gratifying to report that the activities of the Society have been maintained within the limits of the budget, and that the financial condition of the Society remains satisfactory.

Reference was made last year to the depreciation in market value of some of the investments. We are pleased to report that since then there has been a recovery amounting to \$7,838.75. During the past fiscal year, ten one-thousand U. S. Treasury bonds were purchased and placed in the investment fund which now totals \$104,401.50 (market value as of December 31, 1932). It is recommended to continue the policy of annually

augmenting this investment fund.

The Trustees again urge upon the Delegates and all those proposing activities which involve the expenditure of funds, to carefully consider the ultimate cost to the Society. Momentous problems, possibly epochal in character, now confront the profession. These must be met with intelligence and vigor, and unquestionably will require substantial sums to preserve our present professional ideals and status. We must put our house in order and be amply prepared. For this

reason, if for no other, the Trustees recommend that the present annual dues be maintained, and that all reasonable efforts be directed towards economy.

An analysis of the disbursements of a member's annual dues shows that less than eighty cents go to the investment fund. Personal benefits of Legal Defence, the Journal, and the Directory consume a considerable portion, while the remainder defrays executive office expenses and the cost of the various Society activities, all of which originate in the House of Delegates and the Excutive Committee. The members should also consider that a vast amount of time and conscientious work are donated annually by the officers and those composing the various committees, the benefits of which are shared by the entire membership.

It is very evident that a reduction in dues will necessarily demand curtailment of Society activities, and that no discussion of change of dues is logical without considering this fact.

The Board desires to express its appreciation of the Treasurer, Dr. Sondern, who attended all our meetings and whose valuable advice has been of inestimable aid, particularly on investment matters.

ARTHUR W. BOOTH, M.D., Chairman.

February 15, 1932.

REPORT OF THE TREASURER

	HEET, DECEMBER 31, 1932
Assets	Liabilities, Trust Funds and Surplus
CURRENT ASSETS:	Deferred Income: 1933 Annual Dues Received in
Cash Pctty Cash \$43.84	Advance \$1,940.00
In Banks 2,916.39	TRUST FUNDS:
\$2,960.23	Lucien Howe Prize Fund \$3,189.22 Merritt H. Cash Prize Fund 1,772.28
	Wear, Tear, Loss and Depreci-
Accounts Receivable—	ation Fund
Journal Advertising 1,630.21 Directory Advertising 2,515.00	Directory Fund
Directory Sales 425.00	42.274.87
4,570.21	Surplus (General Fund): Balance—January 1, 1932\$106,233.46
, , , , , , , , , , , , , , , , , , ,	Deduct:
Investments—(Bonds—Par Value \$96,000.00—Cost \$94,785.26) At	Printing 1931 Directory.\$13,173.34
Market Value 74,877.75	Furniture and Fixtures purchased and charged
Acrued Interest on Investments 1,268.18	off 376.00
\$83	Disbursement to compo- 3,676.37 nent County Soci-
·	eties at \$1.00 per paid
TRUST FUND ASSETS: Union Dime Savings Bank—	member as of June
Lucien Howe Prize	30, 1932 10,176.00 Write-down of General
Fund 854.43	Fund Investments
Merritt H. Cash Prize Fund 496.92	to Market Value 19,907.51 43,632.85
120,74	Apd: \$62,600.61
\$1,351.35	Transfer of Account
Investments—(Bonds—Par Value	Committee Medical Research Trust Fund \$465,47
\$47,000.00—Cost \$45,415.00) At	Transfer balance Re-
Market Value	serve Amortization Bond Premium Ac-
Investments	count
Cash in Banks	Excess of Income over
42	Expenses for the 2,274.87 Twelve Months End-
FIXED ASSETS:	ed December 31, 1932 18,526.62 19,136.76
	17,100.70
Furniture and Fixtures	
	1.00 BALANCE — December 31, 1932
\$125,	1.00 BALANCE — December 31, 1932 81,737.37
\$125 JOURNAL ACCOUNT FOR TW	1.00 BALANCE — December 31, 1932 81,737.37
JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$20,022.20	1.00 BALANCE — December 31, 1932
JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage	1.00 BALANCE — December 31, 1932
JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 1,657.92	1.00 BALANCE — December 31, 1932
### State	1.00 BALANCE — December 31, 1932
\$125 JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage \$3,867.62 Rent \$1,657.92 Office Salaries \$4,640.25 Commissions \$7,423.99 Discounts \$1,035.20 Honorarium—Editor in Chief	1.00 BALANCE — December 31, 1932
\$125 JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage \$3,867.62 Rent \$1,657.92 Office Salaries \$4,640.25 Commissions \$7,423.99 Discounts \$1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary	1.00 BALANCE — December 31, 1932
\$125 JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 4,640.25 Commissions 7,423.99 Discounts 1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary 4,750.00 Traveling Expense 50.08 Literary Editor's Salary 1,035.20	1.00 BALANCE — December 31, 81,737.37 \$125,952.24
\$125, JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 4,640.25 Commissions 7,423.99 Discounts 1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary 4,750.00 Traveling Expense 50.08 Literary Editor's Salary 1,200.00 Stationery 1,200.00	1.00 BALANCE — December 31, 81,737.37
\$125, JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 4,640.25 Commissions 7,423.99 Discounts 1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary 4,750.00 Traveling Expense 50.08 Literary Editor's Salary 1,200.00 Stationery 137.81	1.00 BALANCE — December 31, 81,737.37 \$125,952.24
\$125 JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 4,640.25 Commissions 7,423.99 Discounts 1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary 4,750.00 Traveling Expense 50.08 Literary Editor's Salary 1,200.00 Stationery 1,200.00 Subscriptions 119.37 Telephone 119.37 Traveling Expense—Adv. Manual 150.83	1.00 BALANCE — December 31, 81,737.37 \$125,952.24
\$125, JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 4,640.25 Commissions 7,423.99 Discounts 1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary 4,750.00 Traveling Expense 50.08 Literary Editor's Salary 1,200.00 Stationery 137.81 Subscriptions 119.37 Telephone 119.37 Traveling Expense—Adv. Manager 56.35 Bad Debts Charged Off 36.00	1.00 BALANCE — December 31, 81,737.37 \$125,952.24
\$125 JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 4,640.25 Commissions 7,423.99 Discounts 1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary 4,750.00 Traveling Expense 50.08 Literary Editor's Salary 1,200.00 Stationery 137.81 Subscriptions 119.37 Telephone 150.83 Traveling Expense—Adv. Manager 56.35 Bad Debts Charged Off 36.00 Office and Sundry Expenses 400.53	1.00 BALANCE — December 31, 81,737.37 \$125,952.24
\$125, JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 4,640.25 Commissions 7,423.99 Discounts 1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary 4,750.00 Traveling Expense 50.08 Literary Editor's Salary 1,200.00 Stationery 137.81 Subscriptions 137.81 Telephone 150.83 Traveling Expense—Adv. Manager 56.35 Bad Debts Charged Off 36.00 Office and Sundry Expenses 400.53	1.00 BALANCE — December 31, 81,737.37 \$125,952.24
\$125. JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 4,640.25 Commissions 7,423.99 Discounts 1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary 4,750.00 Traveling Expense 50.08 Literary Editor's Salary 1,200.00 Stationery 137.81 Subscriptions 119.37 Telephone 119.37 Telephone 150.83 Traveling Expense—Adv. Manager 56.35 Bad Debts Charged Off 36.00 Office and Sundry Expenses 400.53	1.00 BALANCE — December 31, 81,737.37 \$125,952.24
\$125 JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 4,640.25 Commissions 7,423.99 Discounts 1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary 4,750.00 Traveling Expense 50.08 Literary Editor's Salary 1,200.00 Stationery 137.81 Subscriptions 119.37 Telephone 119.37 Telephone 150.83 Traveling Expense—Adv. Manager 56.35 Bad Debts Charged Off 36.00 Office and Sundry Expenses 400.53 Publication—Printing Expenses	1.00 BALANCE — December 31, 81,737.37 \$125,952.24 FLVE MONTHS ENDED DECEMBER 31, 1932 Income \$33,846.80 Subscriptions and Sales \$412.38 Bad Debt Collected 54.00 Income from Dues 12,330.00 \$46,643.18 Net Cost of Journal 9,316.13 \$55,959.31 VELVE MONTHS ENDED DECEMBER 31, 1932
\$125 JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage \$3,867.62 Rent \$1,657.92 Office Salaries \$4,640.25 Commissions \$7,423.99 Discounts \$1,035.20 Honorarium—Editor-in-Chief \$500.00 Executive Editor's Salary \$4,750.00 Traveling Expense \$50.08 Literary Editor's Salary \$1,200.00 Stationery \$1200.00 Stationery \$137.81 Subscriptions \$19.37 Telephone \$150.83 Traveling Expense—Adv. Manager \$6.35 Bad Debts Charged Off \$36.00 Office and Sundry Expenses \$400.53 Publication—Printing \$12,255.25 Salaries \$12,255.25 Commissions \$4,821.59	1.00 BALANCE — December 31, 81,737.37 \$125,952.24
\$125, JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 4,640.25 Commissions 7,423.99 Discounts 1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary 4,750.00 Traveling Expense 50.08 Literary Editor's Salary 1,200.00 Stationery 137.81 Subscriptions 119.37 Telephone 150.83 Traveling Expense—Adv. Manager 56.35 Bad Debts Charged Off 36.00 Office and Sundry Expenses 400.53 Publication—Printing \$12,255.25 Commissions \$12,255.25 Commissions 4,821.59 Discounts 557.50	1.00 BALANCE — December 31, 81,737.37 \$125,952.24
\$125, JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage \$3,867.62 Rent \$1,657.92 Office Salaries \$4,640.25 Commissions \$7,423.99 Discounts \$1,035.20 Honorarium—Editor-in-Chief \$500.00 Executive Editor's Salary \$4,750.00 Traveling Expense \$50.08 Literary Editor's Salary \$1,200.00 Stationery \$137.81 Subscriptions \$137.81 Telephone \$119.37 Telephone \$19.37 Telephone \$150.83 Traveling Expense—Adv. Manager \$6.35 Bad Debts Charged Off \$36.00 Office and Sundry Expenses \$400.53 Publication—Printing \$12,255.25 Commissions \$12,255.25 Commissions \$4,821.59 Discounts \$57.50 Delivery \$12,50	1.00 BALANCE — December 31, 81,737.37 \$125,952.24
Size	1.00 BALANCE — December 31, 1932
### Subscriptions 137.81	1.00 BALANCE — December 31, 1932 81,737.37 \$125,952.24 ELVE MONTHS ENDED DECEMBER 31, 1932 Income \$33,846.80 Subscriptions and Sales 412.38 Bad Debt Collected 54.00 Income from Dues 12,330.00 Net Cost of Journal 9,316.13 Net Cost of Journal 9,316.13 VELVE MONTHS ENDED DECEMBER 31, 1932 Income Advertising \$3,955.00 Sales 3,556.32 Income from Dues 12,330.00 \$19,841.32
\$125. JOURNAL ACCOUNT FOR TW Expenses Publication—Printing and Cuts \$29,933.36 Postage 3,867.62 Rent 1,657.92 Office Salaries 4,640.25 Commissions 7,423.99 Discounts 1,035.20 Honorarium—Editor-in-Chief 500.00 Executive Editor's Salary 4,750.00 Traveling Expense 50.08 Literary Editor's Salary 1,200.00 Stationery 137.81 Subscriptions 119.37 Telephone 150.83 Traveling Expense—Adv. Manager 56.35 Bad Debts Charged Off 36.00 Office and Sundry Expenses 400.53 Publication—Printing \$12,255.25 Commissions 4,821.59 Discounts 557.50 Delivery 12.50 Stationery 1,994.49 Postage 371.50	1.00 BALANCE — December 31, 1932
Size Size	1.00 BALANCE — December 31, 1932 81,737.37 \$125,952.24 ELVE MONTHS ENDED DECEMBER 31, 1932 Income \$33,846.80 Subscriptions and Sales 412.38 Bad Debt Collected 54.00 Income from Dues 12,330.00 Net Cost of Journal 9,316.13 Net Cost of Journal 9,316.13 VELVE MONTHS ENDED DECEMBER 31, 1932 Income Advertising \$3,955.00 Sales 3,556.32 Income from Dues 12,330.00 \$19,841.32

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REPORT OF THE TREASURER

STATEMENT OF INCOME AND EXPENSES FOR TWELVE MONTHS ENDED DECEMBER 31, 1932

Expenses			Income
Committee on:			Annual Dues Received:
Legislation	\$4,892.30		Arrears \$348.00
Public Health and Medical Edu-			1930 180.00
cation	6,895.06		1931 9,450.00
Medical Economics	1,201.27		1932 113,323.00
Physical Therapy	404.11		Total Dues Received \$123,301.00
Periodic Health Examination	516.06		, ,
Scientific Work	352.89		l.ess:
Public Relations	2,379.98		Dues Credited to Juurual Account \$12,330.00
Medical Research	394.15		Dues Credited to Directory Ac-
Press Publicity	217.89		count
County Secretaries' Conference	533.14		Balance
Tri-State Conference	94.65		Interest Earned on General Fund Investments 4,001.20
Special Meeting, House of Dele-			Interest on Bank Balances
gates	83.00		Clerical Work
District Branches	1,889.19		
Special Appropriation-District			
Branches	200.00		
Executive Officer's Salary	8,500.00		
Executive Officer's Expenses	1,310.54		
Secretary's Honorarium and Ex-			
penses	3,550.00		
Salaries—General	14,287.12		
Legal Expenses	13,395.85		
Traveling Expenses:			
A. M. A	2,124.65		
General	3,233,91		
Assistant Secretary's Salary	300.00		
Annual Meeting-1932	829.90		
Auditing	565.00		
Rent	2,900.04		
Stationery and Printing	991.65		
Postage	592.01		
Telephone	146.95		
Custodian Fees (Investments)	116.00		
Annual Meeting-1933	20.00		
Office and Sundry Expenses	943.21		
Total		73 860 52	
Net Cost of Journal Transferred f		70,000.02	
nal Account		9,316.13	
Net Cost of Directory Transfer		,	
Directory Account		1,285.57	
Total	\$	34,462.22	
Excess of Income Over Expenses To			
to Surplus	· · • · · · · · · · · 1	18,526.62	•
	\$10	2,988.84	\$102,988 84
			φευ2,980 84

The above accounts have been audited and found correct by Wolf & Company, C.P.A., New York State.

Respectfully submitted, Frederic E. Sondern, '.

REPORT OF THE COMMITTEE ON PUBLIC RELATIONS

To the House of Delegates:

Gentlemen:

Your Public Relations Committee, now consisting of seven members instead of five as heretofore, is as follows:—William H. Ross, M.D., Secretary, Brentwood; George M. Fisher, M.D., Utica; Oliver W. H. Mitchell, M.D., Syracuse; Augustus J. Hambrook, M.D., Troy; William D. Johnson, M.D., Batavia; Thomas H. Cunningham, M.D., Glens Falls, and James E. Sadlier, M.D., Chairman, Poughkeepsie.

This committee has continued to form contacts with the various governmental and lay organizations working in the health field. These conferences have been most satisfactory in establishing harmonious and cooperative action, demonstrating the wisdom of the society in developing a committee such as this, to whom the various governmental departments, especially the State Department of Health, The State Department of Education as well as the lay health organizations, can appeal in order to obtain the viewpoint of the medical profession. It is doubtful if there has ever been quite as satisfactory a relationship between the medical profession and these various groups as exists at the present time. Your Committee considers that this alone justifies its existence and the necessary expenditure of money.

In order to form a closer relationship with the chairmen of the Public Relations Committees of our sixty county medical societies, this committee divided the state into ten regional districts and is meeting each month in one of these districts. During the forenoon the committee meets in executive session and transacts such state-wide business as is required. The meeting is continued during the afternoon as a regional conference with the chairmen of the Public Relations Committees of the counties in that section of the state. Eight regular and many special meetings have been held so far this year.

We are impressed with the importance of this arrangement which enables us to determine and evaluate just how each county society is handling its medical public relations. At the same time it gives your committee a chance to advise with and suggest to each county chairman plans of procedure.

In addition to the chairmen of the Public Relations Committees of the County Medical Societies we also invite to these conferences a few of the key men or leaders of the medical profession in that particular district. Hence we have a round table conference which cannot help but be valuable in the establishment of more harmonious cooperation between the medical profession and the various health agencies.

In our letter of invitation to the county chairmen we endeavor to outline the particular fea-

tures of the conference which we hope they will discuss, as for example:—

1. What has your committee done to help establish a working relationship with the governmental and lay health organizations?

2. Are you cooperating at the present time in

any important piece of health work?

3. What educational health activities are occurring in your county?

4. What are your physicians doing to secure satisfactory support from the Board of Supervisors with reference to Public Health activities?

5. Is the profession assuming a leadership in

your county in all health programs?

Your committee is receiving most enthusiastic support from the chairmen of the County Medical Societies Public Relations Committees.

Furthermore, we are impressed by the fact that the work done in the past six years by your committee has developed a large amount of real earnest work in the county units, hence we feel encouraged by the results of our efforts.

The following bulletin issued to our county chairmen, presidents and secretaries of the county societies and others, outlines the "Aims & Pur-

poses" of this committee.

"The Public Relations Committee of the Medical Society of the State of New York herewith submits a statement of the Aims and Objectives which it will strive to achieve during the year.

"This committee is undertaking to translate into County Medical Society activity the knowledge that it has gained of the problems of medicine in the last six years. In the beginning the work of the committee was largely fact finding. As information has spread the need for constructive activity in the problems of medicine has increased. The aim of the Public Relations Committee is to assist the physicians of the County Medical Societies in providing the public with the best medical service possible. This is the prime objective. Achievement, however, will depend upon a number of factors; among them three stand out as most important.

"1. By creating harmony among all medical and public health workers. There is an interrelation between all agencies seeking improvement in health and medical services. If the Public Relations Committee can help to develop a common program between all agencies in health work, it will have accomplished its primary purpose.

"2. By aiding the public to recognize good medical service. The rapid advancement in medical knowledge and medical practice makes it necessary to keep the public correctly informed so that it may reap the full benefit of the advancement in medicine. The Public Relations Committees of the County Societies should feel

a responsibility to the people of their counties for a correct knowledge of what is good medical practice and what the citizen should do to protect his health. Some of the county societies are already engaged in doing this by giving radio talks and addresses at public mass meetings or in places of industry. Some are making use of newspapers in describing good medical procedure. One of the serious conditions which must be thought of in publicity is the danger of encouraging self-diagnosis and self-treatment. The Public Relations Committee in entering this field is stressing particularly the importance of the advice and counsel of the family physician.

"3. By stimulating physicians to become active members of public movements in health and welfare. Physicians should take a leading part in all lealth activities just as the Bar has done in political or historical activities. Physicians should have a similar feeling regarding their position in health and welfare activities and they should feel that it is their prerogative to join with official bodies in developing health and welfare programs.

"The technique of putting these suggestions into operation must be worked out by each County Medical Society Committee. It is not expected that a program can be devised that will fit each county. Local conditions must be considered by the Public Relations Committee of each county

medical society.

"A basic need is harmony and cooperation between the physicians represented by County Medical Societies and official and unofficial health organizations. Physicians should take a civic interest in public health and medical service problems. Wherever public health can be directed by local physicians, it should be done.

"It is increasingly apparent to this committee that the problems of medical public relations must be solved in the County Medicol Society and that the function of the State Public Relations Committee is to stimulate interest in the solution of medical problems by the County Medical Society and to take leadership in the solution of problems that are state-wide. For example, in some departments of the state service full time men are permitted to engage in private practice of medicine. The Public Relations Committee is now engaged in an effort to correct this.

gaged in an effort to correct this.

"A primary problem in County Society administration is to inform and arouse the interest of its members in their own behalf and in behalf of public welfare, so that physicians may become leaders in the solution of medical problems. In the present period of general unrest and the many influences at work toward the solutions of medical problems, the profession of medicine should

give intelligent leadership.

"There are many opportunities for the profession to improve public welfare and at the same time their own economic status, by helping to

meet present-day problems. To this end the Public Relations Committee is holding this year regional conferences for the purpose of hearing a discussion of the problems of medicine from each County Society of the State and for receiving their suggestions of how these problems can be met and then coordinating them in a policy of public relations which will meet the situation between the profession, unofficial and official health agencies, and satisfactorily solve the conomic relation of the profession to the administration of these services of whatever kind they may be."

Your committee, in conjunction with the Committee on Public Health and Medical Education and the Division of School Inspection of the State Department of Education, is stimulating greater interest in medical examination of school children. This work is in some localities most efficiently performed, but we regret that in many localities it does not meet adequate standards, Furthermore, it is to be deplored that more of this work is not performed by the family physician. At the present time throughout the upstate section, but fifteen per cent is so handled. In view of these facts the following letter was formulated, received the approval of your Executive Committee and was mailed to school superintendents, medical examiners, members of Public Relations Committees and others throughout the state who are or should be interested in this important subject.

Subject: School Medical Inspections.

"The Medical Society of the State of New York, through its Committees on Public Relations and Public Health and Medical Education, has been cooperating with the Bureau of School Medical Inspection of the Department of Education, with the object in view of making these school examinations a serious and painstaking investigation of the physical condition of the child.

"It is the wish of the Medical Society of the State of New York and of the Department of Education that these school examinations shall be made by the family physician when possible, and in this way not only obtain for the child the result of such examination by the home doctor but, likewise, impress upon the mind of the youth of this country the necessity for a careful evaluation of their physical condition, with the hope that in later years, when they are men and women, they will still carry on and have such annual physical examinations.

"At the present time altogether too few physical examinations of school children are made by the family physician. We hope that in the future this will be different.

"In the Borough of Brooklyn and the Borough of Queens, approximately fifty per cent of such examinations are made by the family physician, and this year the Bronx County Society reported

that above ninety per cent of the high school children were examined either by the family physician or by physicians appointed by the County Medical Society to do the work. Why can we not have the same conditions in the rest of the state?

"It may not always be possible or practicable for the school children to be examined by the family physician, and in many such instances regularly employed physicians are doing the work thoroughly and conscientiously, with very satisfactory cooperation from school officials. It is not intended that this communication should interfere in those places, but rather that it should help support school officials and physicians so employed where conditions are less favorable, to achieve more efficient and satisfactory examinations

"It is to be hoped that proper and adequate facilities will be furnished and that there will exist between the medical examiner and the school authorities a mutual feeling of harmony and cooperation in the handling of this important piece of work, which may mean so much to the future health and happiness of the child.

"To the school medical inspectors throughout the state we beseech your very earnest coopera-

tion."

The Executive Committee has from time to time, referred certain matters to this committee for investigation and adjustment, all of which requests have been complied with and reported back to the Executive Committee.

The following are some of the subjects which have been considered and investigated by this

committee during the past year:

A study and ultimate decision with reference to the project about to be undertaken for the control of Venereal Disease by the State Charities Aid Association through its State Committee on Tuberculosis and Public Health.

A thorough investigation is being conducted with reference to the Department of Correction allowing full time physicians to engage in private practice in their particular locality to the detriment of local medical men. This subject is one of vital importance and through lack of correction has become a state-wide evil. Your committee would appreciate and desires the approval of the House of Delegates to continue this investigation and endeavor to correct the abuse of full time physicians, paid by the State, entering the private practice of medicine, thereby interfering with the normal practice of medicine by general prac-Naturally, this should not interfere with such men being used as consultants at the request of local medical men providing such consultations do not conflict with their duties to the

Conferences with the Medical Inspection Bureau of the State Education Department with reference to preschool and school examinations. Co-

operating with the Medical Inspection Bureau of the State Department of Health with relation to anti-tuberculosis work in the schools of the state. Conferences with reference to state aided county hospitals. Conference with a committee of the Nassau County Medical Society with reference to the care of the crippled children of that county. Report of the Ratio of Hospitals to Population. This latter subject was suggested by a member from Buffalo and referred to this committee but was not made as it centered around the general municipal law and should be cared for by the legal department.

The Chairman of this committee or the Executive Officer, Dr. Lawrence, representing the chairman, has attended the meetings of the Coordinating Committee of the five counties comprising the Metropolitan District. By so doing much valuable information has been obtained as to Medical Relations as they exist in the greater city and their influence over the state. Your chairman desires to express his appreciation to the members of the Coordinating Committee for the courtesy of being invited to participate in their conferences.

Your committee has issued bulletins frequently to the county committees and other members interested in our work. These bulletins serve the purpose of stimulating the county committees and also supplying them with necessary information regarding the aims and activities of the State Committee. We believe that such bulletins are a real factor in helping to produce a most agreeable relationship between this committee and its county units, resulting in a decided betterment in medical relations throughout the state.

Again this year, we are pleased to report that the Deans of the nine Medical Schools of the state have each signified their desire to have a member of this committee deliver a lecture to the third and fourth year students upon the subject "Organized Medicine and Medical Laws."

The committee selected Dr. William H. Ross, a past president of this society, to deliver this course of lectures. The cordial response of the medical schools of the state to this innovation upon the part of organized medicine is appreciated by the committee.

This should form a connecting link between the future physician and the organized medical profession and instruct him with reference to civic medicine and the laws affecting the practice of medicine.

The above represents a few of the many subjects that have been considered.

Throughout the year there has been a very cooperative relationship between this committee and the Committee on Public Health and Medical Education through its chairman, Dr. Thomas P. Farmer, who has attemded our meetings and conferences and given unstintingly of his time and valuable advice. The work of these two commit-

tees interlocks to a very great extent.

We desire to acknowledge our indebtedness to our Executive Officer, Dr. Joseph S. Lawrence, for the faithful and invaluable service he has rendered this committee throughout the year. It would be quite impossible to carry on this work and develop the necessary contacts without his advice and assistance.

The committee wishes to express its appreciation to the Editors of the New York State Journal or Medicine for having given a large amount of space to reporting its activities, there-

by enabling it to develop a correct amount of publicity and bring before the medical profession the result of its work,

Your committee is definitely impressed with the fact that the organized medical profession in the counties of the state is taking a deeper and broader view of the civic responsibilities of medicine. In many counties it has extended to the point where medical leadership is definitely in evidence in all that pertains to health work.

Respectfully submitted,
JAMES E. SADLIER, M.D., Chairman.

February 15, 1933.

REPORT OF THE COMMITTEE ON SCIENTIFIC WORK

To the House of Delegates: Gentlemen:

Your Committee on Scientific Work has been active during the past year. Each Section Chairman has endeavored to develop an instructive program and we are sure you will be pleased with the excellence and wide range of topics presented for the advancement of medical knowledge.

Section meetings will be lioused in comfortable, attractive, well-ventilated quarters. These arrangements have been made possible by the cooperation of the Committee on Arrangements and the management of the Waldorf-Astoria. Particular attention has been given to the requirements of each Section and we trust that the members will find the rooms not only comfortable but accessible. The final program will give explicit directions for reaching each Section.

The opening General Session, Tucsday afternoon, will be given over to a symposium on, "Dental Conditions as They Affect General Health." This innovation was arranged by Dr. Theodore Blum and Dr. Peter Irving, who were able to induce extremely well qualified men to open the Session with carefully selected topics. This joint gathering will add another link to our chain of intimate associations and bring medicine and dentistry into closer harmony.

The other General Session, Wednesday afternoon, will be devoted to the consideration of "Some Disorders of Liver Function." The essayists have had unusual experience and their contributions will be most instructive.

We are happy to announce that the President of the American Medical Association, Dr. Edward H. Cary of Dallas, Texas, will be with us and also that Dr. Olin West, Secretary of the American Medical Association, will favor us with his counsel and presence.

The Committee feels confident that the members will profit by attending all of the Sessions which have been so carefully prepared for their edification.

The Scientific Exhibit, instituted last year, will occupy much more space and under the efficient direction of Dr. Frederic E. Sondern will be well shown. The Committee on Arrangements has planned so that those who register will be routed through the Exhibit and all will be amply repaid for the time spent in the display room where the practitioner will find many excellent demonstrations.

The program for Monday, April 3rd, the Clinical Day, is under the direct supervision of Dr. Irving and his local assistants. A complete list of hospitals, operations, ward rounds and other attractive features will be available when you register. It is our earnest hope that a large crowd will come to New York City on Monday to receive the full benefit of these clinics.

The printed program will follow the lines inaugurated last year and will include not only the author's title but also a brief abstract of the material that he is to present.

The Chairman takes this opportunity to express his appreciation of the work of the Chairmen of the individual Sections, the tireless energy of Dr. Sondern, the whole-hearted support of Dr. Irving and the skillful help of Dr. Heyd, Dr. Dougherty and Dr. Kopetzky.

Respectfully submitted,
ARTHUR J. BEDELL, Chairman.
February 15, 1933.

REPORT OF THE COMMITTEE ON PUBLIC HEALTH AND MEDICAL EDUCATION

To the House of Delegates:

Gentlemen:

Your Committee on Public Health and Medical Education begs leave to submit the following report for the current year.

Owing to the early date of the annual meeting and the necessity of submitting this report in time for publication before the meeting, it is impossible to cover the activities of the Committee for the entire year, or to give details regarding activities. With these exceptions the present report follows the general form of the previous reports from this Committee.

GRADUATE EDUCATION

Table number one is a report of the graduate courses sponsored by the State Society for county medical societies under the direction of this Committee for the current year. It is understood, of course, that there may be some change of plans in this program subsequent to the time of this report. The title after each county refers to the subject of the course, and the figure refers to the number of lectures given in that course.

County	Subject	Number of Lectures
Chemung	Internal Medicine	0) 250011163
Cortland	Total Medicine	•••••• б
Herkimer	Internal Medicine	6
Rockland	Traumatic Surgery	• • • • • • • • • • • • • • • 4
St. Lawrence	Cumanic Surgery .	· · · · · · · · · · · · · · · · · · ·
Ti	Surgery	
Tioga	Internal Medicine	
wayne	Internal Medicine	
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Table No. 1.—Courses of instruction given through county medical societies.

Statistics:—The committee has continued to keep detailed records of the courses which it has sponsored. However, as only a small part of this year's activities have been completed, a detailed comparative summary of the work for the different years would not be worthwhile. Such a summary, however, will be submitted after the completion of all courses. Despite the absence of these figures the Committee has definite facts to report which are indicative of the trend of its work and suggestive of its value.

This year represents the sixth year during which this work has been sponsored entirely by the State Society; and during this time, assuming that the present year's program will be completed as now arranged, there will have been given 116 courses comprising 622 lectures. These eourses were actually given in 37 different county societies; but inasmuch as 10 other county medical societies have on one or more occasions joined in

participating with a neighboring county in some of these courses, the work has actually reached 47 different counties, representing approximately 70% of the membership of the State Society.

It should be remembered that the list of county societies where graduate courses have not been given includes several of the large counties where graduate education has been locally sponsored, as well as other county societies which had graduate lectures on Obstetrics and Pediatrics or both, when that work was given under the combined efforts of the State Department of Health and the State Medical Society. Apparently only Allegany County has not been reached by any form of grad-

uate education during these eight years.

Appraisements:—An effort should be made to arrange for some form of graduate education on the part of counties which have not participated in this work since the State Society has taken over its entire control. Reasons for the absence of this work in these counties, after the Committee has made every effort to provide courses for all county societies, are the lack of acquaintance with the work, lack of initiative of the officers of the county society, or lack of leadership in the county society. Six county societies in which courses were given last year have not arranged for courses this year, though it is possible that four of these may still arrange such courses, and it is very probable that two of these will do so. The remaining two counties consist of a very large county where the work offered by the State Society supplemented graduate work locally sponsored, and a small county in which it would be unwise to repeat a course every year.

Two counties on this year's list did not have a course last year, and again represent a large county where the State Society is supplementing local graduate work and another small county society in which a course each year would be superfluous. Fourteen county societies which have arranged courses for this year had courses last year and all except two of these had courses the year before. Twenty-four county societies of the 37 different counties, in which courses have actually been given, have had more than one course, while 20 have had three or more courses. Four societies have had a course each year for the entire six years comprising the time the State Society has sponsored this work. Five counties have had a course for five years, and in two of these the courses have been held in consecutive years. Eight societies have had a course each year for the past 4 consecutive years. counties represent all sections of the State geographically as well as varying conditions consisting of both large and small counties, and counties largely rural and wholly urban in population.

These facts demonstrate that the program of

the State Society for graduate education has been carried to a large proportion of its membership in The tendency for widely distributed sections county societies to repeat this work so frequently would seem to indicate that the work has been fairly satisfactory to many societies where it is looked upon as a regular yearly feature of the so ciety's program of ictivities. Each year this is further demonstrated by letters of appreciation received by the committee from the various county societies. During the present year the committee has received a set of resolutions adopted by one county society, personally signed by its different members, expressing the gratitude of that society for the efforts of the committee Another society in which a course has been completed this year is now planning for a course to be given next fall One county society has sent to the committee an analysis of the attendance of its members at the course presented in that county

These expressions from county societies are not only help ful to the State Society's Committee but have been a compensation for its efforts and a stimulus to make the work of greater value and greater interest

The committee has continued its general plan of graduate education as carried on for the past The work has been given in five or six weekly lecture courses usually at sessions other than those of the regular county society meetings Nearby counties have continued to agree on having the same course so as to save expense and facilitate arrangements The courses have dealt with practical subjects, the mijority of them having been in the field of internal medi-The committee has endeavored to make its plans as elastic as possible in order to meet local conditions without upsetting the purposes of the work In arranging the courses the chairman lins taken advantage of attending the sectional meetings of the Public Relations Committee in order to have personal conferences with representatives of the county societies The curtailment of railroad service in certain sections of the state has added some difficulty in the arrangement of courses but on the other hand the railroads have shown a splendid spirit of cooperation in agreeing to stop some of their fast trains at different places to facilitate the program of the committee

One new course has been added to the list of courses which the committee is prepared to offer to county societies. This course was outlined by Dr A F R Andresen of the Long Island College Hospital and is a course in Internal Medicine dealing with gastro enterological topics. The committee has initiated an innovation with one of its courses (Dr Greene's course on Internal Medicine) in supplying mimeographed outlines of each lecture to all those present. These out lines have proven to be most valuable in that they have added interest and provided permanent notes.

of the lectures They have been very much apprecated by physicians who have been compelled, for some valid reason, to miss one lecture in the course

Future Plans -The Committee is prepared to offer an extension of its program under two new plans The first plan is possible through the offer of the Administrative Board of Post-Graduate Studies in Medicine of Columbia University to present to a group of at least 20 physicians a course in New York City of one week's duration Outlines for three different courses have been pre-These outlines differ considerably should appeal to almost any man in general prac tice, another to a man in general practice who is doing obstetrics and pediatrics, and, the third to a physician who is somewhat interested in public It is expected that Columbia University will charge a registration fee of \$1000 for these This committee is endeavoring at this time to iscertain if enough physicians would be interested in registering for these courses and to learn when such courses should be presented in order to be as convenient as possible for those interested in taking the courses. The committee hopes that similar courses will be planned in other medical centers in the state and particularly urges that in arranging such courses the local county medical society actively participate in this work

The second plan comes direct from the committee and is a change from the weekly lecture course to a clinical conference plan The scheme of a clinical conference is to have physicians in an area bring to the meeting some half dozen cases which present concrete problems either in diagnosis or tre itment These cases should be brought to the center where the meeting is to be held early in the day, thus allowing the guest chief of the clinic an opportunity to study these cases Then, at the time of the meeting the patient's physician pre sents the case and gives his point of view patient is shown and the case is opened for general discussion, and finally the guest chief summarizes his own findings, expresses his own opin ion and makes his recommendations It would be desirable, if possible, that not only an internist but a surgeon as well constitute a team would encourage an enlargement in the type of case that could be brought in and would also in crease the general interest by giving different points of view. It is recommended that the work in graduate medical education be extended to in clude clinical conferences and that this plan be tried in some counties as an experiment in place of post-graduate lectures

Recognitions — Each year this committee receives requests for information from other organizations regarding the work of the Medical Society of the State of New York in graduate education. During the past year such information has been supplied to the Massachusette Medical So

ciety as well as to a local society in a city outside the state.

In the final report of the Commission on Medical Education reference is made to the work of this Society in providing its extension courses and in its conclusions dealing with post-graduate medical education the Commission lists these courses as one of the three major phases of post-graduate education. The Report states:

"A comprehensive program of post-graduate education can be conducted only through the cooperative endeavor of the medical associations, medical schools and hospitals. The most important and largest part of the program should be directed toward taking educational opportunities to the practicing physician in his own community or to centers to which he can go without leaving his practice."

It is comforting to know that our State Society has not lagged in providing a vital part of an adequate program of medical service for the public.

PUBLIC HEALTH ACTIVITIES

In the report of this committee under a different chairmanship submitted to the House of Delegates in 1926 the statement was made that, "In the continuous education of the practicing physician we see the greatest single contribution that organized medicine can make." Each day it is being generally realized that medical service is the most important activity in the field of public health and that continuous education of the physician is an essential for good medical service. It is also further accepted that such continuous education is the province of organized medicine, if not in whole, at least, in a large part. It is generally accepted that a state medical society's program dealing with public health must give major consideration to the subject of continuous education of the practicing physician.

While a large part of the committee's time and attention has been concerned with graduate education, nevertheless it has been active in other fields of public health. In this connection it is pleasing to report an evidence of increasing cooperation on the part of other organizations toward the medical profession.

Maternal Mortality Study:—In last year's report mention was made of the study of maternal deaths to be undertaken by the State Department of Health. This study is well under way but has not been completed. Some of the material obtained from the study has recently been sent to the committee for review. A sub-committee consisting of Doctors Kosmak, Foster and Farmer will take charge of the review of this material. A complete report will be made by the committee after all the material has been reviewed. It is expected that Doctor Kosmak will present a state-

ment regarding the progress of the study to the section on Obstetrics and Gynecology at the annual meeting. The committee has considered requesting the extension of this study to a period of three years. No decision on this point, however, can be made until some estimate of the value of the first year's study can be formed. Each county medical society has been requested to give its reaction to the study. The replies from the county societies so far heard from have been favorable, with the exception of two counties which opposed only that phase of the study which permitted a state physician instead of the family physician to obtain information from the family. The committee is in complete agreement with these county societies on this particular phase, and it is their understanding that the State Department of Health has subscribed to this plan.

Tuberculosis Reporting:—Reference also was made in last year's report to this subject. Two conferences between representatives of the State Department of Health and this committee have been held to consider means whereby the reporting of tuberculosis might be improved. What at first seemed to be a simple subject has turned out to be a complex problem. Because there seemed to be some uncertainty on the part of some physicians as to what cases should be reported, the first step was to agree on a definition of what constituted a reportable case. These conferences brought out that case reporting of tuberculosis is far from satisfactory and that methods previously used have been ineffectual, that the trend to the institutional and clinic management of the tuberculosis patient has proceeded to such great proportions as to possess the disadvantage of lessening the physicians' interest in this problem; and that there is some question as to whether undergraduate medical clinical instruction in tuberculosis is always adequate. As a means to improve these conditions an effort is to be made to increase the teaching of tuberculosis to medical students wherever it seems inadequate; to enlarge the program for post-graduate instruction on tuberculosis before county medical societies; to publish appropriate articles in the State Medical Journal pertaining to the whole problem; to bring back to the physician more medical supervision of the tuberculosis patient; and to formulate a practical simplified system for the reporting of this dis-

Cancer:—Under the direction of this committee 13 counties either have had or have arranged for a meeting during the year devoted to the consideration of cancer. Most of these talks have been of a practical nature emphasizing the physician's part in the management of such cases. Some of the lectures were provided through the up-State Committee of the American Society for the Control of Cancer with whom this committee has been actively cooperating. The arrangements

for all of these talks were made through this committee.

Medical Inspection of School Children:-As a result of discussion by the Committee on Public Relations of complaints regarding unsatisfactory school examinations in one county, this matter was referred to the Chairman of the Public Relations Committee and the Chairman of the Public Health Committee. At a conference between these two chairmen and a representative of the State Department of Education it was learned that there were about 8,000 rural schools in the state, employing about 20,000 teachers, and grouped into 208 districts, each district supervisor having from 25 to 75 schools in his district. Each of these rural school districts has a separate commisioner with rather broad powers of administration. The district supervisors apparently have little authority. It is apparent therefore that the system of organization of these schools adds to the difficulty of the problem of the medical examination of school children.

conditions in this type of work are incompetent examiners, politics, unsatisfactory places for making examinations, lack of contact between the parents of the child and the examiner, lack of cooperation on the part of the teacher. The only means by which these conditions can be improved would seem to be through the investigation by the county society of this problem within its own confines; by efforts to have these examinations made by the family physician in all eases possible; and by a request for better cooperation from both physicians and teachers. A letter urging such cooperation has been prepared and approved by the Committee on Public Relations and by the Committee on Public Health and Medical Education. The term "medical inspection of school children" as it now appears in the law, we believe, should be changed to the "medical examination of school children."

Other factors contributing to unsatisfactory

Periodic Health Examinations:—This subject was referred to this committee last year when the special committee for this purpose was abolished. The committee is impressed with the advance being made in periodic health examinations. Doctor Crampton, who has acted with the cominitice, informs the committee that two large business organizations have adopted the health examination, one as a requirement and the second as a strongly recommended optional procedure. The committee would therefore urge all county societies to furnish timely instruction to physicians for health examinations wherever that seems necessary. The question of certifying physicians who are willing to give such health examinations and have demonstrated satisfactory evidence of abilty to do so, is a matter which we believe should rest with the county societies.

MISCELLANEOUS SUBJECTS

Physical Therapy:—As a continuation of the educational phase of the work in physical therapy, single talks were given before the Ulster, Washington, Sullivan and Wyoming County Medical Societies, and a series of four lectures was given before the Queens County Medical Society.

In order to clarify some of the aspects of instruction and supervision in connection with the physio therapy clause of the Medical Practice Act, a conference was held with the Department of Education, and a satisfactory agreement as to the best viewpoint of the problem was reached.

Licensure of Graduates of Foreign Medical Schools:—It has been brought to the attention of the committee that residents of this country whose qualifications are not sufficient to admit them to medical schools in the United States are readily admitted to schools abroad and are granted degrees after the completion of that course, although in many cases they are refused the privilege to enter an examination for licensure in that country. This matter was discussed at an informal conference in Chicago on December 18th, attended by representatives of the medical profession, medical colleges and medical examiners, when the following recommendations were adopted:

1. That no American student matriculating in a European medical school subsequent to the academic year 1932-33 will be admitted to any state medical licensing examination or to the examination of the National Board of Medical Examiners who does not, before beginning such medical study secure from a State Board of Medical Examiners or other competent state authority, a certificate endorsed by the Association of American Medical Colleges or the Council on Medical Education and Hospitals of the American Medical Association, showing that he has met the premedical educational requirements prescribed by the aforementioned associations.

2. That no studens, either American or European, matriculating in a European medical school subsequent to the academic year 1932-33 will be admitted to any state medical licensing examination, or to the examination of the National Board of Medical Examiners, who does not present satisfactory evidence of pre-medical education equivalent to the requirements of the Association of American Medical Colleges, and the Council on Medical Education and Hospitals of the American Medical Association, and graduation from a European medical school after a medical course of at least four academic years, and either,

(a) Obtain a license to practice medicine in the country in which the medical school from which he is graduated is located, or

(b) Receive the degree of Bachelor or Doctor of Medicine after not less than one year's resident study in an American or Canadian medical school approved by the Federation of State Medical Boards of the United States, the Association of American Medical Colleges, and the Council on Medical Education and Hospitals of the American Medical Association.

Regulations of the Public Health Council:—Objections to some recent additions to the Sanitary Code have been brought to the attention of the committee. This has been criticism of the regulations relating to blood transfusions. After reviewing this matter the committee feels these regulations are burdensome, inadequate and impractical in many instances. The committee does not believe that the responsibility of giving blood transfusions can be shifted to some remote agency, technician, interne, hospital or employee. This responsibility is solely that of the physician. We therefore disapprove of Regulation 8 because its rules for guidance in examination of donors are not in accord with scientific fact and clinical The regulation therefore does not meet in a sound workable manner such public health problems as may be involved. We disapprove of the burdensome, unwarranted and unenforceable duties Regulation 8 imposes upon hospitals, and which serves no good purpose.

Your committee favors all reasonable public health regulation. The regulations, however, should be in accord with accepted methods of medical practice and procedure. Any direct or indirect regulation of medical practice or hospital management other than for matters of public health, or any tendency to stretch public health regulation to cover that which is not in the ordinary sense a public health problem is an invasion of the field of medical practice not contemplated

by the statutes.

The Detroit Health Plan:—The committee has given attention to the plan of medical participation in public health work as it is now being carried on in the city of Detroit. Although this same subject is being studied by the Committee on Medical Economics, we believe that its public health aspect should be evaluated by this committee before any definite pronouncement is made. There is no question but that this plan has many decided advantages. Naturally it presents a radical change from the accepted method of caring for community health problems. Whether such radical changes could be made in a large number of communities within a short period of time is The human factor is an important element in the success of this plan and its effectiveness must naturally depend upon the personal qualifications of the local health chief, and the activity of the county society. Your committee would recommend further study of this plan by both the Committee on Medical Economics and this committee.

Distribution of Cod Liver Oil by Relief Agencies:—It is well known that at the present time many families are dependent upon public relief for food and housing. As a dietary supplement it has been recommended that cod liver oil should be furnished to such families especially when there are children in those families. Because there had been some objection on the part of some physicians to the distribution of cod liver oil without a doctor's prescription this matter was considered by the committee and the following statement has been prepared by the committee:

The artificial character of many basic foods in modern society requires that supplementary elements be considered. This is particularly true in respect to growing organisms, infants and children, and it is generally held that cod liver oil contains elements which are essential supplementary foods for growing organisms. Suitable amounts of cod liver oil daily should be a part of every welfare, low cost or limited choice diet particularly for children and during the winter months.

All cases of malnutrition and depleted states, in which extra amounts of vitamin A and D might be indicated, should be referred to competent medical authority for examination and treatment. Such extra amounts of cod liver oil as might be useful for the treatment of such cases should not be given except as prescribed by a physician.

GENERAL

The committee has held only two meetings this year, but has been able to transact a large amount of business by correspondence between its members at other times. Several questions have been cared for in this manner which, of course, has resulted in a large saving of expense. Many of the subjects which the committee has considered during the past year have been handled by subcommittees which, after studying the problem thoroughly, have submitted their findings to the whole committee.

The committee has curtailed its expenses in every possible way without injuring its services, and expects to finish its year's activities well within its allotted appropriation, despite the fact that it has taken care of the activities of two special committees which were delegated to this committee after the special committees were abolished.

The committee has continued to serve county medical societies in advising them regarding health problems and programs for their meetings. It has secured speakers for their meetings, and on one occasion provided the program from its own members. The chairman and members of the committee have represented the committee at various district branch and county society meetings.

The committee wishes to acknowledge the excellent assistance which it has had during the past year from the president and all the officers of the state society. The splendid cooperation with the other standing committees has continued. The committee also acknowledges its appreciation of the services of the various lecturers and all others who have assisted in organizing the postgraduate programs. The chairman is deeply grateful to the members of the committee for their valuable and unselfish service as well as their continual interest in the various activities of the committee.

In order to expedite the work of the House of Delegates the recommendations contained in

this report are herewith summarized:

RECOMMENDATIONS

1. It is recommended that every county society be urged to earry on some form of graduate education at suitable intervals.

2. It is recommended that the plan of graduate education as now carried on by this committee be extended to include clinical conferences.

- 3. It is recommended that the State Society give approval to short resident courses to small groups in large medical centers and that the county society of the counties in which such centers are located be urged to take the initiative in organizing such courses.
- 4. It is recommended that the State Society give its approval to a request of the committee to extend the study of maternal deaths to three years, provided in the opinion of the committee the first year's study has been of value, but too short to make the Study sufficiently comprehensive.
- It is recommended that the committee be directed to continue its efforts to improve tuberculosis case reporting along the lines suggested in this report.
- 6. It is recommended that approval be given to the statement of the committee regarding the use of cod liver oil as a food, with especial reference to diet furnished by relief agencies.
- 7. It is recommended that county societies be asked to study the work in medical school examination in their respective counties with especial reference to rural schools and with particular emphasis on the need of having such examinations made as much as possible by the family physician.
- 8. It is recommended that the State Society approve the recommendations as contained in this report regarding the licensure of graduates of foreign medical schools.
- It is recommended that the State Society take some action urging the appointment of active physicians to the Public Health Council for reasons of efficiency and public welfare.

10. It is recommended that the Committee on Public Health and Medical Education be directed by the House of Delegates to study jointly with the Committee on Medical Economics the Detroit Health Plan of medical participation in public health work and report their findings to the Ilouse of Delegates.

ADDENDA

1. Definition of a Reportable Case of Tuberculosis: All cases of pulmonary tuberculosis which have clinical significance should be reported. Cases free from symptoms and having slight pathological changes indicative of a healed lesion in the lung, as noted by x-ray, and which the clinician is relatively certain are bacilli free, should not be reported.

All other forms of tuberculosis such as meningeal, gland, bone, joint, etc., should be reported.

Children, who in the absence of other signifieant clinical findings, show evidence of tubercullous infection by positive tuberculin reaction, or x-ray, should not be reported. These children, however, may be recorded locally in order to allow for proper epidemiological work, including the examination of all intimate contacts.

2. Regulation 8 of the Sanitary Code: "The superintendent in charge of every hospital shall keep a record of every blood transfusion performed in such hospital. Such records shall be open to inspection by the state commissioner of health or his authorized representative, and shall include the name of the physician or surgeon making the transfusion; the full name, age and address of the donor; a certificate from a physician registered under the laws of New York State showing that a satisfactory physical examination of the donor has been made within ten days immediately preceding the offering of the blood donation and that such blood donor is free from communicable disease; a record of laboratory tests, including a complement-fixation test for syphilis, made in connection with the physical examination to determine that the donor was free from communicable disease; the blood group to which the donor belongs according to the Landsteiner elassification with the source of this information; if the donor belongs to the group of so-called "universal donors", a record of tests of his blood showing that his serum does not contain dangerous agglutinative properties for the blood cells of persons belonging to other blood groups; the time and place where tests were made which showed that the blood of the donor and recipient were compatible; the quantity of blood given; the full name of the recipient; the date of the transfusion, and the condition of the donor and recipient during and after the transfusion; PROVIDED, that if due to an emergency any of the above requirements cannot be met prior to transfusion, the records shall show the

reason therefor. This amendment shall take effect January 1, 1933."

Objections of the Committee Regarding Regulation 8 of the Sanitary Code: So far as the transmission of communicable disease is concerned, medical experience, as evidenced by reports of cases, indicates that even in the presence of a positive Wassermann test, without active symptoms of the disease, the hazard of transmitting syphilis by blood transfusion is negligible. Malaria, however, can be easily transmitted in both the active and latent periods. On the other hand, syphilis in the acute stage, even in the earliest chancre stage, can be transmitted by transfusion even so early that the blood Wassermann is negative. It would, therefore, seem that the best protection for the recipient is a physical examination of the prospective donor at the time of the transfusion together with a careful questioning of the donor with explanation to him of the seriousness of the situation.

This brings in line another comment on the regulation as a matter of public health. Damage to the donor is an important item to be settled only by a careful physical examination by a physician. If the donor is suffering from serious disease although not transmittable, or is in the early stages of some minor acute disease, giving of blood might be damaging to him.

So far as blood groups and blood matching are concerned, most of the accidents have occurred from a misunderstanding of the groups, confusion in nomenclature, misinformation or improper technique in grouping. It is our opinion that the best and only true protective method is cross matching of donor with recipient at the time of transfusion. The supposed group of the donor might be useful as a presumption of eligibility but except in grave emergency cross matching should be done. The so-called "Universal donor" should be accepted with reserve except in grave emergency. At any rate the ordinary grouping does not take into consideration Landsteiner's groups M and N which are disturbing factors. All the inaccuracies of the agency technician, confusion in the nomenclature of groups, errors of memory and of record are checked off by cross matching at the time of transfusion.

The giving of a transfusion is the responsibility solely of the physician in charge. He cannot shift that responsibility to some remote agency, to a technician, interne, hospital or employee. The responsibility is definitely his as a matter of law.

The final selection of a donor can best be made at the time of the transfusion and on the spot. Donor agencies and their records, including Wassermann tests, become less and less important as the necessity for physical examination of the donor at the time he is to be used and careful history taking and cross matching are emphasized.

A predated Wassermann test, even one but a week old, is neither conclusive nor sufficiently protective.

The part the hospital should play in regulating transfusions is no different than for any other medical or surgical procedure, and the reasons for Regulation 8 so far as it applies to hospitals is therefore obscure. The hospital may have a closed staff, permit only certain physicians or allow all registered physicians in the community to make use of its facilities; but as a corporation it has little to say, and should have little to say, as to how cases shall be treated, operations performed, etc. Such regulation, if any, is a function of the Staff. It is customary for hospitals to keep a record of each case to which the attending physician must contribute a history, results of a physical examination and daily comments regarding the progress of the case. All operative procedures are to be described therein by him. Combined with these data are the nurse's bedside notes, the laboratory reports, etc., making a running record of the case. All the data called for by Regulation 8 should and usually does appear upon this ordinary hospital record. For the hospital to keep a separate registry for blood transfusions not only means extra expense and trouble to them, now very much overburdened by record keeping anyway, but seems to serve no good purpose. The fact that in true emergency, a matter which can be decided only by the physician, all requirements are waived the record to show the reason for waiving it, is no recommendation for the regulation. A waiver of any or all regulations when it is not practical to comply with them for reason of an emergency yet leaving it required that the circumstances must still be recorded by the hospital in a separate register, adds petty annoyance to an unreasonable burden. To see that in each and every case regardless of the circumstances a record be kept is beyond the power of hospitals to comply. It is far outside the realm of public health regulation. Were such matters within the scope of public health regulation, one should think of the innumerable rules and regulations which could spring up to regulate the practice of medicine in hospitals. Attempting to regulate medical practice by a burdensome system of record keeping in the hospitals is an awkward expedient.

We disapprove the Regulation 8 as not meeting the public health problems involved in a sound and workable manner. We thoroughly disapprove of the burdensome, unwarranted and unenforceable regulations it imposes upon hospitals to no good purpose or practical advantage.

Respectfully submitted,

THOMAS P. FARMER, M.D.,

Chairman.

February 15, 1933.

REPORT OF THE COMMITTEE ON ECONOMICS

To the House of Delegates Gentlemen

The Committee on Medical Economics respectfully submits the following record of its activities for the current year

- It will be noted throughout our Report that the Committee has become more convinced than ever that justice and the welfare of all the people are the most important considerations in any de-When we cision which we may recommend condemn injustice to the tax payer or approve of a measure which saves the tax-payer money, this is what we have in mind. Also, the welfare of the people depends to a larger extent than we usually realize upon the study, care and decisions of physicians The disposition of any matter in the easiest way because it is the easiest way is The unwillingtherefore unwise and inhumane ness to alter habits and ways traditionally fixed may ultimately react upon the profession ever is best for all the people is best for its as a profession This "best for all the people" should be the stimulus to our initiative and the objective of all of our actions resulting therefrom
- 2. In planning the work for the year it was the unanimous opinion that the Committee should concentrate on a few important pressing problems rather than attempt to carry forward to final action a multitude of considerations. In a general way the sequence of headings will follow the sequence in the Report of 1932. The shortening of the administrative year has reduced our desired accomplishment by at least 16%
- 3. Projects undertaken and completed as far as recommendation to the House of Delegates and (or) the Executive Committee are

Proposed amendment to the Workmen's Compensation Law by a new so-called "Medical Section"

Study and recommendations concerning the Social Welfare Law

Completion of our study of the Detroit Plan of Public Health Service

Economic implications of the Public Health Council as now organized

Proposed amendment to the medical section of the General Municipal Law

The re-referred matters concerning the regulation of firms and corporations dealing with bill collections or financing for sickness

Consideration of the National Health Plan The re-referred matters concerning "Physicians and the Courts"

The heretofore unapproved recommendations concerning compulsory arbitration of automobile accident claims

Proposed amendment to the Lien Law providing for a lien upon the verdict recovery, settlement or financial return to one injured in an acci-

dent allegedly through the negligence of some one else

4. Projects which have been undertaken with the idea of gathering facts and conducting study through the current year and which remain incomplete at this time are

Many of the features of the economics of hos pitalization

Cost analysis of medical practice

Studies in relation to the outlet field for medical knowledge

Commercialized and industrialized medicine in-

Survey of Doctors under contracts to industry Survey of free and pay clinics in the City of New York

The Bassett Memorial Hospital, at Coopers town Insurance Plan of the United Hospital Fund,

New York City

Baker Memorial Hospital, Boston

5. Projects postponed for future consideration of this Committee

The Cleveland Plan of Clinic Control

U S Travelers Hospitalization Corporation California Insurance Plan of practice among persons of moderate means under jurisdiction of County Medical Societies

ECONOMICS OF HOSPITALIZATION

6. Your Committee is following with close observation the development of new forms for the analysis of hospital expenses by the United Hospital Fund We report that a new text on "The Budgeting of Hospital Funds" will be on the press soon The stress and difficulties of the time are bringing proper emphasis on "cost analysis" in hospital care. We recommend that physicians connected with the various hospitals throughout the State make inquiry as to the methods of "budget" and of "expense analysis," and that duplicates of blank forms, if any, be mailed to the Secrctary of this Committee for study and compari-Necessity, born in the agony of depression, seems destined to rectify wasteful methods of previous years

COMMERCIALIZED AND INDUSTRIALIZED MEDICINE

7. In considering the subject of commercialized medicine, it is apparent that throughout the country there are hundreds of plans under way, most of which antedated the Committee on the Cost of Medical Care Prominent among them are the Los Angeles Plan, including the Loss Clime, the Baker Memorial, the Massachusetts General Hospital and the Imogene Bassett Memorial at Cooperstown, New York. These all have elements about them which are highly to be com-

mended and under proper administration doubtless would fulfill the objects for which they are designed.

- 8. It would seem that a combination of the Baker and Bassett Memorials might work out satisfactorily both to institutional management as well as to the members of the profession involved. On the other hand, the new Plan of the California State Medical Society seems to fit in with some of the principles expressed by the members of the minority group of the Committee on the Cost of Medical Care. Doubtless this will be put in force in the near future and out of that experience may grow a satisfactory solution.
- 9. With the very definite opposition to regulated group medical activity, there is, nevertheless, a strong sentiment in the profession for cooperative medical endeavor of such a type that initiative will not be destroyed and compensation diverted unfairly.
- 10. Medicine in Industry.—In continuing the questionnaire with reference to medical practice and associated interests we have concentrated on the members of the profession who are concerned in industrial medicine in New York State alone.
- The same general information holds as was expressed by members of the National Industrial Conference Board who furnished the material of the first portion of the study. (Annual Report, 1932.) There are practically none of the physicians under definite contract with the organizations by which they are employed, in fact the general consensus of opinion is that they are week to week or month to month employees. This is particularly true of those who are on a part time basis. On the other hand, it is quite evident that with the full time medical employees who are engaged by organizations having sickness benefit and pension plans, a contract is implied, whereby the medical employee just as any other employee is entitled to payments under the plan for sickness or for retirement at the expiration of specified age limit. In practically all the returns the men expressed themselves as being satisfied with their compensation and that it filled a very satisfactory phase in their budget. The opinion with reference to a full time industrial work was rather more pronounced than one would expect, in view of opinions to the contrary stated by various members of the profession who have been in industrial work for long periods of time.
- 12. The latest questionnaire was directed to 46 members of the New York State Society for Industrial Medicine. These were sent to the men whom it was thought would be most liable to respond and respond most satisfactorily. They were picked from a group of several hundred who constitute this organization. The result expected was to the effect that these men were well satisfied with this type of work and feel that it

- has a definite place in medicine. It might be well in the future to continue brief questionnaires of this sort, particularly with reference to details of preference and manner in which any opinion of the various members might be solved.
- It is desired to repeat the statement that industrial medicine as an entity does not exist, but that medicine in industry is exactly the same as good medicine elsewhere and does not demand any particular academic investigation beyond that which is necessary in the understanding of various processes, materials and activities involved in the manufacture of various products or in the rendering of various types of service. It is apparent that during the present economic crisis in many parts of the country the medical organization, while personnel activities have been limited, is carried on even at considerable financial effort on the part of management. In some parts of the country, where public medical service is limited or of a type inadequate or undesirable, industrial medical departments have stepped into the breach and rendered emergency service. This has sometimes called for critical comments by the profession at large, but has been justified on the basis that such service, if not provided from these sources, would either not be possible at all or would be relatively inadequate. Where medical endeavor in industry has been fitted to the demands of the particular industry and certain of its personnel obligations, it seems to have fulfilled a desirable service both to the employee, the industry and the profession at large. It is to be remembered that industry is the basis of economic prosperity; that industry in buying raw products or particular service must recognize the social status of the sources from which these may be obtained and in the processes of fabrication or in the delivering of service the features of economic justice must be maintained. If the excellence of a product or of an industrial personnel endeavor has a medical feature in its composition, then the industry producing the same must see to it that this production does not interfere with the lawful sources of financial compensation due the members of the profession at large.
- 14. It would seem that, under certain compensation requirements, industries were justified in carrying on their own first aid and continued treatment of accident cases provided they were financially in the position of purchasing adequate service at charges commensurate with those prevailing in the several social and economic levels. Furthermore, where industry maintains sickness benefit and pension plans, the costs of which are ultimately passed on to the consumer in the form of operating costs or even where such payments are made out of surplus, it is justifiable for the industry to maintain diagnostic facilities or to otherwise purchase them with the object in view of determining the nature of the diseased condi-

tions present. This is of value to employee, employer and physician.

WORKMEN'S COMPENSATION LAW

- 15. Arbitration meetings and adjusted settlements avoiding arbitration on the part of the carriers and some of the County Societies have been continued accomplishments of the past year. The work has been done by and through the Committee on Economics of the County Medical Societies. The earriers have sought to limit the number of arbitration centers to the fewest possible number. They would prefer to conduct all arbitrations in New York City. This experiment has proven the practicability of the arbitration of all contested bills for medical care.
- 16. The report of Governor Roosevelt's committee, appointed to review medical and hospital problems, was so generally disapproved by the House of Delegates in 1932 and there were so many complaints of abuses of and defects in the law, that we are cognizant of general agitation for changes in the Law. Numerous bills for amending the Law luve been introduced into the 1933 Legislature.
- 17. Governor Lehman has appointed a special committee of medical men to make suggestions as to changes in the Law. Your Economics Committee, fortified by executive opinion, has formulated a new Medical Section to be proposed for insertion in a suitable place in the Law. In this, the Committee has been ably assisted by the advice of our Counsel. It is the aim that this Medical Section shall deal with all matters which involve medical services directly or indirectly. If this proposed Section is earefully considered and ratified as amended and modified by the House of Delegates it may prove to be of considerable value to Governor Lehman's Medical Committee.
- 18. Recommendations.—The following is a new Medical Section recommended for Inclusion Within the Law.

SECTION 13A. MEDICAL SERVICES.

Subd. 1. DEFINITION OF MEDICAL CARE. Medical care under this Act consists of the undertaking, by any means or method, to diagnose, treat, operate or prescribe for any human injury, disease, pain, deformity or physical condition arising out of industry and compensable under the provision of this, the Workmen's Compensation Law, by an eligible person.

Subd. 2. Those Eligible to Render Medical Care:

a. A person licensed and registered to practice medicine under Article 48, Section 1251 of the Medical Law of the State of New York; provided

b. Such physician shall register with his County Medical Society, and the Commissioner of Labor, his desire to participate in medical care under this Act.

to participate in medical care under this Act.
c. Regulations for registration provided for in paragraph b shall be established by the Commissioner of Labor with the concurrence of the Incorporated Medical Society of the State of New York, representing the medical profession of the State of New York.

d. Emergency (First Aid) inedical care may be rendered under this Act by any licensed physician,

e. Any member of a constituted medical staff of any Hospital may render care under this law while an injured employee remains a patient therein.

f. Medical care may also be rendered under supervision. Such supervision must be exercised by a licensed, registered, qualified physician. This supervision must be evidenced by written instructions for treatment and written records of condition. These shall be preserved for review by the Industrial Commissioner and (or) the County Medical Society. Under such medical supervision may be conducted first aid stations; industrial plant stations; dressings and treatments by nurses; physical therapy, and rehabilitation care.

g. Any person, firm or corporation who shall solicit for the professional treatment, examination or care of an injured employee or who shall make it a business to solicit in person or by circular or placards the employment of a physician or for a physician in connection with any claim under this chapter, shall be guilty of a misdemeanor.

Subd. 3. REMUNERATION.

a. Remuneration shall consist of a fair and adequate return to persons qualified to render medical care under this Act and such charges shall he based on the social and economic status of the individual and shall harmonize with the charges that prevail in the same community with similar treatment of injured persons of a like standard of living.

b, Remuneration for medical and surgical care—To Whom Payable. The fecs for all charges for all treatments rendered by a physician, surgeon, or other lawfully qualified person shall be payable only to the individual rendering the service or to his heirs at law.

c. All fees for such charges shall be paid within thirty days by employer or carrier or shall be protested to the Labor Department within thirty days of furnishing bill for some

d. Any person participating in the act of the division, transferance, assignment, subordination, rebating, splitting, or refunding, or who by any subterfuge is a party to such division, transferance, assignment, subordination, rebating, splitting, or refunding, of a fee for medical care under this Act shall be guilty of a misdemeanor, except that this rule shall not prohibit the payment of salaries by a qualified physician to others rendering medical care under his supervision as provided in Subd. 2, Para. f, of this Section.

Subd. 4

a. The determination of temporary, partial, total and permanent disability and of the degree or percentage of disability shall be the duty of one or more physicians qualified under the law, designated or accepted by the Commissioner or Referee silting in the case. Said Commissioner or Referee shall approve or appeal such determination. He has no authority to arbitrarily alter it.

b. In the end result after accident the following shall be used as a general guide for determination of degree of permanent disability:

Three factors are involved:

1. Function, or capacity to perform.

Union, or state of repair of parts.
 Contour, or external appearance.

Inasmuch as function is the most important part in any recovery from accident or disease, it should be assigned the highest percentage of value. Its suggested value is placed at 60%.

Union, or state of repair, naturally has an effect on ability to perform and also on appearance, but can be very imperfect while affording full function and satisfactory appearance. Its suggested valuation is placed at 20%. Contour or external appearance, plays an indirect part

Contour or external appearance, plays an indirect part in ability to perform and in a measure may influence function. Its suggested valuation is placed at 20%. However, if such disability of contour or general ap-

pearance is of such character as to reduce future em-

pearance is of such character as to reduce future employability its percentage should be increased.

Illustrative example: If in a given case F is only half perfect, allow 30% disability. If union or repair is half perfect, allow 10%. If appearance is three-quarter perfect, allow 5%. The end result then is 30 plus 10 plus 5 or 45% disability. Details of evaluation are to be based on "Accidental Injuries" by Kessler, or an equally authorizative text authoritative text.

Functional disturbance may be estimated by this scale regarding the following:

Flexion, Extension, Abduction, Adduction, Supination, Eversion, Inversion, Apposition, Rotation, Grip, Locomotion, Mastication, Audition, Vision, Articulation, Sensation, Co-ordination, Urination, Defecation, and other measurable capacity of function.

c. Appeals concerning the determination of temporary, partial, total, and permanent disability and of the degree or percentage of disability may be obtained upon appli-cation by the referee, employer (or carrier), or the em-ployee. The determination in such appeals shall be rendered by a Medical Advisory and Appeal Board of three physicians appointed by the Commissioner upon recommendation of the County Medical Society in the County where employee resides or elects to be heard. A fee of Ten Dollars shall be payable to said County Medical Society for each case reviewed, Five Dollars to be paid by appellant and Five Dollars by the Department of Labor. When appeals are too numerous for one Board to manage two or more Boards may be so designated. The decision of this (or these) Board (or Boards) shall be final but only as regards the determination of temporary, total, partial, or permanent disability, or the degree or percentage of disability. Whenever a County Medical Society fails to nominate a Medical Advisory and Appeal Board in accordance with this section of the Law within a reasonable time, the Medical Society of the State of New York shall nominate said board. d. Expert Opinion. The Industrial Board or an Ap-

peal Board may avail themselves of a written opinion of an expert upon the examination of a claimant with the approval of the Commissioner of Labor, who shall also direct the making of compensation for such service, the payment to be the fee usual for that service in

the community.

e. Whenever a case is re-opened the review and rejudgment of determination of degree of disability may be obtained upon order of the Commissioner of Labor after application by the Referee (who judged the case) or by employer or by employee. This review or rejudgment shall follow the course herein prescribed for the primary determination of disability. (Subd. 4, Para. a and Para. c.)

f. Awards by the Labor Department shall be determined in accordance with the medical evidence as here-

in prescribed.

Subd. 5. The determination of consequential accidents (old law sec. 2, subd. 7) and abnormal physical conditions "arising out of employment" shall be a duty of the Medical Advisory and Appeal Board, subject to the approval of the Industrial Board.

Subd. 6. Arbitration of bills for medical care. Employer (or carrier) and physician shall arbitrate all contested bills for medical care. In such arbitration there shall be two officially designated representatives of his County Medical Society and two physicians chosen by the employer (or carrier). In case of an equal division in votes of these representatives, the physician of the Labor Department who sits as presiding officer of the Board shall be entitled to a vote. The decision of this Board of Arbitration shall be final.*

Subd. 7. Hospitals operated by a City of more than

50,000 inhabitants as Charity Hospitals, Municipal or General Municipal Hospitals and maintained by taxation of the people, may treat only emergency cases under this law and these only as long as the emergency exists, except in localities where there is no other available Hospital provision.**

Subd. 8. It shall be possible for a person having a physical departure from normal resulting from congenital or acquired causes to waive his rights or those of his heirs to compensation for disabilities arising out of or related to aggravations or reactivations of the same.

The physical facts justifying the waiver must be concurred in by the prospective employee and a physician licensed to practice medicine under Article 48, Section 1251 of the Medical Law of the State of New York, the waiver to be certified to by the Commissioner of Labor of the State of New York. It shall be the responsibility of the Commissioner of Labor to ascertain that the individual seeking employment under the conditions of the waiver understands the facts contained or implied therein and if such a person be a minor, that one of the parents or a guardian of such minor shall have been informed in person and shall have affixed his signature to suitable number of duplicate copies thereof. No such waiver shall prevent an individual from claiming compensation not attributable to an aggravation or reactivation of the impairment waived against, but in which the existence of the impairment plays a part in delaying recovery or modifying the final result.

Subd. 9. No physician whether or not employed by the Department of Labor in any capacity whatsoever can serve both as a witness and as advisor to the Commissioner or Referee at a hearing. Serving in one capacity he is forever disqualified to serve in the other manner in the same case.

Subd. 10. The C-4 Forms shall be completed in triplicate within within 20 days by any qualified physician who attends a case under this Act. One copy shall go to the Labor Department, one copy to the employer or carrier, and one copy shall be retained by the physician. For each service rendered in completing C-4 Forms in triplicate (not carbons) the qualified physician shall receive a fee of Two Dollars (\$2.00) to be paid by the employer (or carrier).

Subd. 11. Failure to comply with either the literal or implied meanings of the Law regarding the provision for treatment by the employer or the acceptance of treatment by the employee may prejudice the immediate or ultimate result. Upon request of the aggrieved party, employee or employer (or carrier) the question of the degree of this prejudice shall be determined in exactly the same manner as the determination of the degree or percentage of disability—Subd. 4, para. a, and appeals may be taken from the primary decision in accordance with the appeals. with the regulations set up in Subd. 4, para. c.

Subd. 12. Whenever it results to the employee that accident impairments occur which have a definite permanent compensation value, which according to the opinion of the employer's (or carrier's) physician or physicians, may be corrected by reconstructive surgery and the employee objects to such reconstructive surgery, the employer is permitted to request the Department of Labor to secure the opinion of two or more of the Department's physicians to decide whether or not the opinion of the employer's physician or physicians should prevail. The employer or employer (or carrier) may appeal the decision of the Department's physicians thus rendered and this appeal shall be decided by the Medical Advisory and Appeal Board in precisely the same manner as prescribed for the determination of degree of disability as described in Subd. 4, para. c. If the decision on appeal

^{*}County Society can discipline unreasonable members. Secure justice for membership.

^{**} Note: The overhead of treatment under Workmen's Compensation Law should not be paid by the municipal taxpayer.

favors the desire of the employee this decision shall be final. If this decision supports the contention of the physician or physicians of the employer (or carrier) and the employee still refuses the reconstructive treatment, the allowance for permanent disability shall be paid for a length of time approved by the Industrial Board but in no case shall the Board allow such payments to continue for more than two years nor shall the rate of payment be increased over that previously determined. In this last instance this decision including the allowance and time limit shall be final,

Subd. 13. A committee on Discipline shall be appointed by the Commissioner. This Committee shall consist of eight qualified physicians. The Conunistioner shall appoint the members of this Committee selecting them from a list furnished as follows: Two members shall be chosen from each of the eight district branches of the Medical Society of the State of New York by the District Branch organization. One of each two thus chosen shall be appointed to membership of this Board. The functions of this Committee shall be to receive charges, conduct hearings, and make recommendations to the proper authorities in any case of formal complaint and filing of charges against a qualified physician, such complaints or charges purporting to show professional or other misconduct in connection with medical service rendered under this the Workmen's Compensation Law. Each appointment as member of this Committee shall be for two years. However, the original appointments shall be so made that four members shall serve one year and four members two years. Thereafter the system of two vear appointments shall prevail. Any physician found guilty of neglect, misconduct, deceit, or gross unfuses may be suspended from participation and privileges of rendering medical care under this Law by the Committee on Discipline.

19. Recommendation. — That the House of Delegates records its disapproval of any extension of the number or nature of compensable diseases beyond those already enumerated in detail, Section 3, subdivision 2, of the present law.

Public Health. Individualized Medical Service by Public Agencies

- 20. Our studies here have lead us to realize more fully the rapidity of the expanding program of individual medical service developed under the guise of Public Health. Thus the Public Welfare Law or Social Welfare Law and the Public Health Council have been carefully studied. The Commissioner of Social Welfare was invited to attend a conference with us and answered twenty-two previously prepared questions. His complete knowledge and thorough understanding of the Law proved most instructive. The following paragraphs contain a summary of information and opinions afforded by the Commissioner.
- 21. Perused and viewed from the standpoint of any public spirited citizen who is interested in the state-wide problem of providing medical and surgical service for the sick poor, this Law is notable for its lack of vision, provision and teeth. Its reference to and planning for the medical and surgical care of poor patients is summarized in a few lines, the most important of which says "a physician or physicians shall be appointed by the

County Commissioner." The law does not refer to the State or County Medical Society. It does not suggest that many physicians may share in the care of the indigent. It merely provides that such eare may be given and that the supervisors or other local authorities may appoint a physician for this work. These being the facts, let us do honor to the leaders in those County Medical Societies who, by their initiative, wisdom and diplomacy, have brought into practical completeness almost perfect workings of an ideal Public Welfare Law which has never been written. And this result has generally unanimous local and state-wide approval. The State Society has helped magnificently in this work through its modern Public Relations Committee, conceived by men of vision, manned by men of vital wisdom.

However competent, the Commissioner of Social Welfare is almost helpless in attempting to control the State's adventures in Social Welfare. The operation of medical relief from the Social Welfare Law is entirely in the hands of local welfare commissioners. The Law does not say to the local officials what to do, how to do it, when to do it, when to pay, and it does not say the Department shall do this and the Department ear-not impose penalties. In other words there are no teeth in the law. It is entirely operable by local groups of politicians. Until the law is changed, the only way to improve service to the needy and provide for reasonable compensation to the doctors is by persistent, diplomatic, publie spirited efforts on the part of the local County Medical Society to confer and arrange with the Welfare Officers. In other words, the success of the present law depends upon local understanding and cooperation.

23. Such understanding and ecoperation has developed in some of the counties and your Committee has in hand the complete arrangements made in some of these counties. The Suffolk County arrangements seem to approximate the ideal. Nassau and Oncida Counties recently adopted a somewhat similar plan.

24. In Ontario County the contract between the County Society and the Supervisors for the care of the indigent of that county for 1932 resulted in a net return to the doctors of \$.16 on the dollar for their services. The effects of the depression brought unusual demands in the second half of the year. The experiment is continued for the year of 1933. The Supervisors, keeping faith with their previous agreement, have inereased from \$3,000 to \$5,000 the budgetary allowance to cover the care of the indigent of that county for the year of 1933. This Committee offers its congratulations to this local county society for its initiative in undertaking this experimental work to determine the facts upon which to determine the proper budgetal allowance for indigent care.

- 25. Members of the Committee have addressed three well-attended meetings on this subject in widely separated parts of the State. There has been a definite gain in understanding this Law, certainly outside of the metropolitan area. The metropolitan counties are not affected by the Social Welfare Law because of their exclusion from its provisions in accordance with the socalled "Home Rule Law." This fact means that 7,900 doctors of the State are not affected directly or indirectly by the Social Welfare Law. We believe this is not desirable. We believe the taxpayer, the needy citizen and the physician would all profit if the metropolitan counties were included under a revised Social Welfare Law which would provide amply for medical service to all the needy and compensation to the physician who performs the service for the county.
- 26. A completely new medical chapter is needed in the Law with specific provisions and detailed instructions for all commissioners and workers. The supervisory and directing power of the Commissioner should be increased. Power should be his to compel local commissioners and officers to abide by certain definite principles. Power of removal of incompetent, inhumane, unfair or dishonest commissioners or local officers should be vested in some State officer.
- 27. Recommendations.—That the Medical Society of the State of New York recognize the need of a new chapter in the Public Welfare Law which shall specify the principles upon which medical care shall be given to the indigent and provide for reasonable compensation to the physicians rendering services. We recommend that the said medical chapter should contain the provision that the indigent persons thus served should have the privilege of choosing the physician to whom they should go and that the principle of hiring one or two lowest bidders to do all of the medical work in the County is not good public policy.
- 28. Recommendation.—That the Medical Society of the State of New York instruct the Committees on Public Health, Public Relations and Economics to join in the drafting of a desirable chapter as suggested in recommendation paragraph 27 and such other amendments as would seem best for the welfare of the people of the State of New York, including New York City.

Geib-Vaughan Detroit Plan.

29. In accordance with our recommendation in paragraph 97 of our 1932 Annual Report and the instruction of the House of Delegates at its last session, a thorough study of the Geib-Vaughan Detroit Plan of Public Health work has been conducted. A sub-committee of two visited Detroit in company with a special emissary from President Heyd, to observe the practical workings of the Plan and to ascertain cardinal faults if any

existed. Their report with printed materials was convincing as to the results obtained. This Plan has been in operation four years. Success, technical, psychological and civic has crowned its efforts. Tax-payers profit in lessened use of public Substantial reductions in mortality and morbidity have been recorded. All of the people have access to the measures thus far introduced by this scheme. All the physicians of the county society are earnest workers in the scheme. Graduate medical education is furnished and de-Physicians are recompensed for treatment of the indigent from public funds. This scheme is an evolution not a revolution. Geib-Vaughan Detroit Plan of Public Health work has thus far been applied only to preventive measures, namely diphtheria prevention, small pox prevention, early detection of tuberculosis and the combating of venereal diseases. This is to be extended to other measures in preventive medicine. Cooperation of the physicians has been practically unanimous—1,100 physicians become health officers. Post-graduate lectures and courses in preventable diseases are enthusiastically attended by the physicians. District nurses in house to house visitations discern needs and point out to parents what should be done regarding their family and explain to what doctors' offices people may go regardless of their capacity to pay. In the longest experimental demonstration (diphtheria prevention) the mortality is reduced, the incidence of protection has been elevated by large percentages in each age class, the expenditures for this work have been definitely reduced, and yet every physician has been paid something for every service rendered. An interesting incident and objective in the operation of this Plan is the abolition of public clinics and the savings of maintenance costs. The Detroit idea is that the work is done better and at less cost when distributed among the physicians' offices than when centered in the public clinic. After careful study we believe that the principles of the Detroit Plan can be practically applied to all forms of the practice of preventive and curative medicine. The leaders and statesmen of our profession should devote themselves to determining how and how rapidly this Plan can be developed and what are the initial steps. It is our opinion that 20 to 30 years will be required to complete such a program and that the traditional devotion of the profession to the welfare of the people may be a guarantee of performance. The Detroit Plan demonstrates the efficiency and economies of decentralization in medical practice. In other words, the people receive more service and the cost to the tax-payer is less than for previous less effective services, partly because of the abolition of health centers and clinics. Centralization may be an ideal manner in which to conduct hard business. Decentralization provides convenient access to an individual doctor's office obtainable by all the people regardless of economic status. With the abolition of all free and part-pay clinics, the hospital in each district, having its facilities available for any patient or any physician in that district we would have cooperation of all physicians in best of service to all the people, and tax-payers would pay less. The Detroit Plan has elevated the quality of service in every feature it has undertaken. The quality and its aim to universal application are its strong points.

- 30. Recommendations.—That the Geib-Vaughan Detroit Plan of Public Health Work be cordially and completely approved by the Medical Society of the State of New York and that the State Society initiate active efforts to introduce this principle of participation of the medical profession in Public Health work, both preventive and curative, throughout the State of New York.
- The Promotion and Practice of Preventive Medicine. In one respect we find the recommendations made by all of the committees on social trends, medical education and costs of medical services, to be in harmony with those of organized medicine. This is in the call for greater understanding, greater development and more active service in Preventive Medicine. This Committee is in accord and we believe that the situation calls for renewed, vigorous and unremitting effort. Preventive Medicine has vital economie features. The return of medical service to the physician's office, from the public clinie as accomplished by the Detroit Plan; the return of the School Medical Inspection service as undertaken by the Bronx County Medical Society; and the efforts of this Society to promote periodic health examinations at the physician's office are all cases in point. These are only three of the many economic features in the field of Preventive Medicine, yet Preventive Medicine transcends the scope of this Committee. It affects our public relations and our medical education. It affects every department of medical science and medical practice. We believe that organized medicine should guide medical and lay opinion in this field.
- appoint a committee representing the several branches of medical science and practice to study the field of Preventive Medicine, and in association with the several standing committees, to prepare and present authoritative information and recommendations in a coordinated report calculated to insure the development of this work in accordance with sound principles of medical organization and practice.
- 33. Public Health Council.—The appointment, organization and functions of this body have been studied. Recent regulations promulated have been considered. The membership of our Society should be alive to the potentialities

- here smoldering. Flames may never develop. If they do they will destroy much that the people need and more that has been the outcome of activated high-minded scientific ideals for a century past.
- 34. Several closely typewritten pages have been collated by a sub-committee. Many astonishing findings are reported. A suggestive outline for consideration follows: The Public Health Law defines the Public Health Council as consisting of the Commissioner of Health, together with six other members all appointed by the Gov-Excepting for the Commissioner, the term of appointment is six years. Of the six members, at least three must be physicians experienced or trained in sanitary science and one must be a sanitary engineer. This body has power, by a majority of vote (for example, a vote of any three members, plus the vote of the Commissioner himself) to establish, amend, and repeal sanitary regulations, without discrimination against any licensed physicians. Such regulations, formally passed by the Public Health Council and approved by the Commissioner, become the Sanitary Code. The Sanitary Code is then defined, in the same chapter of the Public Health Law, in these words: "The Sanitary Code may deal with any matters affecting the security of life or health or the preservation and improvement of public health in the State of New York."
- 35. Your Committee brings to your attention the faet that the Public Health Council, an appointive body, is really a legislative body, inasmuch as the Code it has adopted, and from time to time changes by amendment, is the law of New York State. Nor do any of its regulations need any approval, nor are they subject to any veto from an elective officer, although they are subject to the veto of another appointive officer, the State Commissioner of Health, who is himself a member of the Council.
- 36. Your Committee brings to your attention the fact that, although the Public Health Law provides that there must be three physicians in the membership of the Council, or, counting the Commissioner of Health, a total of four physicians in a membership of seven, there is no provision that any one of them shall be a practicing physician. As a matter of interest, there is at the present time only one practicing physician on the Public Health Council.
- 37. Your Committee brings to your attention the broad powers conferred upon the Public Health Council. It may pass regulations, and these regulations become the Sanitary Code, and the Sanitary Code becomes the law of the State, as long as the regulations deal with "any matters affecting the security of life and health or the preservation and improvement of public health." This is a fairly broad definition, and under it the

Council can, as it already has done, pass regulations governing blood transfusions, regulations as to what physicians may or may not perform public health bacteriological examinations, regulations as to what physicians may or may not examine pathological specimens removed at operation or autopsy. The breadth of the powers of the Council are further shown by chapters in the Sanitary Code dealing with the use and storage of x-ray film (a noxious gas or fire hazard) and others dealing with the handling and transportation of tetra-ethyl lead.

- 38. The Public Health Council, it is apparent, can, when they deem it necessary for the security of life and health, pass regulations affecting the manner of the private practice of medicine, and the regulations they pass will be law. This will be so regardless of the fact that the regulations were made by an appointive body, and a body in which it is not essential that a single practicing physician act as member.
- The only protection afforded the medical profession against a perfectly legal but nevertheless rigid and onerous regulation by the Public Health Council is the phrase in the Public Health Law which provides that the regulations of the Council must be "Without discrimination against any licensed physicians." This phrase has not prevented the Public Health Council from discriminating against licensed physicians in its regulation requiring credentials additional to a medical license for health officers and laboratory directors, and additional procedures for those licensed physicians doing blood transfusions. Will it be a protection when the Public Health Council passes regulations covering additional credenx-ray operators, obstetricians, for surgeons? Such regulation of the privately practicing medical profession may be necessary, but is it wise and proper for it to come from a body which is appointive, and in whose membership the medical profession as a practicing entity is not adequately represented?
- **40.** Thus the dangerous implications and potentialities under this provision of the Public Health Law are:

Public Health Council is an appointed body answerable to no one and no one can alter their rules and regulations.

These rules and regulations which may define, limit, abrogate and otherwise interfere with the practitioner of medicine as licensed by the State can handicap service to the public.

These promulgated rules and regulations become laws of the State.

The Council can publish their personal views and sentiments at the State's expense and so propagandize their personal desires regardless of benefits to the citizenry or discrimination against physicians.

The appointive powers have apparently disregarded the value to the State of the knowledge acquired by the licensed physician with years of experience and considerable eminence in his profession.

41. Essentially the questions which arise are: Is the Public Health Council so constituted as to render the fullest service in Public Health to the citizenry of the State of New York?

Should an appointed body of any character possess such broad powers?

Should the Public Health Council have the power to adopt regulations affecting the private practice of medicine, in view of the fact that in so doing it is exercising a legislative function, a function of the Legislature of the State of New York.

42. Recommendation.—Your Committee recommends that the constitution, powers and potentialities of the Public Health Council be referred to the joint consideration of the Committees on Public Health, Public Relations, and Economics with legal counsel for report at the next Annual Meeting of the House.

State-Aided Hospitals

- 43. Considerable thought has been given to the status and professional organization of County hospitals receiving State Aid. The difficulties and cross-purposes affecting Lewis County have been considered. A sub-committee of two has carefully investigated every phase of the situ-These gentlemen have visited Lewis County and Albany and have conferred and corresponded with all concerned officers. A representative of the State Health Department has reported a personal investigation of the hospital and detailed the evident faults in operation. As in other portions of the Public Health Law, the Commissioner considers that his duty ceases when he finds that the County hospital receiving State aid is operating in accordance with rules recognized as standard by the American College of Surgeons and accepted by the Medical Society of the State of New York.
- 44. Recommendations.—1. That the Medical Society of the State of New York considers that complete local autonomy in the administration of a State-aided County hospital is a policy of doubtful justice and efficiency.
- 2. That representatives of the Committees on Public Health, Public Relations and Economics be instructed to study the relations of the Health Department and Department of Social Welfare to State-aided County hospitals and offer recommendations which would tend to increase efficiency and justice in the administration of these institutions.

THE POOR, CHARITY, EXPLOITATION OF PHYSICIANS

45. General Municipal Law.—The House of Delegates at its Annual Meeting in June, 1932, unanimously adopted a resolution offered by the Erie County Medical Society condemning certain phases of the General Municipal Law. The insufficiency in our administrative organization and our indifference to the general welfare of the public and our profession are nowhere more clearly illustrated than by the fact that this law has been on the statute books since 1909 and that it has required the recent sad experience in one of our most active and progressive centers of civilization to demonstrate how unjust and preposterous the law is. By it the State provides that any county, town, city or village can erect and maintain an institution for the charitable and noncharitable treatment of disease in direct and underhanded competition with the professional man whom it (the State) has licensed to do this work. Moreover, it gives the governing board of any county, town, city or village the right to appoint the staff of physicians and surgeons who must work without remuneration for such hospital thereby entering into unfair competition with their colleagues while they and their colleagues are being taxed for the maintenance of said hospital. The ramifications of evil which may and do emanate from the actions of this law brings injustice and extra cost to every tax-payer in any community where a hospital is actively operating under this statute.

46. Examples: A sound, home-owning citizen with an influential friend in politics has a pain; surgeon diagnoses cholecystitis, advises operation. Patient sees politician friend, who says, "I will see the superintendent of the hospital, don't worry about money." Admitted to hospital, no charge for maintenance, no charge for operation. Community and surgeon cheated 1 Another example: the vicious tendency developed in the minds of normal, upright and always self-supporting families which creates the feeling that the government should somehow or other give them something for nothing. In other words, this law increases the tendency which we see more and more in our times for a type of people hitherto independent to claim dependency upon public funds. This means the development of a type of psychology among the hitherto solid section of our people which must sooner or later result in deterioration of character, broad and diffuse in its distribution.

A third evil is that taxes are unreasonably increased in the provision of care for non-indigents. At the same time the indigent may be deprived of adequate care, thereby.

It becomes a definite encouragement to the growing tendency of making county, city, town and village offices attractive to a type of clever,

characterless individuals who can live well on account of the favors they can distribute to certain voters. In other words, this law encourages the development of government by privilege.

The irony of the law: the physician who has prepared himself to care for the sick and who has been licensed by the State, must pay his share of the tax to create and operate institutions which shall make it impossible for him to conduct his work with the remuneration that the State expected him to get when it licensed him.

Thus has been established by the power of the law inequitable competition between doctors who are willing to serve the local institution without pay (or with pay as the case may be) and their colleagues who must depend upon their private practice in order to exist.

47. Certification of the Indigent .- In paragraph 102 of our 1932 Report is a brief reference made to the certification of the indigent supported by the approved recommendation - paragraph 104a. This has been a matter of study during the current year. As far as indigent persons or families are concerned in private practices of physieians, it seems just and best to all concerned that the physician alone is to be the judge as to whether he will or will not serve these indigent persons without remuneration and without referring them to the Commissioner of Charity or Commissioner of Welfare. A different situation is created when the individual applies for free care at a hospital or any other institution, the maintenance of which is provided for either by taxation levied upon the citizens of the community or by contributions from the more or less prosperous members of the community, as is the case in hospitals conducted by the self-perpetuating Board of Trustees who alone are responsible under law for the eare of people and care of monies which are contributed by trusting benefactors. (Here the problem of who shall be awarded free treatment is more complex because of multiplied relationships.) We have felt the injustice of being compelled by a Board of Trustees, or Board of Managers or city government or county government to care for people who are receiving all hospital treatment and care without cost to themselves when we knew that these people owned more property and had more means than we ourselves or perhaps than most of the doctors in the community. It is true that if every person who requested free treatment were asked for a certificate of indigency, undoubtedly physicians would benefit to the extent of many thousands of dollars per town. This, however, will be a mere by-product of principles which involve justice to all tax-payers. It only needs to be mentioned to be self-evident that if all of the tax-payers of a community are taxed every year a certain extra percentage because people who are not indigent are to receive treatment at the city or county

hospitals there is an injustice to every tax-payer in the community. The benefactor of a hospital presents hundreds or thousands of dollars to trustees of the hospital for the benefit of the community poor. If any fraction of the income or principal is spent giving free care or partly free care to people who are well able to meet the ordinary bills of maintenance in hospital and of medical and special care the trustees are unjust to that Anon that benefactor will realize how false were these trustees and will cease to be a benefactor and perhaps cease to love his fellowman as he did before this injustice was done him. In other words it is for the benefit and righteous justice of every tax-payer and every contributor in all communities that every person who receives free treatment at any hospital should be certified as indigent. The facts are so elementary to the tax-payer and so hazardous will be the results of the pauperism of the great middle class of our people, who are not only in numbers but in physical, mental and spiritual qualities the solid part of our civilization, that justice to the rank and file compels our action. This attempted pauperism which has already been well started may well lead to a national or world-wide degeneracy because it is, undoubtedly, a fact that men and women begin to slip as solid characters when they cease to fully realize their responsibilities.

- 48. Recommendation.—That the Medical Society of the State of New York approve of and urge the "Certification of the Indigent" as an essential qualification for securing medical care without charge from any county, town, city, or village or in any hospital. out-patient department or dispensary or any other institution affording sick care incorporated under the laws of the State of New York.
- 49. Application of the principle of the certification of the indigent has been deemed by your Counsel and your Economics Committee the best method of amending the General Municipal Law of 1909, as amended by the Laws of 1922. are cognizant of the fact that evil and injustice has not always resulted from the utilization of the General Municipal Law before cited. It is the intent that this application of the certification of the indigent as an amendment to the General Municipal Law should in no way interfere with operation of any portion of any general municipal hospital affording private or semi-private accommodations or private wards where patients pay the stipulated hospital charges. It is expected to be applicable to that portion of such hospital which is devoted to the free treatment of patients.
- 50. The text of the amended sections and paragraphs, as proposed, follows:

"Section 129. General powers and duties of superin-

"5. Receive into the hospital, under the rules established by the board of managers, any person in the

county, town, city or village who is sick or maimed or injured, and who is in need of hospital care, provided said person has complied with the provisions of the article relative to admission to such hospital. The said superintendent may also receive persons from without the county, town, city or village, provided there is a vacaney in the hospital and provided the reception of such persons does not interfere with the proper care and treatment received by persons from the county, town, city or village, and provided that such person has complied with the provisions of this article relative to admission to said hospital."

51. Section 130 of the General Municipal Law, as amended by the Laws of 1922, Chapter 265, in effect March 25th, 1922, is to be amended as follows:

"Section 130. Admission and maintenance of patients. Except in cases of emergency, and then only as long as said emergency exists, the superintendent of such hospital shall not admit any patient nor permit any patient to remain in such hospital unless the patient presents at the time of admission a certificate from the county commissioner of Public Welfare for the county welfare district in which such person resides, or the City Commissioner of Public Welfare for the city welfare district in which such person resides, certifying that such person is wholly unable to pay for hospital and medical care. No employee of such hospital shall accept from any patient thereof any fee, payment or gratuity whatsoever for his service, except that physicians and surgeons rendering services under the Workmen's Compensation Law shall receive the allowed payment for services so rendered."

52. There shall be added to Article 6 of the General Municipal Law a new Section to be known as Section 130a, which shall provide:

"Section 130a. Indigent persons only shall be received or treated at public general hospitals. Subject to the provisions of this article, no persons shall be received or treated at such hospitals except one who is wholly unable to pay for hospital and medical care."

53. To Article 10 of the Public Welfare Law there shall be added a new Section, i.e., Section 85a, which shall read as follows:

"Section 85a. Duty to provide certificate of indigency for persons applying to public general hospitals. It shall be the duty of the commissioner of the city or county public welfare district to investigate the financial status of any person residing in such district and applying for admission into any public general hospital. If after such investigation said commissioner is satisfied that such person is wholly unable to pay for hospital and medical care, then he shall issue a certificate to that effect. Such certificate shall be valid evidence of indigency only for a period of six months from the date of the issuance thereof."

54. Recommendation.—That the Medical Society of the State of New York approve of the amendments to the General Municipal Law and Public Welfare Law as proposed by the Committee on Economics in collaboration with the Counsel.

Veterans' Administration Hospitals

55. Many hundreds of physicians gladly served the country in the World War. Many of these are active participants in the work of organized medicine. These and all of the members of the Medical Society of the State of New

York should be interested in the problem of what should be done with the Hospitals of the Veterans' Administration. We feel that there has been an excessive dispensing of national bounty in the form of hospitalization. We believe that organized medicine should speak vigorously in opposition to the use of these hospitals in direct or indirect competition with the practising physicians of the United States, many of whom are the same men who volunteered at considerable sacrifice to care for the soldiers during the War

56. Our tenets in regard to the use of Administration Hospitals are as follows

a Use should be free and generous to all those who were disabled dinring the War or are suffering from any disability which is of such nature as to make it at all likely that it originated during their term of service

b The use of the Veterans' Administration Hospitals should be available for all service men whose physical and financial need of such hospitalization is certified by their attending physician or surgeon or any physician or surgeon who is qualified to so certificate the veteran Such physician's certificate is hould be a definite

requirement

Veterans who are self-sustaining and solvent and who suffer from ills not connected with service should not be hospitalized or treated at the expense of the Government any more than they should receive groceries, or clothing, or housing, or coal or light at the Government's expense If they do, the Federal Government is entering into direct and rumous competition with physicians licensed to practice medicine in the various States composing the Federation

e The use of Veterans' Administration Hospitals to hospitalize other than veterans is morally, and perhaps legally, a wrong to the Government, to all taxpayers and causes the Government to enter into the same type of competition with physicians as referred to in paragraph b

We recognize while littering the above that inistales have been made in building veterans hospitals so large as to provide several times the needs of the veterans now or ever in that section Such hospitals should be disposed of by the Government, a moderate capital loss being more sensible than a huge loss from earing for those who will be better citizens if they care for themselves

d After the same manner the Government me the excessive inclusion of other critizens among those eligible for admission, is entering into competition with many hospitals organized and maintained by the tax-payers of the county, town, city or village, or organized and maintained by benefactors, or by the action and cooperation of genetous citizens. In this way the Government is abolishing the insefulness of institutions set up

by citizens who again have to pay takes to support the veterans' hospitals. Is the Government to succeed if it injustly abolishes the usefulness of citizens or institutions who should be supporting it? Will the citizenty long accept excessive repealed taxation for the same item?

- 57. We hope that all of our members will use all of the influence which they can possibly summon to promote the abolition of these nefari ous practices which are immical to the interests of millions of high type citizens Plans should be made to close veterans' hospitals as rapidly as is possible. None should be necessary after 25 to 30 years In all probability the number of beds can at present be justly reduced to one eighth of present capacity and still serve the disabled vet The most important consideration in erans well connection with this question is the growing policy of Government pauperization of heretofore self-respecting and self-supporting people taste of free hospitalization, free coal, free light, free provisions, rapidly deposes the sense of responsibility in the impority of minds thief concern of the individual thiis affected is not how to contribute to his day and civilization ill he possibly can, but how he can get as much as he possibly can for nothing, without work
- 58. Our tenets in regard to the use of Administration Hospitals were sent to the Committee on Economics or the officers of each of the 60 County Medical Societies in the State. With these was enclosed the request that the County Society addressed should write to as many of the list of 36 Senators, Congressmen and other officials as possible stating the opinions of their Society. Cordial State wide response and cooperation were secured.
- 59. Recommendation We recommend that the Medical Society of the State of New York ratify and approve the tenets outlined by the Committee on Economics, and that the Secretary be instructed to forward a record of this action to the list of Government officials furnished by the Committee on Economics

Financing of Sichness

60. In October, 1931, the Committee on Economics recommended to the Executive Committee a set of proposed principles and a program for the supervisory regulation of firms who collect doctors' bills and finance sickness by small loans. This recommendation was disapproved In the 1932 Report to the House of Delegates the Committee on Economics reaffirmed its belief in the need for such regulation and supervision provided that nothing shall be done to involve this Society in any way in any financial responsibility. On recommendation of the Reference Committee, the House of Delegates referred this back to the Committee to be resubmitted to the

Executive Committee. Accordingly, this Committee made the following recommendations in its November, 1932, report to the Executive Committee:

"The approval of the following paragraphs to be set up as regulations to be accepted by any concern dealing with bill collection for physicians or the financing of sickness who desire to voluntarily accept advisory supervision by the Economics Committee or other designated commission of the Medical Society of the State of New York:--"

"1. Submit to the Economics Committee a brief history of the firm and brief statement with names of all principal owners (10 per cent or more).

"2. A statement of previous business connections of each director or owner and to advise us immediately of all subsequent changes

of ownership.

"3. Names of banks where the firm does business, financial references, and other business associates.

"4. Name of bonding company, amount and date of bond which covers each employee who handles money.

Statement of what there is to guarantee stability of the firm and to guarantee performance of contract (a bond or its equivalent).

"6. Supply the Committee on Economics with copies of all printed forms and advertising matter as or when issued and agree to immediately delete or recall anything which is not approved by the Committee.

7. Contract between doctors and firm must be standard and submitted for approval of the Committee. No change shall be made without

the approval of the Committee.

Present financial statements showing: "a. Resources and liabilities on date of

application for listing. "b. Total amount of new account items of previous year. Total of money paid to doctors on that amount. Total which is still held collectable. Total abandoned as noncollectable.

- "c. File with this Committee monthly, quarterly, or yearly statements, as required, showing total of new accounts received; total of payments to doctors; total remaining in process of collection; total of abandoned accounts; number of cases carried to court action; and such other items as may be specified.
- "9. Agree to confidential review of books and records of the firm by the Committee or a representative thereof. A certified public ac-

countant may be employed by the Committee at the company's expense.

"10. Agree to accept judgment of all issues and be bound by the decision of a Committee. the latter to be of or appointed by the Economics Committee.

They shall provide credit information "11. service to all physicians registered by them for

service.

"12. Each and every firm accepting a place on the list shall agree that this listing is for the information of members of the medical profession and shall in no way be used for commercial publicity.

These regulations to be subject to revision, addition and extension to conform to the provisions of the Massachusetts Small Loan

"14. That nothing herein implied or otherwise stated shall be taken to involve the Medical Society of the State of New York or any of its component county societies in any responsibility or liability for the performance of contract by any firm.

That it shall be within the prerogative of any local or State Committee to remove any name from such listing without claim, liability or protest on the part of a firm so removed."

62. All of these recommendations were disapproved by the Executive Committee on January 12, 1933, in the opinions as quoted.

"Paragraphs 1 to 15. It is questioned if these recommendations dealing chiefly with the supervision and control of commercial agencies financing sickness and collecting bills for physicians are really within the functions of the Committee on Medical Economics as detailed in Chapter X, Section 5 of the By-Laws. It is doubted if the Committee has the facilities for such service or if the State Society desires to assume the responsibilities which would be incurred by the Committee in this way. In consequence the approval of the recommendation is not advised."

- 63. Recommendation: This Committee reaffirms its belief in the recommendations expressed in paragraph number 61 of this report. We recommend their adoption by this House of Delegates.
- In addition to the above recommendations and extending them the following recommendations were also forwarded to the Executive Con-
- "(a) We recommend that each County Society be urged to provide its members with a listing of the local facilities for the handling of deferred payments for such patients as may prefer to meet their obligations to the doctor out of earned income."

"(b) We recommend that the Society be urged to follow the regulatory provision set forth in the preceding paragraph [61] and that they shall list no firm for banking duties who is not willing to accept the supervisory and investigative functions of the State Committee on Economics and the right of this Committee to make inquiry and investigation into the conduct of their affairs."

"(c) We recommend that all firms who propose to serve in the capacity of bill collectors shall be required to file a bond to guarantee the security of any money collected and the safe delivery of it to the physician for whom the collector acts as

an agent."

- 65. The Executive Committee disapproved of these recommendations as "not advised for the same reasons as stated in the consideration of recommendations—62."
- **66.** We recommend that the House of Delegates approve of the recommendations contained in Paragraph 64.

67. Some of the firms in the new field of banking have agreed upon the reau of Supervision for

The purpose of this Bureau is to establish machinery for policing of the activities of its mem-bers. This Bureau will establish rules of conduct, censor contracts, advertise, etc., hold adequate bonds guaranteeing performance of contracts and security of monies entrusted to any member or employee in the course of its business and to guarantee to the profession that each member firm is ethical, reliable and stable. All of the provisions and principles for safeguarding the ethics of professional service and the security of funds and the fair treatment of patients, proposed by this Committee, are incorporated in the by-laws and rules of this new organization. It will be governed by a small directorate board on which there will be professional representation. Further, an advisory council, composed of twenty members will be chosen from the organized professions, ten physicians of recognized standing and five dentists, pre-eminent in their profession, will be invited to sit in this council. Each of the five metropolitan county medical societies will receive an invitation to be represented by its treasurer. All matters relating to the ethical conduct and publicity and the general character of the activities of this Bureau of Supervision will be subject to the approval of this Advisory Council. Complaints which cannot be adjusted to the satisfaction of either the laity or the profession by the financing companies or the Burcau of Supervision may be appealed to and settled by this Professional Advisory Board. It is the belief of this Committee that when this principle of handling accounts receivable has been generally adopted that the professional-patient relationship will suffer less frequent vexations from unpaid obligations.

68. National Health Plan. The Committee has carefully investigated the officers, stock-

holders, the copyrights, trade marks, and the plan and operation of the National Health Plan, Inc., of Providence, R. I. We have met the President, Hamilton E. Cray, and discussed everything pertaining to the Plan with him and have seen the opinions of a number of prominent public men concerning it. This Plan provides for regular weekly deposits in a savings bank of the patron's own choosing and is essentially a copy of the Christmas Club applied to provision for sickness instead of Christmas presents. At the end of fifty-two weeks the participant receives a check for the full amount with interest which he can deposit in his savings account or ne can withdraw part and deposit the rest in his savings account or the account can go on for another year. Furthermore, it is provided for if during the year an illness supervenes and hospitalization or surgical operation prove necessary, the participant may give to the doctor or doctors rendering services an order for collecting the amount of the fund at the end of the period when it shall have become paid up. During the year 1931, a bad year, Six Hundred Million Dollars were deposited in this manner in Christmas funds. If such an amount could be awaiting the needs of illness to pay physicians. hospitals, dentists and nurses, we believe that the public would have a healthier attitude toward medical service. However satisfied we may be with the organization of the Plan and the personnel of it's organizers and even though the only transactions in money would take place between depositors and their own savings banks, we recognize the wisdom of the dictum that the Medical Society of the State of New York should not endorse or approve of any firm.

69. Recommendation: That the House of Delegates approve of the principle of thrift as portrayed in the National Health Plan, Inc., or in any other similar plan which seems to be honorably conducted through legally constituted banking facilities. This Society does not assume responsibility for the acts of any other corporation.

70. Brattleboro. In accordance with the action of the House of Delegates on Paragraph 121 of the 1932 Annual Report, a member of this Committee visited Brattleboro, Vermont. In this village there are organized two benefit insurance schemes to provide nursing care and for hospital and surgeons fees. Its availability is limited to the stratum of ten or fifteen per cent of the population immediately above the indigent in financial abilities, families and persons self-supporting and solvent in ordinary healthy years but rarely able to make provision ahead for illness.

The plan has proven successful because there are no administrative or overhead costs, no salaries for investigators and other insurance company impedimenta. The beneficiaries of this insurance are limited to the range of neighborhood

acquaintance. The benefits are limited. The patient must pay the first \$30 of the cost of each sickness for which he is hospitalized. Thereafter payments up to three hundred dollars are guaranteed if needed. Surgeons fees are paid. The nursing service is assured at exceedingly low rates but there is always some participation on the part of the insured. The initial premium charge has been found to result in a deficit and moderate increases will be instituted. The philosophy of the supporting Thomas Thomson Fund, as voiced by Mr. Bradley, Trustee, is to encourage and not paralyze self-reliance. "We help those who help themselves" is really an expression of the prin-This plan of mutually organized health insurance is limited in the possibility of its application to larger urban or metropolitan communi-

Physicians and Courts

71. The re-referred matters contained in Paragraphs 141 to 149 inclusive in the 1932 Report, under the caption "Physicians and Courts" have been studiously considered and on December 8, 1932 we reported to the Council, the following recommendations:

"a. The introduction of an amendment to the Civil Practice Act creating a new classification of witnesses, adding to the old order that of 'medical witness,' the qualification of such witness naturally conditioned upon the license to practice medicine in the State of New York.

"b. That such amendment shall provide for an adequate minimum fee to be paid in compensation for physicians' appearance in court.

"c. That such amendment shall release the physicians and surgeons of active practice from the ordinary, conventional subpoena; such witnesses to be subject only to the command of the court and shall appear as witnesses for the court instead of partisan witnesses for one or the other side in a legal claim.

"d. The approval of all recommendations in paragraph 149 of the 1932 Report (after deleting all of Section F.). Such recommendations being contained in sections a, b, c, d, and e of said paragraph, except that in section d the personnel of the four representatives shall read as follows: "The Counsel of the Society and three physicians who have been admitted to the Bar in the State of New York."

72. In regard to the first three recommendations, the Executive Committee has ruled:-"Desirable as is the proposed legislation, its consideration is questioned in that it would be class legislation and in a letter dated November 19, 1931, our legal Counsel so rules."

"The matters relating to the above recommendations will therefore need reconsideration and re-presentation in new form." In regard to the other recommendations contained in Paragraph

149, exclusive of Recommendation f, the Executive Committee ruled "That such provisions were submitted to the House of Delegates at the last session and not adopted. It is advised that they should not be considered at this time by the Executive Committee and that the Committee on Economics be asked to re-submit them to the House of Delegates if they desire to do so."

73. Recommendation: Therefore, after a careful understanding with our Counsel, we re-recommend the following:

a. That this House of Delegates approve of the principle of Compulsory Arbitration of automobile accident case claims.

b. That we approve the inclusion of a doctor on such arbitration board.

c. That the Secretary of this Society transmit the expressions of our approval to Justice Frederick E. Crane.

d. That the House of Delegates request Justice Edward Lazansky of Appellate Division to include in the "permanent committee" to receive suggestions helpful to the betterment of the general administration of the law, four representatives from the Society. These representatives shall be Counsel of the Society and three physicians who have been admitted to the Bar in the State of New York.

Lien Law. On December 8th, 1932, we recommended for re-consideration by the Executive Committee the proposed amendment to the Lien Law of the State of New York, previously offered in November, 1931, disapproved by them at that time, presented to the House of Delegates in the last sentence of Paragraph 149 in June, 1932, and by them re-referred for further consideration and re-presentation. The proposed amendment follows:

AN ACT: To amend the lien law by providing therein that a hospital, physician or nurse rendering medical aid and service to any person injured as the result of an accident has a lien upon the patient's cause of

The People of the State of New York, represented in

Senate and Assembly, do enact as follows:
Section 1. Chapter thirty-eight of the laws of nineteen hundred nine, entitled: "An Act in relation to liens, continued nine, entitled: "An Act in relation to liens, continued nine, entitled laws" stituting chapter thirty-three of the consolidated laws," as amended, by chapter five hundred fifteen of the laws of nineteen hundred twenty-nine is hereby amended by inserting after section one hundred eighty-four a new section to be section one hundred eighty-five to read as follows:

Section 185. Lien of hospital, physician and nurse, A hospital, physician or nurse rendering medical aid and services to any person injured as the result of an accident other than a claim for compensation under the Workmen's Compensation Law has a lien upon the patient's cause of action, claim or counterclaim which attaches to a verdict, report, decision, judgment or final order in the patient's favor in whosover's hands they may come and the lien cannot be affected by any settlement between the patient of the pa ment between the parties before or after judgment or final order. The court upon the petition of the hospital, physician or any property of the hospital, physician or any physician physician or nurse may determine and enforce the lien. Section 2. This act shall take effect May 1st, 1933.

This has been approved by the Executive Cominities on February 9, 1933

75. Recommendation That the Medical Society of the State of New York approve of this proposed amendment to the Lieu Law

76. In Paragraph 161 of our 1932 Annual Report, there was recommended the appointment of a committee to make a study and recommendations on "organization and administrative machinery to make the collective thought of this organization more effective"

As amended, this recommendation passed with instructions to the Council to publish its report by December 15, 1932 We have not found this pub

hshed report

77. We re iterate the opinion that a reason able measure of economic security to physicians and to the State Society is dependent upon the full utilization of our administrative powers There is needed the means of creating and maintaining perfect understanding, solid progressive action and cooperation Under present conditions two or three committees may be undertaking the study of the same law and its effects or to initiate reforms or in some other way respond to the demands of our membership. We believe that all standing committees should understand what the other committees are doing The Executive Com mittee should understand what the committees are doing and there should be means of correlating work so that its results will come to the Society more promptly and more forcibly

78. In 1932 we did not presume to suggest what such a plan should be The general misunderstanding of the aim of Paragraph 161 and the request of officers lead us to present examples of what might be done in this way. A designated member of the Executive Committee and a designated member of each of the other standing committees might attend each meeting of a standing committee. This would keep the Executive Committee and all standing committees in complete knowledge of the work undertaken by each of the standing committees. Overlapping and reduplication could be avoided and economies of time and money obtained for the Society.

79. Another way in which committee work could be better correlated and economies practiced would be to secure the appointment of a Special Committee of four in addition to the President of the Society who would constitute a policy planning and hason committee. One of this committee could attend all meetings of standing committees and report in a monthly meeting to the President so that the developing of matters under consideration could be understood. We believe that the natural reaction against change is enhanced by the surprise which accompanies its first presentation.

80. These plans are suggested as illustrations

of what might be accomplished by reorganization of our committee work. Changes far more radical than these might be effected with profit to the organization. We are inclined to regard evolution as superior to revolution. Some measures similar to one of the above illustrations might well serve us at this time.

81. Recommendation We recommend that a committee of five be elected by the House of Delegates or appointed by the President with in structions to devise and present a plan of committee organization to be reported to the Council not later than December 15, 1933, and the action of the Council thereon to be published in the New York State Medical Journal at the earliest possible date

82. In conclusion we wish to express our gratitude and appreciation to those who have materrilly assisted us in our work during the current President Heyd has attended four of our sessions and aided its with good advice and valuable suggestions Dr Peter Irving, Assistant Secretary, has visited us and offered constructive information Our Counsel, Mr Lorenz J Brosnan, has attended a meeting and has held numerous conferences with the Chairman and other members of the Committee IIIs advice has been invaluable Commissioner Johnson sat with us through the larger part of a busy meeting and answered a large number and variety of questions concerning the Social Welfare Law and its oper He did this with the utmost frankness, ations good humor and intelligence Dr Emil Koffler attended one of our meetings at which time he accepted a commission from us to make an exlinustive study of the clinics of the metropolitan district following out a plan outlined by the Committee and approved by the Executive Committee Dr Alec Thomson who was appointed a special emissary of the President to investigate the Geib Vaughn Detroit Plan attended one of our meet ings and rendered his report concurrently with the reports of our sub committee of two His report is in our files as valuable evidence Joseph Lawrence Executive Officer of the So ciety, has attended four meetings and has given us cheerfully of help and understanding

Respectfully submitted

CHARLES H GOODRICH, Chairman, FREDERIC E ELLIOTT, Secretary, EDWARD R CUNNIFFF, JOSEPH P GAREN, FREDERICK M MILLER, HOMER L. NELMS JOSEPH C O'GORMAN, TERRY M TOWNSEND, CASSIUS H WATSON, FREDERICK S WETHERELL

REPORT OF THE COMMITTEE ON LEGISLATION

To the House of Delegates:

Gentlemen:

Your Committee on Legislation cannot submit you a final report of its activities for the year, owing to the fact that the Legislature is still in session at the time this report must be written, but it is pleased to report that it is unusually busy studying bills of proposed amendments.

The committee, acting upon your direction, has been enlarged by two members, and in accordance with a program developed this year, has divided the state so that each member holds himself more or less responsible for the active cooperation of a certain number of chairmen of county committees.

During the fall, your chairman held a conference with the president of the Second District Branch and representatives of the four County Societies in that Branch, at which time a program of intensive cooperation was developed. It was agreed that when adverse legislation is pending, a most effective way of combatting it is by enlisting the aid of influential lay persons. order that a group of such persons should be available for use this winter, it was decided to ask the chairman of the Legislative Committee of each of the County Societies to enroll, prior to January 1st, as many influential persons as possible and a printed form for collecting such enrollments was devised. Later it was decided that this form should be published in the county bulletins of the Second District and in the State Journal. The matter was presented to the Executive Committee and approved by it.

The committee has met monthly since the convening of the Legislature and, with the Executive Officer, carefully studied each bill, advising him of the committee's approval or disapproval.

Thus far the efforts at legislation differ somewhat from previous years, but are directly in line with the spirit of the times. No cult bills have been introduced, but many amendments proposed that would have an economic bearing on the practice of medicine. The antivivisection society has split and, accordingly, we have two dog bills to oppose; the usual one and another more rigidly drawn, introduced by Assemblyman Bernhardt Mr. Bernhardt announced during of Buffalo. the summer that he had been requested to introduce a bill and proposed to do so. He has also introduced a resolution calling for an investigation of the laboratories of the state. Lately, however, he has expressed himself as unwilling to push either of the two measures; he is satisfied that it was a mistake on his part to sponsor such legislation.

Among the other bills to be acted upon are the omnibus health insurance bill of previous years; several amendments to the Workmen's Compensation Law making all diseases and disabling con-

ditions arising out of industry, compensable; another that would create a state fund to carry all of the state's insurance, and one authorizing a survey by a legislative committee of the administration of the Compensation Law. All of these are being opposed by the Executive Officer at the direction of your committee.

A number of bills have been introduced modifying or attempting to reconstruct the narcotic drug law. Several of these are modifications of the model offered by the A. M. A. Your committee is in sympathy with the object of these amendments, but cannot see that they carry sufficient improvement over the present law to make

their enactment urgent.

Two bills have been introduced relating to hospital dispensary administration, one denying hospitals the right to collect fees for dispensary services and another creating a committee to authorize dispensary patients; and another closely related, authorizing the creation of a committee in each welfare district to certify the indigent who should be cared for. The approval of these bills has been directed.

Two hospital lien bills have been introduced. Neither of them makes provision for the physicians. With the assistance of Mr. Brosnan, each of these bills has been amended so as to include the physicians and the Executive Officer has been directed to have one or both of these amendments introduced.

The chairmen of the country committees have been unusually cooperative thus far this year. Many more comments have been received at the Albany office and Dr. Lawrence reports that the chairmen of the Senate and Assembly committees, as well as members of these committees, are receiving many more letters from their constituents advising action on bills, than in previous years.

As was stated above, the session is probably not more than half concluded at the time of writing this report and many things may happen before adjournment.

We are keeping the chairmen of the county committees advised of the status at Albany through our weekly bulletins and special bulletins when such are necessary. We are also sending copies of all important bills to the chairmen, and other material which comes before the Legislature or is issued by it that may be of interest or assistance to the county committees.

We have not had a meeting of the chairmen of the county committees in two years and quite a number of new men have come into positions since then. It would be well to consider a conference as a part of next year's program. Certain of the older chairmen have held conferences with their committees and their Senators and Assemblymen since election. The results of such conferences are so satisfactory that the committee has

recommended that each County Society arrange such conference.

Owing to the necessity of submitting this report at this time, the committee asks the privilege of submitting a supplementary report after the adjournment of the Legislature or at the time of the meeting of the House of Delegates, if the Legislature is still in session.

Respectfully submitted, HARRY ARANOW, Chairman

February 15, 1933.

REPORT OF THE COMMITTEE ON PRESS PUBLICITY

To the House of Delegates:

Your Special Committee, with a budgetary allotment of one-hundred dollars, has been unable to do more than cogitate. There is great uncertainty in the minds of the profession regarding the entire problem of publicity, whether it be through the press, through the radio, through the lecture platform or through other methods, such as pamphlets, specially prepared articles, and the like.

Your Special Committee believes that progress in acquainting the public with what the medical profession is doing, has done, and is prepared to do, requires an adequately administered department of the State Society, if the profession is to make headway in overcoming the cynicism of the public and lay organizations against the medical

profession.

Widespread publicity has been given (and threatens to be expanded under a high-powered public relations counsel) to the Report of the Committee on the Costs of Medical Care. The medical profession finds itself with no real means of combating such propaganda, as we depend upon an untrained, unprepared, heterogenous group of volunteer publicity men. Chairmen of press reference committees, public relations committees, public health committees, and so forth, in the different county societies are busy practitioners of medicine. They willingly give of their time. They make a valuable contribution that is negated by lack of personnel and facilities to carry on, to do the detail work, and to establish and maintain contact.

Your Committee believes that if the medical profession is to make progress in the field of public health and relations it must be done as an organized body. As such, we must be able to follow the methods carried on in other state societies and in the American Medical Association, whereby health information, discussions of current medical problems, contact with public agencies and the like are recognized as an imperative need

—a need that is to be met by budgetary allocation sufficient to employ personnel capable of presenting medical information in a medical style that will be as readable as the usual content of the news column.

Your Committee on Press Publicity reports having received very few inquiries concerning problems within its field. Many of the county societies have in one form or another released a considerable amount of medical news. Some have conducted radio broadcasts. Others have provided lecturers on medical subjects.

Your Committee finds that some State Societies and a number of county medical societies throughout the country conduct an active medical information service in one form or another; that more of this type work is being done elsewhere than in the State of New York; that where done most successfully it is administered by the organization sponsoring the work through a department employing paid personnel—and not dependent upon volunteer service of active practitioners.

The Committee recommends that the Medical Society of the State of New York establish in the administrative office a division of publicity, in cluarge of an employee who would be responsible for the preparation and dissemination of medical information, and the organization of a department that would render service to the county societies desiring assistance for dissemination of local information of a similar character.

The Committee recommends the discharge of the Special Committee on Press Publicity, unless the House of Delegates, in its wisdom, determines that the State Society establish the recommended division of publicity and wishes the Special Committee to be continued for the purpose of assisting in the organization.

Respectfully submitted,
ALEC N. THOMSON, M.D.,
Chairman,

February 15, 1933.

REPORT OF THE FIRST DISTRICT BRANCH

To the House of Delegates:

Gentlemen:

The First District Branch of the Medical Society of the State of New York, comprises the Counties of New York, Bronx and Richmond in the Metropolitan District, and Rockland, Orange, Westchester, Putnam and Dutchess in the lower Hudson Valley. The County Societies are all active in carrying out the policies of the State Society.

The Annual Meeting was held at the Rockland Golf Club, Sparkill, on October 14, 1932, and was well attended. In the morning, many members enjoyed a round of golf. Luncheon was served at 1 p.m. followed immediately by the business meeting and election of officers. The Nominating Committee presented its report as follows:

For President—C. Knight Deyo, M.D., Pough-keepsie; for First Vice-President—Samuel J. Kopetzky, M.D., New York; for Second Vice-President—Edward C. Podvin, M.D., Bronx; for Secretary—Isidore J. Landsman, M.D., Bronx; for Treasurer—John T. Howell, M.D., Newburgh.

The report of Nominating Committee was ac-

cepted in its entirety and the candidates were duly elected.

Short addresses were then made by Dr. Charles D. Kline, President of the First District Branch, Dr. Chas. Gordon Heyd, President of the Medical Society of the State of New York, and former Presidents Dr. James E. Sadlier and Dr. Orrin S. Wightman. The absence of Dr. Frederick H. Flaherty, President-elect, and Dr. Daniel S. Dougherty, Secretary of the State Society, was much regretted.

The following scientific program was then in-

troduced:

"Neurogenic Basis for Abdominal Sign Symptoms," by Edward M. Livingston, M.D., New York.

"The Adrenals in Health and Disease," by Max

A. Goldzieher, M.D., Brooklyn.

"Compulsory Health Insurance Abroad," by Emil Koffler, M.D., Bronx.

These papers were very interesting and instructive and greatly appreciated by all present.

Respectfully submitted,
CHARLES D. KLINE, President.

Committee was ac- February 15, 1933.

REPORT OF THE SECOND DISTRICT BRANCH

To the House of Delegates: Gentlemen:

Your councillor for the Second District Branch has made one or more official visits to each of the four component County Societies composing the Branch.

The Branch has held two meetings. One was in June at the Lawrence Country Club. The Annual Meeting was held November 17th at the Garden City Hotel. The descriptive reports of these meetings have appeared in the New York STATE JOURNAL OF MEDICINE.

The Branch Executive Committee has met for the purpose of planning the Branch activities.

The Chairman of the component County Society Committees of Legislation and Economics have met with the respective State Chairmen for the purpose of arranging for unified action.

Each component County Society has continued to carry on the various activities reported upon by the Branch Councillors for the past few years.

The President and the Secretary of the Branch have attended all committee meetings and conferences of the Branch.

A good deal of thought has been given by the officers and groups of members to the elaboration of a plan for the Branch, which if possible of accomplishment would provide administrative machinery, that would enable physicians of Long Island to actively participate in the community efforts directed toward disease prevention and health preservation and promotion.

Respectfully submitted, Louis A. Van Kleeck, President.

February 15, 1933.

REPORT OF THE THIRD DISTRICT BRANCH

To the House of Delegates: Gentlemen:

The twenty-fifth annual meeting of the Third District Branch of the Medical Society of the State of New York, was held at Sharon Springs New York, on Wednesday, September 16, 1931 and the twenty-sixth annual meeting in Loomis

Sanatorium, Loomis, New York, on Wednesday. September 21, 1932. The first being held at an extreme northern and the latter at the most southern part of the District. Despite that both these places are somewhat difficult of access for some members, the attendance was in each in stance surprisingly good. That the programs

were remarkably attractive and meritorious was largely due to the care exercised by the executive committee in the selection of the speakers, they being guided in this by the counsel of our State Society's Executive Officer, Dr. Joseph S. Lawrence.

I wish personally to thank each speaker for his contribution to the success of these meetings and also the manager and the physicians in charge at Loomis Sanatorium for the whole hearted welcome and entertainment we received there.

A very notable event in the history of the Branch occurred on the evening of October 28, 1931, when the Albany County Medical Society celebrated the one hundred and twenty-fifth anniversary of its foundation. The meeting was held in the dining room of the De Witt Clinton Hotel and the excellent dinner, the welcoming speech of Mayor Thatcher and the inspiring addresses of Drs. George W. Crile, William D. Johnson and Charles K. Winne combined to make the occasion a most memorable one.

The Board of Supervisors of Columbia County met on December 20, 1932 and voted to organize a county health department. This is to include the city of Hudson, the approval of which had been previously obtained. The board of health (three of whom are physicians and members of the county medical society) will appoint a full time commissioner of health and initiate the work of the department.

We are pained to record the death of two of our intimate friends and ex-presidents of the 3rd District Branch—on September 15, 1930, Charles P. McCabe of Myocarditis and on December 25, 1932, Luther Emerick of Pneumonia. They served faithfully and well and deserve to be held in loving remembrance.

Respectfully submitted,

HERBERT L. ODELL.

President.

February 13, 1933.

REPORT OF THE FOURTH DISTRICT BRANCH

To the House of Delegates— Gentlemen:

Owing to a rather prolonged illness during the early part of the year, and to the fact that the district covers a large territory making the meeting places of the various component societies rather inaccessible at times, I have been unable to fulfill all my obligations. I have, however, been in fairly close touch with the counties in the neighborhood of Schenectady and know something of the work of the others and feel justified in reporting that they and the branch as a whole are doing their part in supporting the State organization and in making its work worth while.

The Annual Meeting held in Schenectady in October was well attended and apparently successful. The Clinical and Pathological demonstration at the Ellis Hospital on the morning of the first day was an innovation which, judging from the amount of favorable criticism received, was of real benefit to those members whose contacts with hospitals are infrequent.

On Wednesday morning, October 12th, the group was entertained at the Research Laboratory

of the General Electric Company.

Respectfully submitted,

FRANK VANDER BOGERT, President February 15, 1933.

REPORT OF THE FIFTH DISTRICT BRANCH

To the House of Delegates:

Geutlemen:

The Fifth District Brauch of the Medical Society of the State of New York, comprising the counties of Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, and Oswego, held its twenty-sixth annual meeting October 4, 1932, in the Elks Club, Oneida. About one hundred twenty members attended. Dr. D. H. Conterman, President of the Medical Society of the County of Madison, made the opening address.

The scientific program follows:

"Present Day Status of Allergic Disease," T. Wood Clarke, M.D., Utica.

"Correlation of the Symptoms and Pathology of Arteriosclerotic Heart Disease," Harold E. B. Pardee, M.D., New York City.

Luncheon at Hotel Oneida. Introduction of Guests.

"Surgical Measures for the Relief of Intractable Pain," illustrated with lantern slides and moving pictures, Byron Stookey, M.D., Neurological Institute, New York City.

"Some Indications for Plastic Surgery," Leon

E. Sutton, M.D., Syracuse.

"Study of Surgical Complications, Incidence and Treatment," Murray MacG. Gardner, M.D., F.A.C.S., Howard N. Cooper, M.D., F.A.C.S., Watertown.

Entertainment for the visiting ladies was provided by the wives of the Oneida physicians.

After luncheon, at the nearby Hotel Oneida, guest speakers, officers of the State Society were introduced: Dr. Chas. Gordon Heyd, President of the Medical Society of the State of New York, Dr. Frederick H. Flaherty, President-elect. Dr. Thomas P. Farmer, Chairman of the

Committee on Public Health and Medical Education, Dr. O. S. Wightman, Editor-in-chief of the New York State Journal of Medicine; all of whom spoke on matters of interest to the Society and of importance to physicians generally.

EDWARD R. EVANS, President.

February 15, 1933.

REPORT OF THE SIXTH DISTRICT BRANCH

To the House of Delegates:

Gentlemen:

The report of the Sixth District Branch follows:

There has been no outstanding event in the District during the past year. Economic problems of medicine have been given greater attention than ever before. The report of the Committee on the Cost of Medical Care has been of especial interest, because of the location in the District of the subject of one of their studies and reports. Otsego County held a very interesting historical meeting at Cooperstown.

The 26th annual meeting of the Branch was held at Binghamton in the Masonic Temple on Tuesday, September 27, 1932. One hundred were registered as attending. The day was not propitious.

Mr. Homer Folks, Secretary of the State Charities Aid Association of New York City,

spoke on "The Health Program Recommended by the State Health Commissioner." Dr. Hugh Auchincloss, Professor of Clinical Surgery at the College of Physicians and Surgeons in New York City, demonstrated with the aid of numerous charts and slides "Finger and Hand Destruction and Reconstruction Problems."

Luncheon was served in the same building. President Heyd was unable to be present. Among the speakers were President-elect Dr. Frederick H. Flaherty of Syracuse, Secretary Dr. Daniel S. Dougherty of New York City, and Dr. Orrin S. Wightman, Editor-in-chief of the State Journal

In the afternoon Dr. Louis C. Kress of the State Institute for the Study of Malignant Disease at Buffalo by aid of four lantern demonstrations discussed most thoroughly "Bone Lesions."

Respectfully yours,
S. B. BLAKELY, President.

February 15, 1933.

REPORT OF THE SEVENTH DISTRICT BRANCH

To the House of Delegates—Gentlemen:

The Annual Meeting of the Seventh District Branch was held on September 29, 1932, at Clifton Springs Sanitarium, with an attendance of about two hundred.

The Scientific Program includes a paper by Dr. George W. Crile of Cleveland who talked on "Indications for, and end results of, Denervation of the Adrenal Glands." Dr. Crile's paper was discussed by Dr. William D. Johnson of Batavia, also by Drs. Carl Huber and William Dean of Rochester. Dr. William P. Healy of New York gave a paper on "Cancer of the Uterus." This paper came in for lengthy discussion. Those Physicians taking part in the discussion were Dr. Kress of Buffalo and Drs. W. D. Ward and W. E. Bowen of Rochester. Dr. Warfield T. Longcope of Baltimore talked on "The Differentiation of Chronic Pyelonephritis from other forms of Bright's Disease." Dr. Longcope's paper was discussed by Dr. Reifenstein of Syracuse and Drs. Haller, Miller and Kohr. of

Rochester. Dr. Foster Kennedy of New York talked on "Head Injuries." Dr. Kennedy's paper was discussed by Dr. Ward Williams of Rochester, also by Dr. Johnson of Batavia and Dr. Armstrong of Canandaigua. There were also short talks by Dr. Daniel S. Dougherty and Dr. Orrin S. Wightman of New York and Dr. Frederick H. Flaherty of Syracuse. It was a very enthusiastic meeting.

Representatives from the following Counties in the District were present: Monroe, Wayne, Cayuga, Livingston, Ontario, Seneca, Steuben, Yates and Schuyler. Seven County Presidents out of the nine Counties represented were present. The greatest number of physicians came from Monroe and the least number from Schuyler.

The dinner which was served in the dining room of the Sanitarium was attended by one hundred and forty and was most enjoyable.

Respectfully submitted, James M. Flynn, President

February 15, 1933.

REPORT OF THE EIGHTH DISTRICT BRANCH

To the House of Delegates: Gentlemen:

As President of the 8th District Branch, permit me to submit the following report of our activitics during the last year.

In June we had a splendid meeting of the Executive Committee in Buffalo. There was a thorough discussion of the economic conditions confronting our component societies.

In October our annual meeting was held at Leroy, with an attendance of one hundred and

twenty. The program included Dr. Goodrich on Medical Economics, and Drs. Leahy, Joslyn and Hurxthal of Boston on Scientific Problems.

During the year Erie, Niagara and Chautauqua Counties have had difficult problems to face, and have done courageous work in meeting these difficulties.

Respectfully submitted,

RAYMOND B. Morris.

President.

February 15, 1933.

INDEX OF ANNUAL REPORTS, 1933

Arrangements, Committee	Malpractice Defense, Rules of	269
Blood Transfusion	Maternal Mortality	278
Cancer 278	Medical Economics, Committee	283
Cod Liver Oil, Distribution by Relief Agencies 280	Medical Research, Committee	268
Commercialized Medicine	Membership statistics	263
Committee appointments	National Health Plan, Inc., Providence, R. I 2	295
Council 263	Physical Therapy	279
Counsel	Physicians and Courts	
Detroit Health Plan280, 288	President	259
District Branches	Press Publicity, Committee	299
Executive Committee	Preventive Medicine	289
Financing Sickness	Public Health and Medical Education, Committee 2	276
Foreign Medical Schools	Public Health Council of State Dept. of Health 2	89
General Municipal Law	Public Relations, Committee	:72
Graduate Education 276	School Medical Inspections273, 2	78
Hospitalization, economics of 283	Scientific Work, Committee 2	:75
Indigent Patients	Secretary 2	62
Industrial Medicine	State Aided Hospitals 2	90
Insurance against Malpractice 261	Treasurer 2	70
Journal 267	Trustees 2	69
Lectures to Medical Students	Tuberculosis Reporting278, 2	81
Legislation, Committee	Veterans' Administration Hospitals 2	92

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MEDICAL SOCIETY OF THE STATE OF NEW YORK

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Executive Officer-Joseph S. Lawrence, M.D., 100 State St., Albany. Telephone, Main 4-4214. For list of officers of County Medical Societies, see this issue, advertising page xxx. Annual Meeting, April 3-5, in the Waldorf-Astoria, New York City.

THE ANNUAL REPORTS

This issue of the Journal is of unusual size, for it contains the annual reports of the officers and committees, and also the programs of the major features of the Annual Meeting. These programs are more varied and extensive than ever before and contain new features

which will make a strong appeal to the members.

The Annual Reports are printed in the place of the usual scientific department of the Journal; but they may properly be considered to be scientific papers on the subjects of Administrative Medicine and Medical Economics. In fact they are practical dissertations on the subjects, setting forth what the Medical Society has done during the past year in its own peculiar field of organized medicine. These reports have a value which is not only for the present, but will be increasingly evident as years go by. The extensive entrance of the State Medical Societies into the field of civic medicine dates back only a decade, and yet even now the beginnings of those activities are in dispute, for no one could foresee their phenomenal growth or recognize those which were destined for wide development.

The Annual Reports are constructed along the lines of the private practice of a family doctor treating a patient, for each deals with

its subject in three sequences:-

The Examination
 The Diagnosis
 The Treatment

The regardent The report deals with facts, and sets forth the activities of the society and its committees. It describes the workings of the Society and its contacts with other organizations, especially those engaged in education and social betterments. The reports present an excellent picture of the policies of the Medical Society of the State and those of the Counties, and the aspirations of their members.

The reports also comment on the conditions which are found, and diagnose their strength and their weaknesses, their trends and their accomplishments. Their diagnoses are peetiarly accurate and enlightening, for the leaders in the Medical Society of the State of New York have the benefit of the broadest experience that is available in any State, but they are also spurred by lay health organizations and survey groups that are centered in Greater New York. The judgments set forth in the reports of the officers and committeemen of the Medical Society of the State of New York are sane, enlightening, and judicial.

The reports also suggest lines of treatments in the form of recommendations for the House of Delegates to consider. The action of the House will be the policy of the Medical Society of the State of New York and the County Societies during the coming year. The State Society does not assume an attitude of dominering over the county societies and their members, for it encourages them in original

activities and demonstrations.

The Annual Reports are of personal interest to every member of every County Medical Society, for their approval or criticism will be expressed by County Society representatives who are expected to prepare themselves for their duties by reading the reports with care.

LOOKING BACKWARD

THIS JOURNAL TWENTY-FIVE YEARS AGO

Enforcement of Medical Practice Law: This Journal of March, 1908, contains the inaugural address of Dr. J. Riddle Goffe, President of the Medical Society of the County of New York, in which he was unduly optimistic in the control of quacks when he says:

"We have been criticised somewhat for taking the fines that come from convictions in courts, and we all feel that we would like to avoid this if it were a possible thing. Most cordial relations have been established with the District Attorney and his office, and also with the Police Department. It is our hope and expectation that we may now shift a large part of this work upon

the shoulders of these two city departments and secure sentences of imprisonment instead of fines. The permanent effect of such sentences would be more far-reaching. A thousand additional members of our Society, through their dues, would aid vastly in securing this desired end. To further this project I have taken the responsibility of appointing a special committee, whose duty will be to select and solicit new members.

"The new medical laws of the State are going to make it easy to put the specious medical quacks and the advertising medical institutes on the run, and a vigorous campaign against them is now being instituted."



MEDICAL PROGRESS



Arterial Obliteration .- By means of experiments on dogs F. Albert demonstrated that obliteration of the principal artery of a member produces an active peripheral vasodilata-tion which in arterial ligature introduces an additional menace of peripheral gangrene. In an earlier work the author had already established that obliteration of the principal vein has an opposite effect, producing active peripheral vasoconstriction, with an appreciable increase of the peripheral pressure. of the satellite vein will, therefore, by the active vasoconstriction it produces, compensate at least in part the vasodilatation following ligature of the artery. The vasodilatation is independent of the carotid sinuses, and is not the result of a local vessel irritation at the point of closure. It is also independent of the greater part of the nervous system, and in fact resists all nerve sections performed at the root of the member. It remains identical after spinal anesthesia, and is still present, though in less degree, after anesthesia of the sympathetic ganglionic chain. Modifications of intravascular pressure play very little part in these vasomotor responses to arterial oblitera-It appears that the principal cause of vasomotor reactions must be found in physiochemical modifications established in the composition of the peripheral blood and of the interstitial fluids under the influence of a cellular metabolism vitiated by arterial obliteration. This would lead to the appearance of substances with determined vasomotor reactions, which act directly upon the walls of the small vessels and capillaries and produce the reactions in question either directly or through the intermediary of the sympathetic peripheral nerve terminations and by reflex-axonic mech-The existence and nature of these vasomotor products still remain to be formally established. Injection of an ultrafiltrate of the return blood of a limb suffering with certain peripheral sympathetic troubles seems to demonstrate in this blood the presence of vasodilator products. Thus in certain peripheral vasomotor affections of sympathetic origin there would be produced, or would accumulate, at the periphery products of metabolism capable of maintaining certain vasomotor reactions, once they have been set up. It is interesting to note that in different forms of physiopathic affections very different kinds of return blood can be withdrawn according to the affection, that is, each sample is always the same for the same affection. A simple transitory compression of the vessel might be able, through the opposite vasomotor reactions set up by obliterations of arteries and veins, to compensate in the one or the other direction certain vasomotor troubles. The author has already obtained very definite results along these lines.—Lyon Chirurgical, November-December, 1932.

Gastrocardiac Manifestations as Sequels of Left-sided Phrenicotomy.—On the basis of a wide study of the literature and of 106 leftsided and 126 right-sided phrenicotomies personally carried out, H. Jahnke undertook to determine whether permanent or late injuries could be demonstrated as a result of this procedure. In 21 cases in which the operative purpose was achieved there was an especially high position of the diaphragm afterwards, this being in some cases a handbreadth above its original place, independently of the length of the removed nerves. In but few cases, however, was there any striking displacement of the median organs of the body from their median position, and these were predominantly due to a marked cirrhotic tendency, occasionally with extensive induration of the pleura and pericardium. But in none of these cases were there any serious subjective discomforts of the heart or any gastrogenous disturbances. The pain from a feeling of pressure after eating, a sense of nausea, etc., complained of by a number of patients disappeared completely a few weeks after operation, returning only in exceptional cases, and then but transiently. Dyspnea upon movement and the subjective cardiac manifestations somewhat more frequently observed were due, in some cases, to extensive and destructive pulmonary tuberculosis, as well as to the narrowing of the half of the thorax resulting from the high position of the diaphragmatic arch, which caused a correspondingly diminished lung surface; in other cases they were due to changes in the course of the blood stream in the pulmonary circulation. It is astonishing, however, to note how slight are the phenomena caused by these changes, often extreme, of topography of organs, especially of the heart and large vessels, provided the heart muscle and the vascular system are sound. Only in adipose types of constitution did a slight insufficiency of circulation exist, which was expressed in a tendency to air hunger and palpitation upon the slightest exertion. Such subjective cardiac manifestations were observed in a few of the author's

cases, and in 12 there were also transitory gastrogenous pains; but in none was there any permanent condition in the sense of a Roemheld complex. Although in most cases the time of observation has been relatively short, averaging only 4 months, Jahnke has been able to follow up 24 left-sided cases over a longer period, some as long as 8 years, without any persisting cardiac or gastric injuries being observed. Permanent or late injuries are, at any rate, so unusual that they need be given no special attention in the choice of cases.—Deutsche medizinische Wochenschrift, December 9, 1932.

Two Rapid Tests for Pregnancy.-In 1929 I. E. Markee showed that the rhythmical vascular changes in endometrial transplants onto the iris are arrested by follicular hormone. This suggested to him the possibility of using this modification of the uterine vascular rhythm as a test for the presence of follicular hormone in the urine of pregnant women. He has devised two ways of applying the test, namely, the direct and the indirect. When 20 rat units, per kilogram, of follicular hormone are injected into a rabbit, the color of the transplant is noticeably intensified, and within fifteen minutes the transplant becomes 20 per cent redder. In twenty minutes a slight irregularity of the cycle develops and the ratio of the time in vasoconstriction to that in vasodilatation is greater than 1:6; in thirty minutes the ratio is 1:10 or greater. These modifications continue until forty minutes after the injection, when the rhythmic vascular changes cease and the color of the transplant is comparable to that of 50 per cent hemoglobin. The color changes in the transplant are recorded by comparing the color with the colors in a Tallqyist hemoglobinom-The direct test is made by injecting the follicular hormone that has been extracted from 150 c. c. of urine by a method only slightly different from that of Frank and Goldberger (1930). A volume of 150 c. c. of urine has been taken because it is not possible to extract enough follicular hormone from that amount of urine from a nonpregnant woman to arrest the rhythmic vascular changes in the transplant, and because 150 c.c. of urine from a pregnant woman will yield enough of the hormone to have this effect. The main advantage of this method is that the diagnosis can be made forty minutes after the injection or two hours after the specimen of urine has been obtained. The indirect method consists in the intravenous injection of untreated urine from pregnant women. With this method the modification of the vascular rhythm is arrested in seven to eight and one-half hours after the injection and is similar in every respect to that following the injection of the follicular hormone. The direct test has the advantage that either gonadectomized or non-gonadectomized male or female rabbits may be used, and that the same animal may be safely used every third day. With the indirect test the same animal cannot be used oftener than every third week, since the injection of urine from a pregnant woman induces pseudopregnancy. Specimens of urine from 147 pregnant and 26 non-pregnant women were tested by both the direct and the indirect method and all of the diagnoses have agreed with the clinical histories.—Surgery, Gynecology and Obstetrics, January, 1933, 1vi, 1.

307

The Modern Conception of Nephritis, and Its Bearing on Certain Problems of Life Assurance.-Although a final conception of nephritis has not been reached, T. Izod Bennett finds that the last five years have seen an emergence, in many different countries, of an important agreement among a body of workers who have studied the subject deeply, concerning the major aspects of nephritis. In the classification of the varieties of nephritis it is more and more generally recognized that three groups are to be distinguished. Of these the central group includes the true inflammatory kidney diseases following acute infections. This great group of glomerulo-nephritis may be subdivided into a relatively benign group in which scattered foci of inflammation arise during an acute infection, and a second group in which the inflammation is spread diffusely through both kidneys. The latter group includes serious cases of nephritis, which begin usually as a streptococcus infection. In this group death occurs from uremia, cerebral hemorrhage or pseudo-uremia, according as the factor of glomerular destruction, or that of increasing hypertension predominates. In sharp opposition to this group two other groups are recognized: (1) Nephrosis, in which there is intense albuminuria without edema, hematuria, increase in blood pressure, changes in the retinae, or any tendency to uremia. There is no evidence of change in the glomerulus, but there are purely degenerative The prognosis changes in the renal tubules. in many examples of this group is relatively good. (2) Ischemic nephritis, of which the outstanding manifestation is hypertension. The main feature of the morbid anatomy is sclerosis of the kidneys and spleen, with hypertrophy of the heart. In this group death occurs more frequently from cerebral catastrophe or from cardiac failure than from renal failure. It is not to be supposed that there are no clinical difficulties as regards allocation of certain eases to this last group.

From the point of view of life insurance,

each of these groups presents a condition dangerous to life, but the degree of danger varies considerably. A point to be stressed is the extreme importance of accurate blood pressure estimations, and these should not be reserved for applicants in the last decades of life. Essential hypertension may appear at ages as early as twenty. The woman who has borne children should not be accepted for life insurance without careful consideration of her history and blood pressure. Careful examination of the urine remains of major importance, but observation of the specific gravity of urine which contains no albumin is superfluous. Oualified acceptance can usually be given with safety in cases of nephritis which, five years after onset, exhibit albuminuria as the sole evidence of disease. Mild degrees of hypertension, without albuminuria or cardiac involvement, with a systolic pressure below 180 and a diastolic pressure below 100, tend to be far too heavily loaded at the present time.— The Lancet, January 7, 1933, ccxxiv, 5706.

The Thyroid and Potassium Permanganate Treatment of Furunculosis.—W. Antony Ball states that the administration of thyroid in the treatment of boils has been successful. As boils are common at the time of puberty this is understandable, though all the successes are not at puberty. Again satisfactory results have been claimed by injections of collosol manganese; similarly alkalis have been given. Ball used bi-palatinoids, containing thyroid ½ grain and potassium permanganate ½ grain. It then seemed to him that these tablets might combine the properties of both thyroid and collosol manganese, with the added advantage that they are given by mouth, so he gave them together with his usual prescription: Ferric sulphate, 3 grains; magnesium sulphate, 30 grains; dilute sulphuric acid 10 minims: Fowler's solution, 2 minims, and chloroform water to make 1/2 ounce. Both the mixture and a tablet were given three times a day. The boils ceased with dramatic suddenness. He has now treated 12 cases of boils of all types with a similar improvement in every case. He feels that there is some connection between the oxidizing action of the potassium permanganate and the thyroid, and that they act by tending to sway the hydrogen-ion of the blood. The result may possibly be due to the antiseptic action of the potassium permanganate on the intestinal contents, but this does not account for the action of the thyroid. -Practitioner, January, 1933, cxxx, 775.

A Discussion of the Rôle of Arterial Thrombosis in the Visceral Diseases of Middle Life, Based upon Analogies Drawn from Coronary

Thrombosis.—Lewis A. Conner, writing in the American Journal of the Medical Sciences, January, 1933, clxxxv, 1, calls attention to the fact that whereas thrombosis in the arteries of the heart and of the brain is known to be common and is easy of clinical recognition, almost nothing is known concerning the symptoms of arterial thrombosis in the abdominal The failure to recognize this condiviscera. tion must be due in part to the inherent difficulties of diagnosis, but it is certainly partly due to failure to have the possibility of such attacks in mind and to have accumulated pertinent evidence. Conner has constructed a tentative framework for the diagnosis of arterial thrombosis in the several organs. Kidney-In a person of arteriosclerotic age, in whom there is no ground for expecting the discharge of arterial emboli, the occurrence of dull pain and tenderness in the flank, of more or less fever and leucocytosis, and of red cells and albumin in the urine (if absent previously) would seem to justify the diagnosis of thrombosis of the kidney. Spleen-Pain of the pleural type, fever, leucocytosis, tenderness, and perhaps muscular rigidity in the splenic region, with not infrequently a to-and-fro perisplenic friction sound, warrant the diagnosis of arterial thrombosis in this Pancreas-Pain in the epigastric or umbilical regions, with some tenderness, shock, fever, and leucocytosis, and probably nausea and vomiting-all symptoms which might be due to disturbances in neighboring organs. The simultaneous appearance of sugar in the urine, however, would go far toward justifying the diagnosis of arterial thrombosis. Mesentery—The symptoms of intestinal infarction vary greatly in character and severity. At the onset there is violent crampy pain, with nausea, vomiting, sometimes diarrhea and usually prostration, sweating and col-The vomitus and stools are frequently blood-stained. After a day or two the symptoms of paralytic ileus appear. There is probably some fever and leucocytosis in every case at some stage. If the diagnosis of intestinal infarction seems justified, it still remains to distinguish between three possible sets of causes—mesenteric venous thrombosis, arterial embolism, and arterial thrombosis. If internists and pathologists would correlate their findings in regard to arterial thrombosis in the abdomen, the lineaments of the respective pictures will gradually emerge from their present obscurity, much as have those of the diagnosis of coronary thrombosis.

Intravenous Pressure.—W. A. Brams, N. L. Katz, and W. J. Schutz present a new method, based on a new principle, for the determination

of intravenous pressure. They believe that it eliminates most of the objections to the older methods, and that it has the additional advantage of a sharp end-point which can be read without hurry. After placing the patient at rest for ten minutes in a horizontal or semirecumbent position, the arm and hand to be examined are supported by a pillow at a level which corresponds to the point of entrance of the vena cava into the right auriele. Following the suggestion of Eyster, this point is taken to be in the fourth interspace, at the junction of the anterior and middle third of the anteroposterior diameter of the thorax. The method itself is based on the principle that the superficial veins on the dorsum of the hand can be easily visualized in a darkened room by transillumination. The superficial veins then appear as black bands which can be obliterated by moderate pressure, and thus distinguished from shadows cast by ligaments. The mouth of a small glass funnel is covered by a thin rubber dam held securely in place by a thread tied tightly in a previously prepared groove near the rim. A small hole is then cut in the rubber dam, through which the vein to be examined is visualized, such a vein having been selected in a darkened room. The surface of the rubber dam is covered with rubber cement, and the funnel is placed on the dorsum of the hand so that the vein is seen through the aperature in the rubber. Moderate pressure causes the rubber to adhere to the skin, making an air-tight seal. The tip of the funnel is then connected by rubber tubing to a suitable water manometer, so graduated that the pressure may be read in millimeters of water. The room is again darkened, and a light placed over the palmar surface of the hand visualizes the vein within the aperture of the rubber dam. The air pressure is then raised in the instrument by means of a rubber bulb until the vein becomes obliterated as a result of the compression. During the compression there are two stages: (1) the obliteration of the vein, and (2) further blanching of the skin. The former has been selected as the end-point at which the pressure is read from the manometer. In a scries of patients, some of them with cardiac disease, the tabulated results obtained by this indirect method, as compared with those of the direct method, show a high degree of accuracy. The authors believe that with minor improvements in the instrument and technique the method can be adapted for general clinical use. -Archives of Internal Medicine, January, 1933. li, 1.

Radioscopic Study of the Beats of the Heart and the Pedicle.—Every complete study of the heart beats should, according to Emile Bordet, take into account (1) the direction of their transmission in relation to the systole of the pulse,

(2) their amplitude. The first point can be demonstrated well on the screen, the second imperfectly so; a third relates to the form which their course takes and is not a subject for radioscopy. Bordet made a radioscopic study of the pulsations of the heart and the pedicle from the top to the bottom on each margin, in both the normal and pathological states, with results in part as follows: In the normal state the arch of the aorta and the median arch at the level of the pulmonary artery present external pulsations at each systole, which are seen to be synchronous and of the same amplitude for the 2 vessels. In the pathologic state these beats may be exaggerated, diminished, or abolished. In the aortic insufficiency of endocarditis the beats of the aorta are often greatly exaggerated without those of the pulmonary artery being excessive, while the reverse is true in insufficiency of the pulmonary artery. In aortitis, when the walls have lost their elasticity, the beats are weak and sometimes lost. In the normal state the contour of the left ventricle is the seat of systolic movements of retreat from the base to the apex. To each contraction of the ventricle there corresponds a point directed toward the median line, followed by a point extruding in the opposite direction, of the same amplitude but slower to appear. The effect of the retreat of the shadow is to bring the shadow of the total image of the heart back within the diastolic contour. In the early stages of pathologic dilatation of the heart, the pulsations are exaggerated, becoming more rapid and stronger upon the least effort; in repose, they become attenuated, but are still excessive. In progressive insufficiency of the left heart, if an exaggerated amplitude is seen to diminish and fail, while the size of the cavities continues to increase, the prognosis is grave. It is not unusual to see extremely reduced pulsations in cases of mitral stenosis where the left ventricle is small. This is due not to a disturbance of contractility of the myocardium, but to the reduced work of the ventricle through diminution of the blood debit. The beats of the right border of the heart are more difficult to make out, owing to the organ's anatomic relations. In extreme auricular dilatation, however, it is possible to see the shadow of the heart animated with lateral displacements from left to right during systole, and from right to left during diastole. In tricuspid insufficiency the border corresponding to the right auricle is the seat of systolic expansions at each contraction of the right ventricle, owing to the reflux of blood which passively distends the walls of the auricle. Pulsations due to the presence of an aneurysm may also be observed on the right border of the heart, the image of which resembles that of auricular ectasia.-Archives des Maladies du Cœur, December, 1932,



LEGAL



REPORT OF THE COUNSEL

By LORENZ J. BROSNAN, ESQ.
Counsel, Medical Society of the State of New York.

To the House of Delegates:

Gentlemen:

Your Counsel herewith submits his report for the activities of the Legal Department of the Medical Society of the State of New York for the period from March 1st, 1932, to and including January 31st, 1933. It will be noted that the report covers a period of eleven months. This is due to the fact that the House of Delegates meets this year in April and hence it was necessary to send this report to the Secreary's office for publication in the New York State Journal of Medicine not later than February 15th.

In his report last year your Counsel stated: "The past year has been an exceedingly busy one, both in court and in consultation. The appended figures state mere conclusions and give no adequate picture of the amount of work involved or the responsibility assumed." This statement applies with equal force to the present reporting period.

At the outset of this report your Counsel wishes to acknowledge his indebtednes for the assistance and cooperation rendered him by your distinguished President, Dr. Charles Gordon Heyd. Dr. Heyd has worked indefatigably in the interests of organized medicine in this State and much has been accomplished for the welfare of your Society and its individual members by his progressive leadership. Acknowledgment is also made of the advice and assistance of your everefficient Secretary, Dr. Daniel S. Dougherty. Dr. Dougherty's keen interest in every phase of the work of your Society has been an inspiration to his co-workers. In his position as Assistant Secretary Dr. Peter Irving has rendered conspicuous and faithful service. We greatly appreciate the labors of Dr. Frederic E. Sondern, who, as Chairman of the Insurance Committee, handled with painstaking care the many matters which have come before him and his Committee for consideration and decision.

During the reporting period your Society suffered a severe loss in the death of your Speaker, Dr. John A. Card. Dr. Card rendered invaluable service not only as Speaker of the House of Delegates, but also as Chairman of the Insurance Committee. In the latter capacity it was his custom to personally speak to the various district branches on the benefits of your group plan of insurance.

In making his report your Counsel adheres to the convenient category employed in previous years whereby his activities have been divided into three main divisions: (a) the actual handling of malpractice actions before courts and juries and in the appellate tribunals; (b) counsel work with officers, Committees and individual members of the Society; and (c) legislative advice and activities.

Litigation

It is customary to call to the attention of your members in these annual reports the ever-present possibility of a malpractice action and the hazard presented by such lawsuit. We again wish to repeat and emphasize that no active practitioner can consider himself free from the possibility of legal action being taken against him for alleged malpractice. The physician should also bear in mind that under our law the facts of these cases are considered and passed upon by twelve lay jurors. While passion, prejudice and bias should not enter into the verdict of a jury, every lawyer who practices in our courts can testify that these elements do affect and in fact are responsible for the fantastic results sometimes arrived at by juries.

In the field of litigation it is pleasing for your Counsel to report the splendid progress made and the results obtained by his associate, Mr. William F. Martin. Mr. Martin had served under your Counsel's predecessor, Mr. Lloyd Paul Stryker, and from the outset demonstrated that he possessed those qualities which make for success in the field of advocacy. Mr. Martin's ability in the trial of these cases has been the subject of favorable comment not only from individual members of the Society, but also from the judges before whom he has appeared in the various courts of the State.

Your Counsel also wishes to record the splendid work done by his associate, Mr. Thomas H. Clearwater, the Attorney for the Society. Acknowledgment should also be made of the fine spirit of cooperation and loyalty shown by your Counsel's entire office staff.

From the accompanying Table I it will be noted that the same number of cases, 292, were instituted in this eleven month period as in the preceding year. We disposed of 188 cases as against 227 during the preceding year. This figure does not include, however, 13 cases tried during the

present reporting period which resulted in mistrials. Also the figures do not include a large number of claims in which we were successful in persuading the claimants or their attorneys not to bring suit. A large number of claims still remain outstanding in which suit may ultimately be brought.

Of the 188 cases disposed of during the reporting period, 28 have been settled, in 153 cither judgments for the defendant have been secured after trial or they have been disposed of through dismissal, discontinuance or abatement. In 7 cases only was judgment rendered in favor of the plaintiff, and 3 of these cases are at pres-

ent pending on appeal.

It will be noted from Table I that there are now pending 747 cases. In connection with this figure your Counsel wishes to state that a complete inventory taken by his office of every pending matter discloses that of the 747 cases pending on January 31st, 1933, as listed in Table I, there are actually pending at this time 568 main eases and 179 eompanion actions (actions for loss of serv-

office at the date of this report 568 litigated matters.

We have already referred to the hazard involved in the trial of a malpractice action. Fortunately, the members of your Society have an opportunity to adequately protect themselves through the benefits afforded by your group plan of insurance. This plan has now been in operation for over a decade and its successful operation has been the subject of warm approbation from the members of your Society.

Your Insurance Committee, under the able leadership of Dr. Frederic E. Sondern, has rendered during the recording period a very real service to the members of your Society. This Committee has met on a number of occasions and has given painstaking care and consideration to the matters which have come before it for decision.

Table 11 hereto appended gives a comparison of the number of members insured in 1930, 1931, 1932 and 1933 and the number of members in the County Societies, and the percentage of insured members in the County Societies and in the entire

Comparison of the Number of Suits Instituted and Disposed of in 1931-32 and 1932-33

	Inst	tituted	Disposed of			
	1931-1932	1932-1933	1931-1932	1932-1933		
		(11 months)		(11 months)		
1. Fraetures, etc	24	24	15	15		
2. Obstetries, etc		19	14	14		
3. Amputations		3	3	15 60		
4. Burns, X-rays, etc.	28	21	21 78	15		
5. Operations: Abdominal, Eye, Tonsil, Ear, etc	81	76	78	60		
6. Needles breaking	5	2	.3	2		
7. Infections	19	16	15 2 9 2	24		
8. Eye infections	2	8	2	4 9 2		
9. Diagnoses	23	27	9	9		
10. Lunaey Commitments	3	3	2	.2		
	63	26 67	20 45	11 30		
12. Loss of Services, Wife, Child	03	07	43	30		
Totals	292	292 -	227	188		
FURTHER COMPARISONS	2,2		201	100		
Actions for Death	17	24	9	11		
Infants' Actions	37	32	21	19		
				19		
Totals	54	56	30	30		
HOW DISPOSED OF				•••		
Settled			26	28		
Tried (Verdict for Defendant), Dismissed, Discontin	ued					
or Abated Judgment for Plaintiff		••	198	153		
Judgment for Plaintiff	•••	••	3	7		
77-4-1						
Totals	•••	••	227	188		
FURTHER COMPARISONS						
Appeals: Judgments for Defendant		••	10	••		
Judgments for Plaintiff		••	••	.1		
Mistrials	043	••	••	13		
Pending on February 29, 1932	•••	747	••	••		
Pending on January 31, 1933	••••	/4/	••	••		

ices by father on behalf of child or husband on behalf of wife, and actions where more than one defendant is joined). Each main action and its companion action constitute one transaction, so that there are actually pending in your Counsel's State Society. The figures are sufficiently clear to obviate the necessity of extended comment. It will be noted that 13,457 physicians are now mem-bers of the State Society, or an increase of 262 over the figure of 13,195 covering the previous

TABLE II.

Comparison of the Number of Members Insured in 1930, 1931, 1932 and 1933, and the Number of Members in the County Societies, and the Percentage of Insured Members

	Cou	1930	101103,	193	1			1932			1933	
	No. of Members in County Society	No. of Members Insured	Percentage Insured	No. of Members in County Society	No. of Members Insured	Percentage Insured	No. of Members in County Society	No. of Members Insured	Percentage Insured	No. of Members in County Society	No. of Members Insured	Percentage Insured
Albany Allegany Bronx Broome Cattaraugus Cayuga Chautauqua Chemung Chenango Clinton Columbia Cortland Delaware Dutchess-Putnam Erie Essex Franklin Fulton Genesee Greene Herkimer Jefferson Kings Lewis Livingston Madison Monroe Montgomery Nassau New York Niagara Oneida Onondaga Ontario Orange Orleans Oswego Otsego Queens Rensselaer Richmond Rockland St. Lawrence Saratoga Schenectady Schoharie Schuyler Seneca Steuben Suffolk Sullivan Tioga Tompkins Ulster Warren Washington Wayne Westchester Wyoming Yates	235 32 859 123 48 859 123 124 125 120 125 126 127 128 129 129 129 129 129 129 129 129 129 129	136 111 476 132 28 405 18 121 127 628 428 131 124 123 1256 124 1256 1241 1256 1241 1256 1241 1256 1256 1261 127 127 128 129 129 129 129 129 129 129 129 129 129	[58459664857551897726021338674962450578886622707476508055496487553845244121170	247 324 130 47 53 90 66 34 22 124 735 25 53 46 48 22 13 47 30 48 22 39 47 30 48 48 49 49 49 49 53 55 50 50 50 50 50 50 50 50 50 50 50 50	1 45 107 107 107 107 107 107 107 107 107 107	[59124766870622336021692644777974954025836665484761586445324823150439963745639754170	248 314 314 314 315 315 315 315 315 315 315 315	147 125 508 70 32 35 52 51 17 20 16 63 54 14 129 63 13 465 14 14 285 13 23 63 63 14 14 285 13 247 37 19 26 27 28 27 28 27 28 27 28 28 28 29 20 20 21 21 21 21 21 21 21 21 21 21 21 21 21	\$\frac{59}{59}\$3517060075575505606420742738942081073871774435565555402860327	257 31 141 1007 463 93 93 93 27 138 809 20 33 467 243 4077 105 23 4077 115 340 4077 115 340 120 120 120 120 120 120 120 120 120 12	160 133 1516 80 333 355 551 1218 2217 455 151 168 168 168 169 169 169 169 170 170 170 170 170 170 170 170 170 170	642158726974629557466678855958443366571504519655582246694504451574156794699369
	12314	7170	58	12812	73 34	57	13195	7699	58	13457	7925	59

LEGAL

yearly period; while 7,925 members are now insured, representing an increase of 226 insured members over the previous period. The percentage of insured members is now 59%, or an increase of 1% over the previous year.

Counsel Work

During the period of this report, your Counsel has prepared for publication in the Society's Journal articles in the nature of editorial comment. These editorials have included the following:

Rights and Liabilities in Connection with Bodies of Deceased Persons.

Challenge to the Bar.

Group Plan of Insurance.

Legal Liability of Employer for the Acts of a

Physician Employee.

Review of Some Interesting x-ray Burn Cases. Private Hospitals—Legal Liability for Acts of Nurse.

Negligence Actions-Mention of Insurance

Ground for Mistrial.

Libel — Defamatory Statements Concerning Deceased Persons.

Dr. John A. Card.

Judicial Interpretation of the Practice of Medicine.

Insurance-Death by Suicide.

Evidence—Improper Questions as to Physician's Wealth.

Malpractice—Legal Standard in Civil Action Against Unlawful Practitioners.

Actions for Death by Wrongful Act—Right of Adverse Party to Participate in Autopsy.

Privileged Communications — An Interesting Case.

Liability for Experimental Diagnosis and Treatment.

Privileged Communications.

Scottsboro Case

Druggist's Liability in Filling Physician's Prescription.

Autopsy—Hospital Held Not Responsible for Autopsy Performed by Medical Examiner.

Necessity for Medical Testimony in Malpractice Actions.

Your Counsel has also digested and there have been published in the Journal reports upon malpractice actions which it has been felt were of special interest to the profession. The case reports published during the previous year are as follows:

Malpractice Claimed in Treating Industrial Accident.

Claimed Negligence in Treatment of Sinus Trouble.

Broken Needle.

Alleged Negligence in Use of Tourniquet. Counterclaim of Malpractice Based on Trea

Counterclaim of Malpractice Based on Treatment of Ear.

Alleged Negligence in Treatment of Colles' Fracture.

Counterclaim, Claiming Failure to Diagnose liness.

Claimed Negligence with Respect to Breaking of Needle.

Treatment of Colles' Fracture.

Lung Abscess Following Tonsillectomy.
Application of Iodine Petrogin to Throat.

Application of found Ferrogin to Timoat.

Alleged Negligent Treatment of Hemorrhoids.

Loss of Teeth During Tonsillectomy. Fracture of Tibia and Fibula.

Removal of Appendix During Operation for Hernia.

Treatment of Peritonsillar Abscess.

Claimed Failure to Remove Gallstones.

Alleged Negligent Treatment of Burns.
Claimed Failure to Properly Treat Mental

Case.
Claim of Negligence in Administering Anti-

toxin.
Treatment of a Fractured Leg.

Death Following Tonsilectomy.

Claimed Negligence by Family Doctor in

Treating Children of Defendant.
Alleged Failure to Treat Child's Injury Prop-

erly. Sun-Ray Burn.

Claim of Negligence in Cystoscopy Examina-

Treatment of Laceration of Eyelid—Loss of Eye.

Needle-Breaking During Administration of Toxin-Antitoxin.

Injuries Received by Heat Lamp Bursting. Claimed Negligent Prenatal Care and Delivery.

Physical Examination to Test Intoxication.

Abdominal Operation—Malpraetice Cas Barred by Judgment for Doctor's Bill.

Incontinence of Urine Following Operation.

In his contacts with the members of your Society your Counsel is pleased to find that these editorials and ease reports are read with approval and interest by the members of your Society.

In addition to his other duties, your Counsel frequently receives requests for opinions on various subjects. It should be remembered that the Executive Committee of your Society has ruled that requests for legal opinion, whether coming from individual members of your Society or from component County Societies, must in the first instance be referred to that body for action. If the Executive Committee deems the inquiry a proper one for opinion by Legal Counsel, it refers the same back to him for reply. Some of the matters upon which advice has been thus rendered by your Counsel are the following:

Communication inquiring, where a patient showing no pathology and well within the child-bearing period requests that she be sterilized:

- (a) What is the criminal liability of a physician who accedes to this request?
- (b) What is the civil liability of such physician?

Inquiry where a surgeon agrees on a stated fee for an operation and thereafter engages an assistant, as to whether the assistant physician can collect for services from the patient or from the surgeon.

Inquiry as to whether a malpractice action can be instituted after the expiration of two years from the date of last treatment; and also as to the advisability of bringing suit for professional services where a counterclaim of claimed improper treatment is likely.

Communication requesting legal decisions and

opinion in regard to chiropractors:

(a) What standing has a chiropractor for the alleviation or cure of human abnormalities in New York State?

(b) Whether oral or written, can a chiropractor assume the resignation as "Doctor"?

(c) Can a chiropractor collect a bill for services rendered for the alleviation or cure of human abnormalities?

Inquiry as to whether the employer of a doctor is responsible for the physician's treatment of employees, or whether the physician alone is responsible.

Communication requesting the following information with reference to the performance of autopsies:

(a) Is a case admitted to a hospital public ward and dying within twenty-four hours a coronor's case whether or not a diagnosis is made?

(b) Is it permissible for the pathologist of such hospital to perform an autopsy in such case, if he has permission of the

next-of-kin and the coroner?

(c) In general, in what order of precedence do relatives have authority over a body?

(d) Where the family has agreed to the autopsy, is it necessary that the very next-of-kin give permission, or may a more distant relative give such?

(e) Where the patient has no blood relatives known to the hospital, may a close friend who is perhaps the only one interested give permission for an autopsy?

(f) Is it necessary to have written permission?

Inquiry as to whether a physician may legally sign a death certificate if either of his parents die while under his care before another physician can be called.

Inquiry as to whether the group plan policy covers a physician:

- (a) Where a nurse assistant gives treatment directed by a physician to a patient personally seen by him;
- (b) Where the physician, taking a vacation, requests the nurse assistant to give treatment during his absence.

Inquiry as to whether the attending obstetrician or the actual attendant to the mother at the birth, who may be an interne at the hospital, should sign the birth certificate.

Communication inquiring, where a physician who had some time previously examined or treated a patient, has the same person referred to him by an insurance carrier for examination:

- (a) Is it ethical for the physician to make such second examination?
- (b) If so, is it permissible for him to include in his report such knowledge as he gained from his first examination, which information would not have been ascertainable from the second examination alone?
- (c) Should he be called as a witness in court, which portion of his information may he divulge?
- (d) If he refers the patient to another doctor for said second examination, may he divulge to the second doctor or the insurance carrier such knowledge as he gained in his first examination?
- (e) Should he be called as a witness in court, may he divulge the information gained from his first examination, where he has referred the patient to another doctor for the second examination?
- (f) Does the submission by the patient to the second examination constitute a waiver of confidential communications?

Communication requesting opinion as to the legality and adequacy of a consent to operation used at a charitable hospital, and suggested revision.

Communication with regard to advertising by licensed lay physiotherapists, inquiring:

- (a) Whether such advertisements may contain other matter than the name, address, telephone number and title of the licensed physiotherapist;
- (b) Whether such lay physiotherapists are subject to the same ethical stringency in regard to advertising as physicians.

Communication regarding a patient who has been treated in the free ward of a municipal hospital, inquiring:

- (a) Can such patient recover for alleged malpractice against the physician?
- (b) Can such patient recover against the city?

(e) Does the fact that it was a charity case absolve the physician from liability?

Communication from an ophthalmologist inquiring:

- (a) Has an ophthalmologist or physician the legal right to recommend or criticize an optician?
- (b) To what extent may he criticize the optician's mountings and quality of workmanship?
- (e) What care should he exercise in so recommending or criticizing, in order to avoid suit for libel or slander?

The foregoing list does not include a number of communications received from physicians requesting reprints and further details in regard to the published editorials.

Your Counsel has also rendered his legal opinion and given advice to various County Societies in regard to the following:

Revised constitution and by-laws of the Medical Society of the County of St. Lawrence.

Where a County Society at a regular meeting approves the reimbursement of counsel and other fees to a member of said Society, who without knowledge of the Society or its executive office has secured the conviction of an unlicensed practitioner of medicine.

- (a) Has the Society the legal right to pay such moneys?
- (b) Is the Comitia Minora, which has the power to direct the expenditure of funds appropriated at any meeting, authorized to nullify such appropriation?
- (e) By paying such moneys, does the Society make itself a party to the original transaction and liable to countersuit?

Resolution by the Executive Committee that the Legal Counsel and the President render to the Medical Society of the County of New York, the opinion expressed by said Executive Committee in regard to the reduction of the State Society's dues and the acceptance of the State Society's assessments in partial payments.

Your Counsel has been in conference and con-

sultation with the members of the Committee on Insurance with respect to the various matters which have been referred to them for action. This Committee has revised and clarified the resolutions of the State Society relating to malpractice defense.

Your Counsel has also attended several meetings of the Committee on Medical Economics, and has also conferred on a number of occasions with Dr. Charles H. Goodrich, Chairman of the said Committee. In this connection your Counsel has prepared proposed amendments to the General Municipal Law and the Public Welfare Law in relation to the certification of the indigent in connection with care and treatment at public hospitals. Also your Counsel has prepared proposed amendments to the Lien Law so as to provide for a lien by physicians for treatment rendered to persons injured in motor vehicle accidents. Your Counsel has also examined and discussed with Dr. Goodrich a large number of proposed amendments to the Workmen's Compensation Law.

Your Counsel has also acted as advisor to the Sub-Committees which have been appointed by the President to study and consider the various reports of the standing Committees.

Legislative Advice and Activities

As this report is being written, the Legislature has only been in session for about a month. Your Counsel has examined a number of proposed bills affecting the medical profession and has given advice with respect to them. He has also drafted several bills for introduction to the Legislature at this session.

Conclusion

At the conclusion of this report your Counsel desires to express his thanks to the large number of physicians who have given so graciously of their time and talents in cooperating with your Legal Counsel in the defense of malpractice actions. This assistance is in no small measure responsible for the results shown by this report.

Respectfully submitted,

LORENZ J. BROSNAN, Counsel. February 1st, 1933.



THE ANNUAL MEETING



FEATURES AND PROGRAMS OF THE ANNUAL MEETING

The one hundred and twenty-seventh annual meeting of the Medical Society of the State of New York will be held on Monday, Tuesday and Wednesday, April 3-5, 1933, in the WaldorfAstoria Hotel, New York City. The major features of the meeting will be those established by the precedents and experiences of past years, with some new ones added.

THE ANNUAL REPORTS

The Annual Meeting may properly be said to begin with the publication of the Annual Reports of the officers and committees of the Medical Society of the State of New York to the House of Delegates, for these reports are the basis of the greater part of the discussions and actions by the House. These reports are printed in this issue of the Journal, taking the place of its Scientific Department. They are referred to Reference Committees appointed by the Speaker of the House of Delegates for the purpose of digesting their facts and judging the recommendations; but they are equally available to every member of the Society. The early publication of the reports has expedited the business of the House of Delegates, and eliminated controversies and misunderstandings regarding the policies of the officers and committees.

THE HOUSE OF DELEGATES

The business of the Society will be transacted by the House of Delegates which will hold its meetings on Monday, in the afternoon and evening, with a social dinner between the sessions. The program will be as follows:

2:00 P.M.—Calling the House to order.

Report of the Retiring President, Dr. Chas. Gordon Heyd, New York.

Inaugural address of Incoming President, Dr. Thomas H. Flaherty, Syracuse.

6:30 P.M.—Dinner of Delegates.

The Dinner of the House of Delegates is open to any member of the Society. Tickets may be obtained by sending check to the Secretary, care of the Society, 2 East 103rd Street, New York City, for \$2.50 per ticket.

7:30 to 8:45—Addresses:

1. Compulsory Health Insurance and the Panel System, Dr. Emil Koffler, New York. Illustrated with lantern slides.

- 2. The Participation of the Physician in Public Health Work, Dr. Henry F. Vaughan, Health Commissioner, Detroit, Michigan. Illustrated with lantern slides.
- 3. The participation of the Physician in Rural Health Work, Dr. Stuart Pritchard, Grand Rapids, Mich.
- 4. Introduction of Dr. George McCleary, of London, England. Medical Officer of the Ministry of Health.

8:45 P.M.—Calling of the House of Delegates to Order.

Presentation of the Report of the Special Committee on the Cost of Medical Care. Dr. Arthur W. Booth, Elmira, N. Y., Chairman.

The report of this committee will be considered in executive session to which only members of the House of Delegates will be admitted.

admitted.

The House of Delegates will complete its labors on Tuesday morning, ending with the election of officers of the State Society.

THE ANNUAL MEETING

The Annual Meeting of the Medical Society of the State of New York will be held in connection with the Banquet of the Society in the Grand Ball Room of the Waldorf-Astoria Hotel at seven p. m., on Tuesday, April 4, 1933. Program is as follows:

- 1. Invocation.
- 2. Calling the meeting to order, Dr. Charles Gordon Heyd.
 - 3. Reading of minutes.
- 4. Introduction of Dr. Samuel J. Kapetzky, Chairman of the Committee on Arrangements.
 - 5. Introduction of Dr. Terry M. Townsend,

President of the Medical Society of the County of New York, who will act as toastmaster.

- 6. Introduction of the Presidents of the Medical Societies of the Counties of New York.
- 7. Introduction of Dr. Edward H. Cary, President of the American Medical Association.
- 8. Introduction of Dr. Olin West, Secretary of the American Medical Association.
- 9. Address of the incoming President of the Medical Society of the State of New York, Dr. Frederick H. Flaherty.
- 10. Address, "Medicine of the Future," Dr. Howard W. Haggard, New Haven, Connecticut.

11. Address, "The Medical Society of the State of New York, Our Responsibility and Our Obligation," Dr. Chas. Gordon Heyd.

Teckets for the Annual Banquet may be obtained by sending check to the Secretary of the Society, 2 East 103rd Street, New York City. Price of tickets, \$5.00. If listed seating is desired it is necessary that the Secretary be informed not later than March 25, after that date the seating places will be unassigned.

SCIENTIFIC PROGRAM

A series of scientific meetings at which professional papers will be presented will be the central feature of the annual meeting. General sessions will be held on the afternoons of Tuesday and Wednesday, while meetings of the eight Scientific Sections will be held on Tuesday and Wednesday mornings, and sessions on Physical Therapy and Roentgenology on Wednesday morning.

The programs of the general session, and the scientific questions, are published in this Journal, beginning on page 319.

The papers and addresses will be published in the New York State Journal or Medicine. The following notice will therefore be printed on the program of each section:

"Essayists will please leave the original copies of their papers with the Secretary of the Section when they finish reading them. All papers read before the Society by its members shall become the property of the Society. Discussers must type their remarks and hand them to the same officer if they wish to have them published in the Journal."

The Committee on Scientific Work, which has made up the program, is as follows:

Arthur J. Bedell, M.D., Albany, Chairman; Edward C. Reifenstein, M.D., Syracuse; Edward R. Cunniffe, M.D., Bronx, New York City;

Edward C. Hughes, M.D., Syracuse; Brewster C. Doust, M.D., Syracuse; David F. Gillette, M.D., Syracuse; Daniel R. Reilly, M.D., Cortland; Henry W. Williams, M.D., Rochester; Paul E. Bechet, M.D., New York; Frederic E. Sondern, M.D., New York City.

THE SCIENTIFIC EXHIBIT

A scientific exhibit, arranged under the leadership of Dr. Frederic E. Sondern, will be open during the whole time of the Annual Meeting, in a large room which will be easy of access from the Registration Booth and the main assembly hall. The program of exhibitors is printed on page 325 of this Journal. This scientific exhibit will be conducted along the lines of those of previous years, but it will be more extensive and comprehensive than ever before.

CLINIC DAY

Monday, April 3, 1933, will be "Clinic Day," when an extensive series of Clinical Demonstrations and Surgical Operations will be made available in many of the leading hospitals of New York City.

The full program of the clinies appears in this Journal, beginning on page 326. A daily list of clinies and operations in all the hospitals of Greater New York will be on file at the Information Bureau of the Annual Meeting.

OPEN MEETING

The 127th Annual Meeting of the Medical Society of the State of New York will terminate on Wednesday, April 5, 1933. The final Session at 8.30 p.m. will consist of a meeting open to the public wherein topics on general medical information will be discussed by distinguished clinicians. The program will be as follows, Dr. Chas. Gordon Heyd, Chairman:

- 1. The Community and the Physician, Olin West, M.D., Chicago, Ill., Secretary and General Manager American Medical Association.
- 2. What the Community Should Know about Arthritis, Lewellys F. Barker, M.D., Baltimore, Md.

- 3. What the Community Should Know About Goiter, Frank H. Lahey, M.D., Boston, Mass.
- 4. What the Community Should Know About Appendicitis, Dean DeWitt Lewis, M.D., Baltimore, Md.
- 5. What the Community Should Know About Diabetes, Elliott P. Joslin, M.D., Boston, Mass.
- What the Community Should know About Tuberculosis, Linsly R. Williams, M.D., New York City.
- 7. The Health of the State, Thomas Parran, Jr., M.D., Albany, N. Y., Commissioner, State Department of Health.
- Admission will be by tickets. These may be obtained, gratis, from the Secretary of the Society, 2 East 103rd Street, New York City.

THE TECHNICAL EXHIBIT

There will be an extensive technical exhibit at which over fifty manufacturers and dealers in medical supplies and hospital equipment will demonstrate their wares and dispense samples and literature. This exhibit will be the most extensive that the State Medical Society has shown for years. A description of the individual booths is printed in this Journal, beginning on page 332.

The greater number of the exhibitors are advertisers in the Journal, and have a kindly feeling toward the State Society. The members can show a reciprocal feeling by calling at the booths, and taking a personal interest in the wares and demonstrations, forming the personal acquaintance of the exhibitors, and registering for samples and literature.

REGISTRATION AND INFORMATION

A Registration Table and Information Bureau will be maintained in a conspicuous location near the elevators and the main entrance to the meeting rooms and exhibits. Attendants will be constantly on hand to direct the members and to give information on all questions relating to the An-

nual Meeting. The attendants will also give out the official badges for the members of the House of Delegates, and issue tickets for the Delegates' Dinner on Monday, the Banquet and Dance on Tuesday, and the Public Meeting to be held on Wednesday evening.

PRESS SERVICE

A new feature of the Annual Meeting will be an organized provision for informing the public of the proceedings by means of the newspapers and the radio. The details of the methods of publicity will be in charge of a special committee consisting of:

Dr. Frederic E. Sondern, Chairman;

Dr. George W. Kosmak;

Dr. Clarence G. Bandler;

Dr. John C. A. Gerster;

Dr. Iogo Galdston;

Dr. Samuel J. Kopetzky;

Dr. Charles Gordon Heyd.

Special Committee on Radio Broadcasting;

Dr. Iogo Galdston;

Mrs. R. S. Hirschman (Courtesy of the New York Tuberculosis and Public Health Association).

Special Press Representative:

Mr. Dwight Anderson.

The committee has the active cooperation of the Medical Information Bureau of the Medical Society of the County of New York and the New York Academy of Medicine.

The committee plans to maintain a staff in a room set aside for the purpose where reporters will be received and all information given out. Press releases will be prepared and issued, and every facility will be provided to supply the representatives of the Press with all proper information.

All publicity of the Annual Meeting must be cleared through the Special Committee on Publicity. Members desiring consideration for their papers will please submit copy of the same at least five days before presentation, to the Chairman of this Committee, Dr. Frederic E. Sondern.

The Committee on Press Service also plans to arrange programs with radio companies so that prominent physicians shall broadcast talks on medical subjects several times during the meeting.

Since medical societies throughout the nation are actively promoting the education of the people regarding the value of medical service, the work of the Committee on Press Service will be of essential importance to every physician in New York State.

COMMITTEE ON ARRANGEMENTS

While practically all the officers and members of committees have been concerned with the plans and programs for the many features of the Annual Meeting, yet the coordination of the details and the smooth running of all phases of the meeting is insured by the Standing Committee on Arrangements of which Dr. Samuel J. Kopetzky, New York, is Chairman.

Every one from the President of the Society to

the clerical force has put forth every effort to make this Annual Meeting an outstanding success. The plans are completed to their smallest detail, and the Hotel Waldorf-Astoria assures plenty of room and comfort.

The acceptance of the plans by the members will be the final act that will make this Annual Meeting the best in the history of the Medical Society of the State of New York.

SCIENTIFIC PROGRAM

All the meetings will be held in the Waldorf-Astoria Hotel.

THE GENERAL SESSIONS

Tuesday, April 4th, at 2:00 P.M.

ADDRESS

Address by the President of the American Medical Association, Edward H. Cary, M.D., Dallas, Texas. (Invited Guest.)

SYMPOSIUM ON DENTAL CONDITIONS AS THEY AFFECT GENERAL HEALTH

1. "Dental Service in Diabetes." Harold A. Kent, D.D.S., Boston, Mass. (Invited Guest.)

Discussion opened by Henry R. Geyelin, M.D., New York City.

2. "Nutritional Control of Dental Caries," Ewing C. MeBeath, M.D., D.D.S., New York City. (Invited Guest.)

Discussion opened by Royal S. Haynes, M.D., New York City, Charles F. Bodecker, D.D.S., New York City. (Invited Guest.)

3. "Pyorrhea and Its Relation to Oral and General Health," Arthur H. Merritt, D.D.S., New York City. (Invited Guest.)

Discussion opened by William R. Williams, M.D., New York City, Isidor Hirschfeld, D.D.S.,

New York City. (Invited Guest.)

4. "Oral Conditions as Aids in Diagnosis of Systemic Diseases," Lester R. Calin, D.D.S., New York City. (Invited Guest.)

Discussion opened by Harlow Brooks, M.D., New York City.

Wednesday, April 5th, at 2:00 P.M. SYMPOSIUM ON SOME DISORDERS OF LIVER FUNCTION

1. "Observations Upon the Deposition of Liver Fat in Normal and Diabetic Animals," Charles H.

Best, M.D., Toronto, Canada. (Invited Guest.)
2. "The Relation of Biliary Dysfunction to
Lithiasis," Lester R. Whitaker, M.D., Boston, Mass. (Invited Guest.)

- 3. "Pathology of Jaundice," Paul Klemperer, M.D., New York City.
- 4. "The Significance of Liver Function from the Surgeon's Standpoint," Chas. Gordon Heyd, M.D., New York City.

THE SECTIONS

Essayists will please leave the original copies of their papers with the Secretary of the Section when they finish reading them. All papers read before the Society by its members shall become the property of the Society.

Discussers must type their remarks and hand them to the same Officer if they wish to have them published in the Journal.

SECTION ON MEDICINE

Chairman Edward C. Reifenstein, M.D., Syracuse Secretary.......Alfred M. Wedd, M.D., Clifton Springs

Tucsday, April 4th, at 10:00 A.M.

1. "A General Discussion of Oxygen Therapy," Lantern Slide Demonstration, Alvan L Barach, M.D., New York City

Discussion opened by John J. Buettner, M.D., Syracuse, and Joseph R. Wiseman, M.D., Syra-ČUEO.

2. "Cavities of the Lung in Pulmonary Tuberculosis—Their Management," Lantern Slide Demonstration, Edgar Mayer, M.D., Saranac Lake.

Discussion opened by Pol N. Coryllos, M.D.,

New York City.

3. "The Treatment of Common Forms of Dropsy," Nellis B. Foster, M.D., New York City.

Discussion opened by Nelson G. Russell, M.D., Buffalo.

4. "Calcium Metabolism in Arthritis," Edward F. Hartung, M.D., New York City.

Discussion opened by John S. Davis, Jr., M.D., New York City.

5. "Clinical Observations on Achlorhydric Anemia," Nathan Rosenthal, M.D., New York City.

Discussion opened by I. Harris Levy, M.D., Syracuse.

Wednesday, April 5th, at 9:00 A.M.

SYMPOSIUM ON VASCULAR DISEASE

1. "Hypertension and Nephritis," Maynard E. Holmes, M.D., Syracuse.

Discussion opened by Herman O. Mosenthal, M.D., New York City.

2. "Some Practical Problems in the Handling of Peripheral Arterial Disease," Lantern Slide Demonstration, W. J. Merle Scott, M.D., Rochester.

Discussion opened by Leo Buerger, M.D., New York City.

- 3. "Coronary Disease and Its Relation to the Increase of Cardiac Morbidity," Louis F. Bishop, M.D., New York City, Louis F. Bishop, Jr., M.D., New York City.
- 4. "Some Points in the Diagnosis and Prognosis of Coronary Thrombosis," Robert H. Halsey, M.D., New York City.

Discussion opened by Emanuel Libman, M.D., New York City, Harold E. B. Pardee, M.D., New York City, John Wyckoff, M.D., New York City.

SECTION ON SURGERY

Tuesday, April 4th, at 10:00 A.M.

- 1. "Blood Changes in Intestinal Obstruction," Dana W. Atchley, M.D., New York City.
- 2. "Etiology of Intestinal Obstructions," Joshua E. Sweet, M.D., New York City.
- 3. "Treatment of Intestinal Obstruction," John J. Morton, Jr., M.D., Rochester.
- 4. "The Diagnosis and Management of Carcinoma of the Colon and Rectum," Frank H. Lahey, M.D., Boston, Mass. (Invited Guest.)

Wednesday, April 5th, at 9:00 A.M.

- 1. "Surgery of the Patient with Diabetes Mellitus." Beverly C. Smith, M.D., New York City.
- 2. "Surgery of the Patient Complicated with Pulmonary Disease," Frank B. Berry, M.D., New York City.
- 3. "Surgery of the Patient Complicated with Thyroid Disease," Roderick V. Grace, M.D., New York City.
- 4. "Discussion of the Factors for Safety in Surgery of Infants," Edward J. Donovan, M.D., New York City.

SECTION ON OBSTETRICS AND GYNECOLOGY

Tuesday, April 4th, at 10:00 A.M.

1. "A Study of Maternal Mortality in New York State." George W. Kosmak, M.D., New York City.

SYMPOSIUM ON 'TOXEMIAS OF PREGNANCY AND SOME OF THEIR COMPLICATIONS"

2 "Nephritis and Pregnancy" Henricus J Stander, M.D., New York City

Discussion opened by Eliot Bishop, MD, Brooklyn

3 "Abruptio Placenta," Henry W Schoeneck, M D, Syracuse

Discussion opened by George L Brodhead,

M.D. New York City
4 "Treatment of Toxemins of Pregnancy and

Their Complications," Benjamin P Watson, M D, New York City

Discussion opened by Karl M Wilson, MD, Rochester

5 'Methods of Induction of Labor in Respect to the Toxemias," Francis C Goldsborough, M.D. Buffalo

Discussion opened by Albert H Aldridge, M D. New York City

Wednesday, April 5th, at 9 00 A.M

SYMPOSIUM ON GYNECOLOGICAL NEOPLASMS

1 ' Freatment of Carcinoma of the Cervix," William P Healy, M.D., New York City

Discussion opened by Walter T Dannreuther, M D, New York City

2 "Treatment of Carcinoma of the Fundus," Thomas P Farmer M.D. Syracuse

Discussion opened by James E. King, M.D., Buffalo

3 "Treatment of Uterine Myomata," Robert A Kimbrough, Jr, MD, Philadelphia, Pa (In vited Guest)

Discussion opened by Howard C Taylor, M D New York City

4 "Mainmary Carcinoma" Frank E Adaii, MD, New York City

5 'Ovarian Neoplasins," Howard C Taylor Ir MD New York City

SECTION ON NEUROLOGY AND PSYCHIATRY

Chairman Secretars Henry W Williams M D Rochester

Tuesday, April 4th, at 10 00 A M

1 'The Morbid Process of Migraine," Foster Kennedy, MD New York City

Discussion opened by Henry A Riley MD, New York City

2 "Neurological and Mental Symptoms in Pernicious Anamin F Livingston Hunt M.D. New York City Discussion opened by Paul H Garvey, MD, Rochester

3 "Colloidal Chemistry and Psychiatry," H Beckett Lang, M D, Marcy

4 "Anxiety as a Medical Problem," Sandor Lorand, MD, New York City

Discussion opened by Abraham A Brill M D New York City

Wednesday, April 5th, at 9 00 A M

1 'Congenital Word Deafness," Samuel T Orton, MD, New York City

Discussion opened by Frederick Tilney, M D, New York City

2 "Disorders of Muscle Tone and Their Lo calizing Significance," Walter Freeman, MD, Washington, DC (Invited Guest)

Discussion opened by James R Hunt, MD,

New York City

3 'Surgical Relief of Intractable Pain," Francis C Grant M D Philadelphia Pa (Invited Guest)

Discussion opened by Leo M Davidoff, MD, New York City

4 "Radiotherapy in Disseminated Spinal Arachnoiditis,' Herman Selinsky, MD, New York City

Discussion opened by Charles W Schwartz, M D , New York City $\,$

5 "Cramal Neurnts," Samuel Brock, M.D. New York City, S. Bernard Wortts, M.D., New York City

Discussion opened by Israel S Wechsler, M D New York City

SECTION ON PEDIATRICS

Chairman	E	Brewster	C.	Doust,	M.D.	., Syra	cuse
Vice-Chairman	Adolph G.	DeSand	tis,	M.D.,	New	York	City
Secretary	Geor	ge C. S	inco	rbcaux	, M.I)., Au	burn

Tuesday, April 4th, at 10:00 A.M.

1. "The Pitressin Test for Epilepsy," A. Wilmot Jacobsen, M.D., Buffalo.

Discussion opened by Noble R. Chambers,

M.D., Syracuse.

2. "The Relation of Infections to Nutrition in Infants and Small Children," Marshall C. Pease, M.D., New York City.

Discussion opened by Marvin F. Jones, M.D., New York City, Frank vander Bogert, M.D.,

Schenectady.

3. "The Common Skin Conditions in Children," Howard Fox, M.D., New York City.

Discussion opened by Albert R. McFarland, M.D., Rochester, Frank C. Combes, M.D., New York City.

4. "Abdominal Pain in Children," Edward S. Rimer, M.D., New York City.

Discussion opened by Edward J. Wynkoop, M.D., Syracuse.

Wednesday, April 5th, at 9:00 A.M.

1. "Preventing the Loss of Weight in the New Born," I. Newton Kugelmass, M.D., New York City.

Discussion opened by Norman C. Bender, M.D., Buffalo.

2. "The Exploitation of the Vitamines," Samuel W. Clausen, M.D., Rochester.

Discussion opened by Adolph G. DeSauctis, M.D., New York City, T. Wood Clarke, M.D., Utica.

3. "Recent Dietary Studies of Practical Interest to the Physician," Frederick F. Tisdall, M.D., Toronto, Canada. (Invited Guest.)

Discussion opened by William J. Orr, M.D., Buffalo, Paul W. Beaven, M.D., Rochester.

4. "A Clinical Study of Enuresis," Meredith

F. Campbell. M.D., New York City.

Discussion opened by John D. Lyttle, M.D., New York City, Charles H. Smith, M.D., New York City.

5. "Cardiospasm and Other Obstructions of the Upper Gastro-intestinal Tract in the New Born." Lantern Slide Demonstration, John Aikman, M.D., Rochester.

Discussion opened by E. Forrest Merrill, M.D., New York City, George M. Retan, M.D., Syracuse.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

Chairman	Paul	E.	Bechet,	M.D.,	New	Yorl	i City
Secretary	F	Ierb	ert H.	Baucku	s. M.	D., B	uffalo

Tuesday, April 4th, at 10:00 A.M.

SYMPOSIUM ON DERMATOTHERAPY

- 1. "Personal Impressions in the Treatment of a Few of the Commoner Inveterate Types of Skin Disease," Fred Wise, M.D., New York City.
- 2. "Unfiltered X-rays and the Ten Milligram Flat Radium Element Applicator in Dermatology," A Résumé of Personal Experience and Opinion, George M. MacKee, M.D., New York City.
 - 3. "Some Personal Impressions of Present
- Day Syphilotherapy," John H. Stokes, M.D., Philadelphia, Pa. (Invited Guest.)
- 4. "Personal Experience in the Prophylaxis and Treatment of Ringworm of the Hands and Feet." Earl D. Osborne, M.D., Buffalo, Edwin D. Putnam, M.D., Buffalo, Raymond J. Rickloff, M.D., Buffalo.

Discussion opened by Edward R. Maloney, M.D., New York City, Charles M. Williams, M.D., New York City.

Wednesday, April 5th, at 9:00 A M.

I. "Lymphogranuloma Inguinale of the Tongue and Cervical Glands." Report of a Case, David Bloom, M D, New York City.

Discussion opened by Louis B Mount, M.D.,

2 "Photography in Dermatology," A New Method, Kenneth M Davenport, MD, Roch-

Discussion opened by John H Hunt, MD,

Elmira.

3 "Pemphigus," Jerome Kingsbury, M.D., New York City, A Benson Cannon, M.D., New York City.

Discussion opened by Binford Throne, M.D. Brooklyn

4 "Biopsy as an Aid to Diagnosis," Sigmund Pollitzer, M.D., New York City.

Discussion opened by J Frank Fraser, MD, New York City.

5. "Acrodynia," Two Cases in One Family, Lopo de Mello, MD, Syracuse, James R Wilson, M.D. Syracuse

Discussion opened by Albert M Crance, M D.

Geneva

SECTION ON OPHTHALMOLOGY AND OTO-LARYNGOLOGY

Chairman

Secretary ...

David F Gillette, M.D., Syracuse Frank M Sulzman, M D, Troy

Tuesday, April 4th, at 10 00 A M. SYMPOSIUM ON CHRONIC SIMPLE GLAUCOMA

1 "Diagnosis," Searle B Marlow, MD. Syracuse

Discussion opened by Arthur J. Bedell, M.D., Albany, John N Evans, M D, Brooklyn, Manuel U. Troncoso, M.D. New York City

2. "Pathology," Algernon B Reese, MD, New York City.

Discussion opened by Bernard Samuels, M D, New York City, Harold H. Joy, M D, Syracuse

3 "Surgical Treatment," Arnold Knapp, M D, New York City

Discussion opened by John M Wheeler, MD, New York City, Webb W Weeks, MD., New York City

4 "Medical Treatment," William Zentmayer,

MD, Philadelphia, Pa (Invited Guest)

Discussion opened by Albert C Snell, MD, Rochester, Walter S Atkinson, MD, Watertown, Thomas H. Johnson, MD, New York City

Wednesday, April 5th, at 9:00 A M. SYMPOSIUM ON HOARSENESS

1 "Etiology, Symptoms and Diagnosis," Wilham A. Krieger, M.D., Poughkeepsie

Discussion opened by Roy S Moore, M.D. Syracuse

2 "Malignant, Tuberculous and Syphilitic Types," David H Jones, M.D., New York City

Discussion opened by Lee M Hurd, MD. New York City.

3 "Benign Neoplasms," Daniel S Cunning, MD, New York City

Discussion opened by Windsor R Smith. M D, Binghamton

4 "Neurological Aspects," Emanuel D Friedman, MD, New York City.

Discussion opened by John L. Eckel, M.D. Buffalo

5 "Non-Operative Treatment," Irving W Voorhees, M.D., New York City

Discussion opened by Eugene E Hinman. M D. Albany

6 Surgical Procedures . "Laryngectomy and Laryngofissure," Charles J. Imperatori, M.D. New York City

Discussion opened by Robert E Buckley, M D. New York City.

SECTION ON PUBLIC HEALTH, HYGIENE AND SANITATION

Secretary......Stanley W. Sayer, M.D., Gouverneur

Tuesday, April 4th, at 10:00 A.M.

1. "Control of Measles Complications in a Rural Area," Frederick W. Sears, M.D., Syracuse.

Discussion opened by Edward S. Godfrey, Jr., M.D., Albany.

2. "Administration of Public Health Engineering in Rural and Suburban Districts," W. H. Larkin, C.E., Middletown, (Invited Guest.)

Discussion opened by Frank W. Laidlaw, M.D., Middletown.

3. "Paper Films as a New Medium for Less Expensive Chest Diagnosis," Margaret W. Barnard, M.D., New York City.

Discussion opened by Leon T. LeWald, M.D., New York City, James B. Amberson, Jr., M.D., New York City.

Wednesday, April 5th, at 9:00 A.M.

- 1. "Cancer as a Preventable Disease," Joseph C. Bloodgood, M.D., Baltimore, Md. (Invited Guest.)
- 2. "The Function of a Cancer Committee of a Hospital Staff," John M. Swan, M.D., Rochester.
- 3. "The Program of the Division of Cancer Control of the State Department of Health," Burton T. Simpson, M.D., Buffalo.

General discussion opened by Louis C. Kress, M.D., Buffalo.

SESSION ON RADIOLOGY

Tuesday, April 4th, at 10:00 A.M.

1. "Hypo and Hyper Dynamic Heart Contractions," Allen W. Holmes, M.D., Watkins Glen.

2. "Radio Sensitivity and Tumor Grouping,"

James Ewing, M.D., New York City.

3. "The Practical Application of Radio Sensitivity and Tumor Grouping," Douglas Quick, M.D., New York City.

4. "Irradiation of the Entire Body (Heublein Method)," Lloyd F. Craver, M.D., New York.

- 5. "Sodium Ortho-Iodohippurate A New Compound for Intravenous and Oral Urography with Physiological Considerations," Moses Swick, M.D., New York City.
- 6. "Roentgen Diagnosis of Lesions of the Small Intestines," Samuel J. Goldfarb, M.D., New York City, Leopold Taches. M.D., New York Citv.

SESSION ON PHYSICAL THERAPY

Wednesday, April 5th, at 9:00 A.M.

1. "Physical Therapy in the Chronic Invalid." Isadore M. Leavy, M.D., Lynbrook.

Discussion opened by Edgar D. Oppenheimer, M.D., New York City, Heinrich F. Wolf, M.D., New York City.

2. "Errors in the Practice of Physical Ther-

apy," Lee A. Hadley, M.D., Syracuse.

Discussion opened by Kristian G. Hansson, M.D., New York City, Herman G. Wahlig, M.D., Hempstead.

3. "Physical and Constitutional Measures in Chronic Arthritis," Richard Kovacs, M.D., New York City, Joseph Kovacs, M.D., New York City.

Discussion opened by Walter G. Lough, M.D., New York City, R. Garfield Snyder, M.D., New

York City. 4. "Present Day Problems in Light Therapy," Frank H. Krusen, M.D., Philadelphia, Pa. (Invited Guest.)

Discussion opened by William Bierman, M.D.,

New York City.

5. "Non-operative Physical Measures in Gynecology," Madge C. L. McGuinness, M.D., New York City.

Discussion opened by James P. Boylan, M.D., New York City, Norman E. Titus, M.D., New York City.

THE SCIENTIFIC EXHIBIT

Tumors of Larynx, Mervin C. Myerson, M.D. Carcinoma of Larynx, Andrew A. Eggston, M.D., Manhattan Eye, Ear & Throat Hospital.

Primary Bone Tumors, Bradley L. Coley, M.D. and Norman L. Higinbotham, M.D., Memorial Hospital and Hospital for Ruptured and Crippled.

Rheumatie Heart of Adult, James R. Lisa, M.D., City Hospital.

Struma Ovarii, Alfred Plaut, M.D., Beth Israel Hospital.

Stereoscopic Photographs of Ocular Fundus, Arthur J. Bedell, M.D.

Cancer, Division of Cancer Control, State Department of Health.

Intracranial Pathology by X-ray, Charles W. Schwartz, M.D., New York Neurological Institute.

Histologic Studies of Eye, Isadore Goldstein, M.D. and David Wexler, M.D.

Tumors of Thymus and Tumors of Thyroid, Chas. Gordon Heyd, M.D., Ward J. MaeNeal, M.D., and Louise H. T. Meeker, M.D., N. Y. Post-Graduate Hospital.

Lipoid Deposits in Gall Bladder, Harry H. Cooke, M.D., Lewis County General Hospital, Cancer of Skin, George C. Andrews, M.D., Vanderbilt Clinic.

Neoplasms of Central Nervous System, Joseph H. Globus, M.D., Mt. Sinai Hospital.

Fractures, New York and Brooklyn Regional Fracture Committee, American College of Surgeons.

Pulmonary Tuberculosis, George G. Ornstein, M.D., Henry K. Taylor, M.D., William F. Honan, M.D., and Pol N. Coryllos, M.D., Sea View Hospital.

Tuberculosis of Neck, Henry K. Taylor, M.D. and Louis Nathanson, M.D., Sca View Hospital.

Genito-Urinary Tuberculosis, Arthur J. Greenberger, M.D., Sea View Hospital.

Gastro-Intestinal Tuberculosis, Irving Gray, M.D., Sea View Hospital.

Psychological Planning in Institutions, Jacob L. Moreno, M.D.

Heart Resuscitation, Albert S. Hyman, M.D., Witkin Foundation Beth David Hospital.

Posters, Books and Journals, State Medical Library, University of the State of New York. The State and Mental Disorders, New York State Department of Mental Hygiene.

Investigation of Liver Discase, Sol. S. Lichtman, M.D., Mt. Sinai Hospital.

Trichomonas Vaginalis Vaginitis, Joseph J. Berkowitz, M.D.

Specimens from Genito-Urinary Tract, Angelo M. Gnassi, M.D., Jersey City Hospital.

Birth Shock. Hemorrhagic Disturbances, I. Newton Kugelmass, M.D., Fifth Avenue Hospital. Plastic Surgery, Keith Kalm, M.D.

Tumors of Head and Neck, G. Allen Robinson, M.D., Manhattan Eye, Ear and Throat Hospital, New York Eye and Ear Infirmary, New York Post-Graduate Hospital.

Colony Morphology of Tubercle Bacilli, William H. Park, M.D. and Miss Mishulow, Research Laboratory New York Department of Health.

Aortic Stenosis, L. Faugeres Bishop, M.D., L. Faugeres Bishop, Jr., M.D. and Max Trubek, M.D.

Cancer Then and Now, New York State and New York City Committee American Society for Control of Cancer.

Lesions of Lung, Liver and Bones, Department of Pathology, Bellevue Hospital.

Lymphogranuloma Inguinale, David Bloom. M.D., University and Bellevue Hospital Medical College.

The Murry and Leonie Guggenheim Dental Clinic, John D. McCall, D.D.S.

Tumors of Colon and Rectum, Jerome M. Lynch, M.D. and Joseph Felsen, M.D., New York Polyclinic Hospital.

Pathological Appendix, Jerome M. Lynch, M.D. and Joseph Felsen, M.D., New York Polyclinie Hospital.

Diseases of Biliary Tract, Samuel Weiss, M.D. and Aaron S. Price, M.D., New York Polyelinic Hospital.

Urologic Surgery in Juveniles, Meredith F. Campbell, M.D., Babies and Bellevue Hospitals.

Malignant Tumors of Bone, Arthur P. Stout, M.D., Department Surgery, Columbia Univer-

Narcotic Drug Addiction, A. O. Gettler, M.D.,

Office Chief Medical Examiner.

Subject to be announced. Harrison S. Martland,

M.D., Newark City Hospital.

Influence of Food on Teeth and Jaws of Eskimo, L. M. Waugh, D.DS., Columbia University School of Dental and Oral Surgery.

Special Caries Research, H. J. Leonard, D.D.S., Columbia University School of Dental and Oral

Surgery.

Clinical Oral Pathology, Theodor Blum, M.D., New York Institute of Clinical Oral Pathology.

X-ray Studies, I. Seth Hirsch, M.D., Beth Israel Hospital.

Laboratory Aids in Diagnosis, Division of Laboratories and Research, N. Y. State Departof Health.

Tumors of Mouth, Charles G. Darlington, M.D., N. Y. University Dental College.

Photomicrographs of Uterine Tumors, Frederic E. Sondern, M.D.

THE CLINIC DAY

Monday, April 3rd, 1933

Special arrangements have been made by certain hospitals, medical schools, and dental schools of the City to welcome members of the Society at operative clinics, ward rounds, lectures and demonstrations both morning and afternoon. Advance information of these opportunities follows, but members should secure up to the minute "Detail Sheets" at the time of registration at the reg-

istration booth of the Society in the Hotel Waldorf-Astoria. These sheets show the nature of each operation, time and surgeon as supplied by the local Clinical Information Bureau.

In addition regular operative clinics will occur on Monday, in all of the other hospitals in Manhattan, Bronx, Kings, Queens and Richmond, details of which also show on the Bureau sheets.

BELLEVUE HOSPITAL

First Avenue and 26th Street

Monday Morning

8:30-12:30-K5 Operating Rm. 1st Div. Operative Clinic, John A. McCreery, M.D., and Staff.

9-12:30—K5 Operating Rm. 2nd Div. Operative Clinic, S. Dudley Guilford, M.D. and Staff.

11:00—Ward Rounds, S. Dudley Guilford, M.D. 9:00-12:00—K5 Operating Rm. 3rd Div. Operative Clinic, Arthur M. Wright, M.D., Robert Wadhams, M.D., William H. Barber, M.D. George A. Koenig, M.D.

11:30—Ward G6 Pediatric Clinic, Charles Hendee Smith, M.D.

Monday Afternoon

2:00-4:00-K5 Operating Rm. 4th Div. Operative Clinic, Carl G. Burdick, M.D., John H. Morris, M.D.

BETH ISRAEL HOSPITAL

Stuyvesant Park East

Monday Morning

9:00-1:00—Operative Clinics—

- 1. Harry E. Isaacs, M.D., and Staff.
- 2. DeWitt Stetten, M.D., and Staff.
- 3. Abraham Hyman, M.D., and Staff.

Monday Afternoon

2:00—Pediatric Clinic, Herman Schwartz, M.D.

2:00-Ward Rounds-Medical-

- 1. Isidore W. Held, M.D.
- Marcus A. Rothschild, M.D.

CITY HOSPITAL

Welfare Island

Monday Morning

9:00-12:00—Operative Clinic—Urology. Terry M. Townsend, M.D. and Staff.

Monday Afternoon

3:30—Dermatological Conference, A. Benson Cannon, M.D., Jerome Kingsbury, M.D.

COLUMBIA UNIVERSITY MEDICAL CENTER 168th Street at Broadway

9:00-10:30—Obstetrical Ward Rounds, Floor N (Presbyterian Hospital). William E. Caldwell,

M.D. 9:00-10:30-Obstetrical Ward Clinic, Floor O

(Presbyterian Hospital). William É. Caldwell, M.D.

10:45-12:00-Obstetrics, Demonstration Room, Floor O (Presbyterian Hospital), William E. Caldwell, M.D.

12:00-Lecture on Obstetrics, Amphitheater F (College of Physicians and Surgeons), Benja-

min P. Watson, M.D. 4:00-5:00—Medical Team Ward Rounds, Wards G & H Center (Presbyterian Hospital), Alphonse R. Dochez, M.D., and Staff.

4:00-5:00-Physiotherapy Lecture, Amphitheater A (College of Physicians and Surgeons), Nor-

man E. Titus, M.D.

5:00-6:00-X-ray Conference, X-ray Conference Room, Floor C (Presbyterian Hospital).

Auditorium 12:00-1:00-Psychiatry Lecture, (Psychiatric Institute), Clarence O. Cheney,

M.D. 2:00-Psychiatric Therapeutics (Psychiatric Institute), Clarence O. Cheney, M.D.

12:00-1:00—Pharmacology Symposium, Amphitheater N (College of Physicians and Surgeons), Harold T. Hyman, M.D.

2:00-Eye Operation, Operating Room (Eye Institute), Thomas H. Johnson, M.D.

General Surgical and Gynecological Operative Clinics as shown on the "Detail Sheets" of the Bureau for the day.

DEPARTMENT OF MALIGNANCY, DEPARTMENT OF HOSPITALS CANCER CLINIC

124 East 59th Street

II. Follow-up Clinics.

Monday Afternoon

2:00-Ira I. Kaplan, M.D., Director, and Staff. 4:00-I. Presentation of New Cases. Skin, Intra-oral, Breast, Uterine, Ovarian, Gastro-Intestinal, Uro-genital, Melanoma, Neuro-genie Sarcoma.

III. Clinical Conferences-Autopsied Cases.

a. Gross and microscopic specimens.

b. Roentgenology of the autopsied cases.

FLOWER HOSPITAL 450 East 64th Street

Diagnostic Medical Clinic, Linn J. Boyd, M.D. Clinic in Metabolism, Philip J. R. Schmahl, M.D. General Surgery, Walter Gray Crump, M.D. Genito Urinary Surgery, Joseph H. Fobes, M.D. and Louis Rene Kaufman, M.D.

Nose and Throat, J. A. W. Hetrick, M.D. Obstetrics, Henry B. Safford, M.D. Gynecology, Horace E. Ayers, M.D. Fractures, Milton J. Wilson, M.D. Brain and Neurological, K. Winfield Ney, M.D.

GERMAN POLYCLINIC 137 Second Avenue

Monday Morning

10:00-Hyman Biegeleisen, M.D., Varicose Vein Clinic with Demonstration of Technique of Injection and Treatment of Complications.

Monday Afternoon

2:00-4:00—Saul S. Samuels, M.D., Clinic Demonstration of Diagnosis and Treatment of Thrombo-Angeitis Obliterans and Related Disorders of the Circulation with lantern slides.

HARLEM HOSPITAL Lenox Avenue and 136th Street Monday Morning

10:30-Clinical Demonstration of Use of Oxygen in Tents and Chambers and Use of Serum in Pueumonia. Jesse G. M. Bullowa, M.D.

KINGS COUNTY HOSPITAL Clarkson Avenue, Brooklyn

Monday Afternoon

2:00-Surgery and Case Presentations, Nose, Throat and Ear Department, Mervin C. Myerson, M.D.

LEBANON HOSPITAL

Westchester, Cauldwell and Trinity Avenues

Monday Morning

Operative Clinic-Milton R. Bookman, M.D., and Staff; Philip M. Grausman, M.D., and Staff.

MANHATTAN EYE, EAR AND THROAT HOSPITAL

210 East 64th Street Monday Afternoon

2:00-Eye Clinic, Herbert W. Wootton, M.D.

2:00—Eye Operations, Lewis W. Crigler, M.D.

2:00—Ear Clinic, Arthur B. Duel, M.D.

2:00—Ear Operations, William H. Haskin, M.D.

2:00—Throat Clinic, Harmon Smith, M.D.

2:00—Throat Operations, Ebenezer R. Faulkner,

4:00-Demonstration of Cases of Tumors of Eye. Ear, Nose and Throat After Radium Treatment. G. Allen Robinson, M.D.

LINCOLN HOSPITAL

141st Street and Concord Avenue

Monday Morning

9:00-12:00—Operative Clinics, Kirby Dwight, M.D., Director of Surgery; Edward D. Truesdell, M.D.; William Bradley Coley, M.D., Benjamin Sherwin, M.D.; Charles S. Rogers, M.D.; James R. Lincoln, M.D.

MEMORIAL HOSPITAL

106th Street and Central Park West

Monday Morning

9:00-1:00—Operative Clinics—Neoplasms Stomach—George T. Pack, M.D. Intraoral—Hayes E. Martin, M.D.

9:00-11:00—Gynecological Examinations for Examining Room, William P. Neoplasm. Healy, M.D.

9:00-12:00-Follow-up Breast Neoplasm Clinic,

Burton J. Lee, M.D.; Frank E. Adair, M.D.

Monday Afternoon

2:00-4:00—Follow-up Rectal Neoplasm Clinic, George E. Binkley, M.D.; Melanoma and Neurogenic Sarcoma Follow-up Clinic, Frank E. Adair, M.D.

2:00-5:00—Operative Clinic, Head and Neck. Hayes E. Martin, M.D.

MOUNT SINAI HOSPITAL

1 East 100th Street

Monday Morning

9:00—Neuro-Surgical Operative Clinic, Ira Cohen, M.D.

9:00—Rare and Unusual Lesions of the Colon, Burrill B. Crohn, M.D.

9:00—Pediatric Clinic, Bela Schick, M.D. 9:30—Physiotherapy Clinic and Demonstrations, Heinrich F. Wolf, M.D.

9:00—X-Ray Demonstrations, Leopold Jaches, M.D.

Monday Afternoon

1:30—Operative Clinic, Robert T. Frank, M.D.

2:00—Operative Clinic, Richard Lewisohn, M.D.

2:00—Arterial Diseases, Eli Moschcowitz, M.D. 2:00—Interesting Medical Cases, Bernard S. Oppenheimer, M.D.

2:00—Hematological Clinic, Nathan Rosenthal, M.D.

2:00—Operative Clinic, Kaufman Schlivek, M.D.

2:00—Operative Clinic, Albert A. Berg, M.D. 2:00—Dermatological Demonstrations, Isadore

Rosen, M.D.

2:00—Operative Clinic, Edwin Beer, M.D.

2:00—X-Ray Demonstrations, Leopold Jaches, M.D.

NEW YORK EYE AND EAR INFIRMARY

13th Street and Second Avenue

Monday Afternoon

Ophthalmological Department

2:00-

1. Operative Clinic, Clyde McDannald, M.D., and Staff.

2. Clinical Demonstration of Intraocular Cases, Francis Shine, M.D., and Staff; Conrad Berens, M.D., and Staff.

Slide Demonstration of Pathological Eyes and Exhibit of Temporal Bones, Bernard Samuels, M.D., Edgar Burchell, M.D.

- Exhibit X-Ray Plates of Eye and Ear Cases, George S. Dixon, M.D.
- 4:00-1. Operative Clinic, Ben Witt Key, M.D.
 - Demonstration of Cases with Muscle Anomalies, Wendell L. Hughes, M.D.

Otological Department

2:00-Operative Clinic, Truman L. Saunders, 1. M.D., and Staff.

2. Case Demonstration Clinies. Stuart L. Craig, M.D., and Staff; Hugh Blackwell, M.D., and Staff.

4:00-Operative Clinic, James Morrisset Smith, M.D., and Staff.

Note: See Bellevue Hospital Schedule for Special Operative Clinics by Webb W. Weeks, M.D., and William B. Doherty, M.D., and Special Demonstrations by Sigmund Agatston, M.D., and Edward B. Gresser, M.D.

NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL

345 West 50th Street

Surgery

Monday Morning

9:00-10:00—Operative Gynecology, Louis J. Ladin, M.D.

10:00-11:00-Monilia Vulvo-Vaginitis (Lecture), Robert L. McCready, M.D.

11:00-12:00-Operative Surgery, J. Prescott Grant, M.D.

12:00-1:00-Demonstration of Fraetures, William V. Healey, M.D.

Monday Afternoon

1:30-2:30-Operative Proctology, Frank C. Yeomans, M.D.

2:30-3:30-Discussion of Obstetrical Forceps, Everett M. Hawks, M.D. and Edward H. Dennen, M.D.

3:30-4:30-Operative Urology, Daniel A. Sinelair, M.D.

4:30-5:30-Duodenal Surgery (Leeture, with lautern slides), Edward Leland Kellogg, M.D.

Medicine

Monday Morning

9:00-10:00-Allergy: Diagnosis and Technique (Lecture), Charles J. Dillon, M.D.

10:00-11:00-Medicine: Demonstration of Cases, Alexander Hofheimer, M.D.

11:00-12:00-Physical Therapy (Lecture and Demonstration on High Frequency Fever Treatment), Richard Koyaes, M.D.

Monday Afternoon

1:30-2:30-Insulin in Tuberculosis (Lecture, with Demonstration of Cases). Frederick M. Allen, M.D.

2:30-3:30-Demonstration of Cardiae Patients, Harold E. B. Pardee, M.D.

3:30-4:30-Pediatries: Demonstration and Discussion of Cases, W. Morgan Hartshorn, M.D.
4:30-5:30—Gastrie Mueosa Relief vs. Gastroscopic Examination (Illustrated), Samuel
Weiss, M.D.

Eye. Ear. Nose and Throat

Monday Afternoon

1:00-2:00—Rhinolaryngology (Lecture), W. Wallace Morrison, M.D. Torok, M.D.

2:30-3:00—Operative Rhinolaryngology, William 4:00-5:00—Operative Otology, John McCoy, Lawrence Gatewood, M.D.

3:00-4:00—Operative Ophthalmology, Ervin

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL 303 East 20th Street

M.D.

Monday Morning

9:00-11:00-Amph., Operative Clinic, Thomas

H. Cherry, M.D. 9:00-11:00-Rm. 4, Operative Clinic, John J. Moorhead, M.D.

10:00-11:00—Amph. B, Clinical Lecture in Gynecology, Emil A. Rundquist, M.D. 11:00-12:00-Amph. C., Clinical Lecture in Trau-

matic Surgery, Henry H. Ritter, M.D. 12:00-1:00—Amph. D, Demonstration of Pediatric Cases, Roger H. Dennett, M.D.; Marshall C. Pease, M.D.; Adolph G. DeSanctis, M.D.; Moses H. Edelman, M.D.

12:00-1:00-X-ray Lab., General Roentgen Interpretation, William H. Meyer, M.D.

Monday Afternoon

2:00-4:00-Rm. 6, The Prostate and Seminal Vesicles; Their Pathology, Bacteriology, Instrumental Study of the Seminal Vesicles and Endoscopic Revision of the Obstructing Prostate, Joseph T. McCarthy, M.D.

2:00-4:00-Rm. 4, Operative Clinic, Fred H. Albee, M.D.

- 2:00-4:00—Skin Clinic—Case Demonstrations in Dermatology, George Miller MacKee, M.D.
- 2:00-3:00—Amph. C, Case Histories—Surgical Diagnosis, Ralph R. Moolten, M.D.
- 2:30-3:30—Rm. 2, Otological Operative Clinic, Clarence H. Smith, M.D.
- 2:30-3:30—Ear Clinic, Clinical Demonstrations of Otologic Cases, Clarence H. Smith, M.D., and Staff.
- 3:00-5:00—Amph., Operative Clinic, John D. Stewart, M.D.
- 4:00-5:00—Amph. D., The Treatment of Coronary Thrombosis, Robert H. Halsey, M.D.
- 4:00-5:00—Amph C., The Treatment of Infantile Paralysis, George Anopol, M.D.
- 4:00-5:00—Amph. A., Clinical Demonstration on Preventive Medicine, C. Ward Crampton, M.D., and William H. Park, M.D.

ROOSEVELT HOSPITAL

59th Street at Ninth and Tenth Avenues
Monday Morning

9:00-12:30—Operative Clinics—

- 1. Alfred Stillman, M.D., and W. Crawford White, M.D.
- 2. Henry W. Cave, M.D., Kirby Dwight, M.D., and Condict W. Cutler, Jr., M.D.

ST. FRANCIS' HOSPITAL

East 142nd Street and St. Ann's Avenue Monday Morning

9:00—Operative Clinics—

- 1. Thomas H. Russell, M.D., and Staff.
- 2. Francis Edgerton, M.D., and Staff.

ST. LUKE'S HOSPITAL

421 West 113th Street

Monday Morning

9:00-12:00—Operative Clinics—

1. Henry H. M. Lyle, M.D., and John Douglas, M.D., and Staffs.

2. Walton Martin, M.D., and Frank S. Mathews, M.D., and Staffs.

SEAVIEW HOSPITAL

(Tuberculosis)

Brielle Avenue, West New Brighton, S. I.

Monday Afternoon

2:00-4:00—Urological Tuberculosis Case Presentation, Arthur J. Greenberger, M.D., Monroe E. Greenberger, M.D., Leonard P. Wershub, M.D.

Those desiring to attend are requested to tele-

phone to Dr. Arthur Greenberger, Regent 4-7146 for directions as to transit.

2:00-4:00—Operative Clinic Thoracic Pulmonary Tuberculosis, William F. Honan, M.D.

Those desiring to attend are requested to telephone to Dr. William F. Honan, Butterfield 8-2343 for directions as to transit.

STUYVESANT SQUARE HOSPITAL

301 East 19th Street

Monday Aternoon

2:00-4:00—Dermatological Clinic. Cases from the services of Jerome Kingsbury, M.D., Binford Throne, M.D.

WOMAN'S HOSPITAL

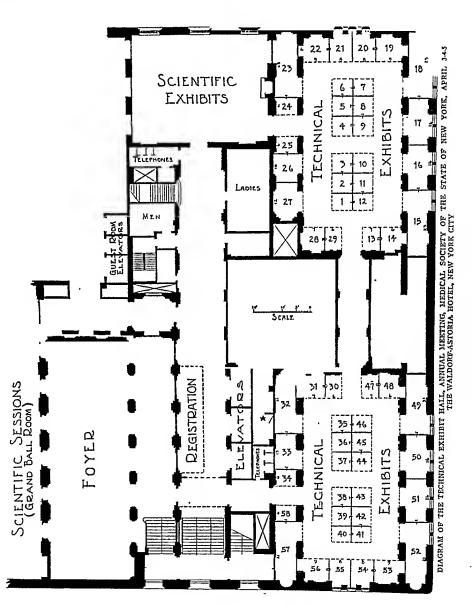
110th Street and Amsterdam Avenue

Monday Morning

Monday Afternoon

8:30—Operative Clinic — Reginald M. Rawls, M.D., and Staff.

2:00—Operative Clinic—Byron H. Goff, M.D., and Staff.



THE TECHNICAL EXHIBITS

Booth 27—American Agency of French Vichy, Inc., New York, N. Y. will exhibit Vichy Célestins Water, bottled at the Spring, Vichy, France, famous as a health resort.

In 1918 Vichy was turned into a large military hospital center for the American Army.

Vichy owes its prestige to the high approval of the medical profession.

Last year Vichy was the meeting place of the great International Congress of Biliary Lithiasis, attended by over 1,200 doctors.

The Vichy Exhibit includes Vichy Waters, Vichy Salts and Pastilles made from the salts extracted from the Vichy Waters.

Photographs of the scientifically equipped therapeutic establishments at Vichy will be shown.

2110 1111

Booth 48—American Vitamins Incorporated,

New York, N. Y.

Bemax is a natural concentrated vitamin B food consisting of selected cereal germ, biologically tested for high vitamin B content, and stabilized to prevent deterioration and rancidity. Bemax assays over 1400 Sherman-Chase units of vitamin B per ounce; it is likewise rich in vitamin G and E, and in the tissue building substances and growth factors of the cereal embryo.

The exhibit will demonstrate the pathology of chronic vitamin B deficiency, with special reference to its effect upon gastro-intestinal structure and function. It will also demonstrate the vitamin B content of the "well balanced" diet and the effect of supplementing it with Bemax, and the comparative superiority of Bemax as a source of vitamin B.

Booth 18—Anglo-French Drug Co., Inc., New York, N. Y., will exhibit their therapeutic products, among which will be *Stamoxyl* for the treatment of boils.

Booth 58—P. Beiersdorf & Co., Inc., New York, N. Y., will present physicians and their wives visiting their booth with a jar or tube of Nivea Creme. Physicians like this new type emollient creme, prepared from Aquaphor, for the care of their hands, and will welcome Nivea Creme for their wash-up basin. To women, Nivea appeals as an all-round economic cosmetic creme.

Special demonstration will be given of *Elastoplast*, a new elastic adhesive bandage for support and compression. *Elastoplast* is now made available at prices permitting of widest use in surgical, industrial and general practice.

Booth 36—Bilhuber-Knoll Corp., Jersey City, N. J., will display in Booth 36 a complete

line of its medicinal chemicals, which include some important new therapeutic agents.

Dilaudid, the new morphine derivative, possessing many advantages over morphine and the other opiates in control of pain and cough, is an important new development. Phyllicin, the new well-tolerated theophylline salt for oral medication, will also be exhibited. Such well-known medicinal specialties as Theocalcin and Metrazol and Eurcsol, so widely used in scalp lotions, will be displayed. Also Bronural, the sedative and hypnotic that is neither a bromide nor a barbituric acid derivative.

Booth 31—Cameron's Surgical Specialty Co., Chicago, Ill., will demonstrate the application of electric light in scopes, retractors, speculæ and lamps for use in diagnosis, treatment and surgery throughout the body, with the Electro-Diagnostoset. Of particular interest is the Tele-Vaginalite, the new vaginal speculum with 10x telescope for the early determination of cervical malignancies. Here, too, will be shown Cameron's Cauterodyne with the new handle control enabling the surgeon to secure any desired amount of current at any stage of any operation—the latest idea in electro-surgery.

Booth 47—S. H. Camp & Company, Jackson, Michigan, will display Camp Physiological Supports for Maternity. Post-Operative, Ptosis, Hernia and Orthopedic conditions. Each model is designed for a distinctive function and a particular purpose, all having the patented continuous lacing feature essential in securing the best results.

Very few physicians or surgeons are unfamiliar with Camp Supports, but by stopping at the booth, you can acquaint yourself with the newest principles in design developed in conformity with the latest physiological and scientific advancement.

Booth 12—Comprex Oscillator Corporation, New York, N. Y.

Booth 20—Crookes Laboratories, Inc., New York, N. Y., will exhibit *Collosol* preparations—an ethical line of stable colloidal products for medicinal use. Physicians will be given an opportunity to study various colloidal phenomena and their relation to therapeutics.

Several new specialties will be introduced to the profession at this time, among them, Collosol brand Sodium Morrhuate, Collosol brand Halibut Liver Oil, and a new stable preparation of high calcium content for intramuscular or intra-

venous use.

The exhibit will be in charge of members of the scientific staff under the direction of Mr. F. L. Cheney. Booth 10—R. B. Davis Company, Hoboken, N. J., invites visiting physicians and their friends to enjoy a glass of refreshing, delicious Cocomalt, which has become so popular and acceptable to the members of the medical profession.

Cocomalt is accepted by The American Medical Association Committee on Foods, and is licensed by the Wisconsin Alumni Research Foundation under Steenbock Patent. Each ounce of Cocomolt, the amount used in an ordinary serving, contains as much Vitamin D as two-thirds of a teaspoonful of standardized cod liver oil.

A cupful of *Coconnalt*, taken hot before retiring, tends to induce sleep. Its nourishing qualities not only soothe the digestive tract, but supply the system with energy against the coming day's work.

Booth 42—The Denver Chemical Mfg. Company, New York, N. Y. will exhibit Antiphlogistine in Space 42. Antiphlogistine, which has been ealled "inflammation's antidote" and "the perfect poultice," is forty years old. It is employed by physicians in all parts of the world. There is only one way in which an ethical product can attain this distinction, and that is through merit. It is always well to remember that Antiphlogistine has never been successfully imitated. Physicians are invited to visit the exhibit and register for a package of Antiphlogistine.

Booth 30—The DeVilbiss Company, Toledo, Ohio, manufacturers of medicinal otomizers, has reserved Space No. 30 at the Annual Convention of the Medical Society of the State of New York, to be held at the Waldorf-Astoria, New York City, April 3-5, 1933. A complete line of DeVilbiss Atomizers and Vaporizers (Nebulizers) will be displayed. F. L. Graham will be in charge. All delegates to the convention are cordially invited to visit this exhibit.

Booth 3—H. T. Dewey & Sons Company, New York, will exhibit its well-known grape juice, and also its combination with other pharmacal products. The juice is extracted without the use of heat, thereby retaining the constituents in their natural state.

Dewey also combines grape juice with mineral oil, and agar-agar under the name *Grape Minol*. The mixture has the natural flavor of the grape juice with the therapeutic properties of the agar and oil.

Samples of the natural juice and the *Grape Minol* will be dispensed to the guests calling at Booth 3.

Booth 17—The Doak Company, Cleveland, Ohio, has an interesting exhibit of various colloidal preparations for the treatment of lues,

anemia, and particularly chronic arthritis. An article on colloidal sulfur in the treatment of arthritis appeared recently in the Journal of Bone and Joint Surgery. The author states colloidal sulfur has a definite place in the treatment of arthritis. Every progressive physician is interested in this obscure disease and is eager to help his suffering patients. Dr. George Rasch and Wm. H. Puls will be present to give information on the value of colloids in various afflictions. Reprints on the elinical application of colloids will be obtainable at Booth 17.

Booth 53—The Drug Products Co., Inc., Long Island City, N. Y., will exhibit a selected line of pharmaceuticals.

Of particular interest will be the display of an extensive and distinctive group of colloidol preparations. The chief chemist will be present to explain the reasons for the increasing recognition of the therapeutic value of colloidality. An ultra-microscope will afford physicians the opportunity to see the Brownian movements of colloids

Another feature of the booth will be a display of *Pulvoids*, which approximate capsule medication in tablet form—one of the distinct advances in pharmaceutical manufacturing technic that has built the reputation of the Drug Products Co., Inc., as a leader in the field.

Booth 52—The Ferment Company, New York, N. Y., will demonstrate its acidolphilus milk and explain the standard method of its use in correcting intestinal putrefaction.

Booth 9—Fremont Canning Company, Fremont, Michigan, will show a new Gerber Product—Strained Cooked Cereal—used for postoperative, ulcer, colitis, and gastro-intestinal cases where a bland diet is indicated. Thorough cooking, fine straining, additional Vitamin B (from wheat germ), combined with uniformity, make a starting cereal for infant feeding. We invite you to inspect this cereal and also Gerber's Strained Vegetobles.

Booth 57—The Foregger Company, New York, N. Y., will have a comprehensive display of apparatus for anesthesia, resuscitation, and oxygen therapy in booth 57. This will include the Gwathmey and the Metric Gas Machines, and the new Waters Metric Anesthesia Table which combines the gas machine, blood-pressure apparatus and the anesthetist's table in one compact unit. The Henderson and the Flagg Resuscitation Apparatus and a number of oxygen-carbondioxide outfits on the "make-yout-own-mixture" principle will also be shown.

Booth 4—Gallia Laboratories, Inc., New York, N. Y., will exhibit two Council-accepted specialties, *Arheol* and *Riodine*.

Arheol (Astier), which is the active principle of sandalwood oil, insures uniform results in gonorrhea and other inflammations of the urinary tract and without irritating either the stomach or the kidneys.

Riodine (Astier) provides a very effective form of iodine medication that reduces the danger of iodism to a negligible factor.

Visiting physicians will receive samples.

Booth 7—Harold Surgical Corporation, New York, N. Y., will have a most complete and interesting exhibit of *Ultra Violet Ray Equipment*. It will show for the first time a new *Mercury Quartz Lamp*, that is beautiful in appearance, efficient in operation, and low in price. The exhibit will also include Carbon Arc Lamps and General Electric Co. Type Bulb Lamps. They will cover a price range of from \$7.50 to \$650.00. In addition it will exhibit the latest innovations in surgical instruments and physicians' supplies.

Booth 44—Health Products Corporation, Newark, N. J., has an exceptionally interesting display on White's Cod Liver Oil Concentrate Tablets. Here you will find clearly demonstrated what is meant by the vitamin fraction (non-saponifiable fraction) of cod liver oil, which makes it easy to understand the principle of how cod liver oil can be concentrated.

A number of reprints of good clinical studies on cod liver oil and cod liver oil concentrates are also available at the booth.

Booth 14—The Heidbrink Company, Minneapolis, Minn., will exhibit its specialties.

The latest model Oxygen Tent. Mr. Grimm will explain its technique and operation.

Anesthetizers, from the small Junior Portable (not a toy) to the three and four gas Lundys, all reliable and durable.

Analgesia,—surgeons and even the public are demanding it. Our representatives will demonstrate it anywhere on practical cases with Heindbrink Company.

Automatic Obstetrical Portable outfits will also be shown.

Booth 24—Hoffmann-La Roche, Inc., Nutley, N. J. Pantopon, the injectable whole-opium product about which so much has been written in recent months, will be one of several Hoffmann-La Roche "Medicines of Rare Quality" featured at Booth 24. Members of the "Roche" Scientific Department will be glad to talk to you and answer any questions about Pantopon, Allo-

nal, Alurate, Digalen, Sedormid, Sedobrol, Elixir Arsylen Compositum and the other remedies which will be displayed.

Booth 33—The Horlick's Malted Milk Corporation, Racine, Wisconsin will exhibit Horlick's Malted Milk, natural and chocolate flavors, and Horlick's Malted Milk Lunch Tablets in the same flavors. Horlick's Maltose and Dextrin Milk Modifier is also on display, which has achieved a marked success for use in infant feeding. Glassine envelopes containing tablets will be distributed to visitors.

Some of the special uses for *Horlick's Malted Milk* which will be emphasized are the following:

- (1) For sleeplessness.
- (2) For infant feeding.
- (3) In digestive disorders.
- (4) During influenza and wasting diseases.
- (5) In nervous cases.(6) In convalescence.
- (7) For the undernourished.
- (8) For nursing mothers.

Booth 8—The Hydrosal Company, Cincinnati, Ohio, will demonstrate the vast difference between true Burow's Solution—a perfect colloidal suspension—and the ordinary extemporaneous "solutions" so frequently employed.

Note the crystal clarity of *Hydrosal* as contrasted with the milkiness of the usual type of preparation. Also note the absence of certain impurities in *Hydrosal*, such as free lead.

Hydrosal is the true colloidal suspension of aluminum acetate which is being so extensively used as a wet dressing and ointment in dermatology, eye-ear-nose and throat work, and pediatrics.

Booth 35—Kalak Water Company of New York, Inc., New York, N. Y. Physicians are invited to visit Booth 35 and test the palatability of Kalak Water. Many physicians who have frequently prescribed Kalak Water are familiar with its value as an alkalinizing agent.

Visit the Kalak booth and discover how delicious and refreshing Kalak is when it is prop-

erly served.

Booth 11—Kellogg's, Battle Creek, Michigan, will demonstrate the value of All-Bran in the low calory diet. A comparison of two tablespoonfuls of All-Bran with other commonly used foods will be shown in an interesting display...

Kaffee Hag Coffee and All-Bran Cookies will be served at the booth to visitors. Kaffee Hag is coffee which has had 97 per cent of the caffeine removed. It is used in diets where stimulants are undesirable. Mrs. Winifred Loggans of the Home Economics Department will be in charge.

Booth 23-A—The C. F. Kirk Company, Bloomfield, N. J., manufactures solutions for intravenous and hypodermie injections, to be used only by physicians.

It also manufactures vaccines of individual organisms, so that the doctor may now make his own mixtures by using varying amounts of vaccine to suit the particular case. The methods of preparation of these vaccines have been passed upon and accepted by the United States Public Health Service, for which they were granted license No. 105.

The company manufactures its products under scientific supervision in a modern laboratory, well equipped for sterilization and asepsis. It has adopted the slogan "Medication for the Physician's Use,—Not to Exploit the Physician."

Booths 28-29—Lederle Laboratories, Inc., New York, N. Y., will feature Solution Liver Extract for intramuscular injection. This product provides in a 3 c.c. vial the active material from 100 grams of fresh liver. It is specific in pernicious anemia.

It will also show Pollen Antigens for hay fever, Antipneumococcic Serum for pneumonia, Erysipelas Antitoxiu for erysipelas, and Digitalis Tablets, prepared from whole leaf, in accord with the suggestions of the New York Heart Committee and standardized in cat units.

Visitors should see everything that Lederle has to offer, as it aims to make the exhibit educational.

Booth 39—J. B. Lippincott Company, Philadelphia, Pa., will feature the Every Doy Practice Series, edited by Harlow Brooks, consisting of monographs on important every day subjects by eminent writers. The binding of these volumes is a reproduction of a celebrated hand-tooled leather binding of 1499.

The company will also display the new Fuchs' Diseoses of the Eye, translated by E. V. L. Brown; the new Operative Surgery by Kirschner, translated by Raydin of the University of Pennsylvania, familiarly known as the Color Surgery; Children's Tonsils In or Out by Kaiser; Surgical Errors ond Sofeguords by Thorek; and Tumors of the Breost by Cheatle and Cutler.

Booth 22—Mead Johnson & Company, Evansville, Indiana, will have on exhibit its complete line of infant diet materials, including Meod's Dextri-Moltose, Meod's Viosterol in Oil 250D, Meod's A-D Viosterol in Holibut Liver Oil, Meod's Undiluted Halibut Liver Oil, Mead's Newfoundland Cod Liver Oil, Meod's 10D Cod Liver Oil with Viosterol, Meod's Brewers Yeost Tablets, Meod's Powder, Mead's Brewers Yeost Tablets, Meod's Cereol, Sobee, Mead's Powdered Whole Milk, Alacta, Mead's Powdered Protein Milk, Mead's Alacta, Mead's Powdered Protein Milk, Mead's

Powdered Lactic Acid Milk, Recolac, Casee, and Mead's Mineral Mixture Tablets.

There will also be for the examination of plysicians a complete line of *Mead's Services*, such as diets for older children, height and weight charts, etc., all of which are free to members of the medical profession in any quantity desired.

Representatives will be on hand to meet their friends and to discuss the application of any of the Mead products to infant feeding problems.

Booth 34—Mellin's Food Company, Boston, Mass., will exhibit its well-known line of foods for babies.

Booths 5-6—Merek & Company, Inc., Rahway, N. J., will display such well-known preparations as: Pyridium for the treatment of urinary infections, Neoarsphenomine for the treatment of syphilis, Tryporsamide for the treatment of paresis, Stovarsol for amebic dysentery, Digitan for heart diseases, Erythrol Tetranitrate for hypertension, Bismosol, a water-soluble preparation for intransuscular use in syphilis, and Arsenoferratose, a palatable blood building tonic. There will also be shown a number of new preparations such as Clymocol for the extemporaneous preparation of stable surgical solutions.

Booth 26—Merckens Chocolate Co., Inc., Buffalo, N. Y., will exhibit its Malteao, manufactured from malt and cacao (cocoa). It also contains milk and sugar in proper proportions; but what makes this product especially valuable are the organic salts of iron, calcum and phosphate contained therein. We lay particular stress upon the word "organic" since these salts have been extracted from vegetable products, which fact makes them digestible. They are readily assimilated into the system.

An analysis shows that *Malteao* contains about 26 times as much fron in organic form as is contained in spinach and more than twice as much calcium as you will find in milk, and about four times as much phosphorus as is contained in eggs. Besides, *Molteoo* contains diastase, which helps to digest starchy food.

Booth 21—The exhibit of the Metropolitan Life Insurance Company, New York, N. Y., will show the response to the individual magazine advertisements of the company on Heart Disease, Periodic Health Examinations, Tuberculosis, Overweight, and other health and disease subjects as measured by the number of requests received for explanatory literature.

Booth 19—Mutual Pharmacal Co., Syracuse, N. Y, is exhibiting products of its laboratory, including a number of new preparations which will be of interest to physicians. Samples of these

preparations will be offered to those interested. Physicians are invited to visit the booth and secure samples or information regarding the Company and its products.

Booth 56—The E. L. Patch Co., Boston, Mass., will show Patch's Flavored Cod Liver Oil, which is well-known to the medical profession of New York State. The exhibit will show the recent developments in the cod liver oil field, and their representatives will be on hand to give information and to answer questions regarding Patch's Flavored Cod Liver Oil.

In addition there will be on display an interesting exhibit of Patch's Kondrenul—the Irish moss mineral oil emulsion. Kondrenul is a superior mineral oil emulsion—the result of more than two years of scientific research in the Patch Company Colloid Laboratory. At the Patch booth you will learn why there is no leakage when Kondrenul is prescribed in the treatment of constipation.

Booth 51—Picker X-Ray Corporation, New York, N. Y., will show several of the new developments in x-ray equipment. Featured among these will be the new Shock Proof Fluoroscopes.

Although 87,000 volts are used for fluoroscopy, these new fluoroscopes afford absolute protection from high voltage electrical shock to the patient, operator and observer.

You are cordially invited to attend.

Booth 45—The Chas. H. Phillips Chemical Co., New York, N. Y. Effective, palatable, convenient are qualities typified in *Phillips' Milk of Magnesia Tablets*. Each tablet contains 4.8 grains of freshly precipitated Magnesium Hydroxide in its highest purity, the magnesia equivalent of one teaspoonful of *Genuine Phillips' Milk of Magnesia*. We should like to have you try *Phillips' Milk of Magnesia Tablets*, a product of acknowledged utility which is growing steadily in professional favor. Samples may be obtained at Booth 45.

Booth 2—Radon Company, Inc., New York, N. Y., will demonstrate the latest type of instruments for use with *radon*. The use of radon for topical, cavity, and interstitial radiation will be explained.

Physicians are cordially invited to call at Booth 2 and discuss their radiation problems with the Company's experts.

Booth 13—Sanborn Company, Cambridge, Mass., will show its Motor-Graphic Metabolism apparatus, which embodies the three essentials of accuracy of design, durability of construction, and simplicity of operation. The '33 model features quiet-running motor-blower circulation of

oxygen, providing easy breathing; the oxygen shut-off valve, for economy as well as ease of operation; and other interesting features.

The Sanborn Battery-Operated or Electric-Portocardiografs are conveniently portable in two compact carrying cases. The three-second interval time marker, the ready autograf, the lead length regulator, the visual string tension control, and double speed device are some of the exclusive Sanborn features.

Booth 1—Sandoz Chemical Works, Inc., New York, N. Y., will be represented by men familiar with technical subjects and competent to answer questions concerning the five Councilaccepted preparations to be shown. A special feature will be Calglucon, a calcium salt suitable not only for oral and intravenous use, but also for intramuscular administration,—an outstanding advantage. Another product of merit is Gynergen (Ergotamine), a pure, specific alkaloid of ergot. Gynergen is recommended to take the place of fluidextract of ergot, just as morphine has largely displaced opium galenicals.

Booth 50—Saratoga Springs Commission, Saratoga Springs, N. Y., will exhibit photographs and charts showing the treatments that are given at the State Sanatorium.

Booth 25—The W. B. Saunders Company, Philadelphia, Pa., very cordially invites all members to visit Booth 25, at which the full Saunders list will be on exhibit. Your particular attention is invited to the numerous new 1933 books, including the new Volume VII of Bickham's Surgery. Full information and advance prospectuses of the following important books that are in active preparation for early publication will be shown: Curtis, Gynecology and Obstetrics, three volumes; Hinman, Urology; Collander, Applied Anatomy; Mitchell, Pediatrics; and several others. The exhibit will be in charge of T. H. McKenna, who will endeavor to extend every courtesy to all visitors.

Booth 41—Schering Corporation, New York, N. Y., will show the following products:

Progynon, a standardized follicular sex hormone, in tablet and ampule form, the first preparation to be standardized for oral use. Progynon is used in the treatment of deficiencies of female sex glands in amenorrhea, dysmenorrhea, and menopausal conditions.

Neo-Iopax, a material used intravenously to produce an opacity of the urinary tract in making

x-ray pictures for diagnostic purposes.

Saráka, a new remedy for the treatment of habitual constipation, which has greater swelling power than any other product used for this purpose, and at the same time produces a tonic condition of the intestines which promotes motility.

Nioza, the latest azo dye material perfected by Schering for infections of the genito-urinary tract. It is effective in both acid and alkaline medias, and acts as a sedative and bacteriostatic agent.

Booth 46—S. M. A. Corporation, Cleveland, Ohio.

Vitamin A crystals were so rare only three years ago that few men in the whole world had seen them. Now, they will be shown by S. M. A. Corporation, in Booth 46.

The company has recently offered physicians caratene (primary vitamin A) in four forms: as crystals, in vegetable oil, in cod liver oil, and with natural vitamin D. The natural vitamin D is a highly potent antirachitie agent prepared by methods (Zucker process) developed at Columbia University. It is offered alone and in combination with carateue.

S. M. A. Corporation is also showing its old reliable antirachitic breast milk adaptation, S. M. A. Specimens of breast milk fat and S. M. A. fat will be available for the purpose of comparison. Alerdex, the new protein-free maltose and dextrins preparation for all milk modification purposes, as well as Smaco Hypo-Allergic Milks, will also be exhibited.

Visit Booth 46; see the caratene crystals and get detailed information.

Booth 55—C. M. Sorensen Co., Inc., Long Island City, N. Y., intends having on display for your personal inspection several new features which will be highly useful to the medical profession, and especially to the men interested in ear, nose and throat work. These will include a new model, No. 54, two-cylinder treatment outfit complete, the DeLuxe, Junior, and the very efficient heavy duty large silent four-cylinder, suction and treatment apparatus, No. 405, which has proven so popular. The company will also show a number of new combinations, and improved and modified outfits, each attractive in its own way.

Booth 40—Tailby-Nason Company, Cambridge, Mass., will again present Nason's Palatable Cod Liver Oil. Real fishing scenes from the Lofoten Islands of Norway where Nason's Plants

are located are on exhibit. The Giant Cod is also on hand to greet you.

Booth 37—George Tiemann & Co., New York, N. Y., will show newly designed instruments for living sutures. The use of these new instruments facilitates not only obtaining the fascia, but the special needle makes it easy to use, with a minimum waste of suture, and with a minimum of suture trauma.

A superior stainless steel hypodermic needle, which will not break in use, has a keen point and is perfectly smooth inside and out, will also be

featured in the Tiemann exhibit.

Booth 54-Myron L. Walker Co., Inc., Mt. Vernon, N. Y.

Booths 38 and 43—The Wander Company, Chicago, Ill., invites you to visit its booths whenever you feel tired or "on edge" and partake of a cup of refreshing Ovaltiue, the well-known Swiss Food Drink for nervousness and fatigue. Ovaltine is used as a soft or liquid diet in difficult feeding cases, such as gastrie conditions, and for malnutrition, and convalescence, and for nursing mothers. In the home it is used for sleeplessness and as a mealtime beverage instead of tea or coffee. Feel free to visit Mr. Jenkins at the Ovaltine booth frequently.

Booth 16—Winthrop Chemical Company and H. A. Metz Laboratories, New York, N. Y. This joint exhibit includes a number of the older standard products of the Winthrop Chemical Company, such as Luminal and Luminal-Sadium (tablets and ampules) and Theocin, and of the H. A. Metz Laboratories, such as Pyramidan and the Salvarsans. Your attention is also called to the anesthetic group—Avertin for basal anesthesia, Navoccin Crystals, Spinacain and Pantacain for spinal anesthesia; also Pantacain solutions for topical application. Furthermore, the display includes Theominal for hypertension; Synadal for the treatment of peptic ulcer; Neoskiodon, the new radiopaque agent for intravenous urography; and Solyrgan, the powerful diuretic.

Booth 49—W. D. Allison & Co., Indianapolis, Indiana, will show its line of office furniture and equipment.



NEWS NOTES



CHAIRMEN OF LEGISLATIVE COMMITTEES OF COUNTY MEDICAL SOCIETIES

Albany Joseph S. Lawrence, Albany
Allegany N. H. Fuller, Friendship
Allegally II. Funct, Friendship
BronxF. L. Flynn, 269 Alexander Ave., New York City
New York City
Broome
hamton
CattaraugusJ. Louis Preston, Salamanca
Cayuga Harry S. Bull, 156 Genesee St.,
Auburn
ChautauquaV. D. Bozovsky, 14 E. 6th St., Dun-
kirk
KITK
ChemungLaRue Colegrove, 423 W. Church St.,
Elmira
ChenangoR. H. Loomis, Sidney ClintonT. Avery Rogers, 75 Court St.,
Clinton Avery Rogers, 75 Court St.,
Plattsburg
ColumbiaC. G. Rossman, 11 S. 6th St., Hudson
Cortland Charles D. Ver Nooy, 84 N. Main
Ct. Cautland
DelawareRobert Brittain, Downsville
DelawareRobert Brittain, Downsville
Dutchess-Putnam., Wm. A. Krieger, 35 Market St.,
Poughkeepsie Erie
Frie James I Callagher 606 Broadway
Durant 1
Buffalo
Essex
FranklinJohn E. White, Malone
Fulton George Lenz, 68 Bleecker St., Glov-
ersville
Genesee Charles M. Graney, 100 W. Main St.,
Batavia
GreeneP. G. Waller, New Baltimore HerkimerA. L. Fagan, N. Washington St.,
Herlimer A I Foren N Washington C4
Transfer D. Pagan, N. Washington St.,
Herkimer
JeffersonH. C. Montgomery, Jefferson County National Bank Bldg., Watertown KingsB. B. Berkowitz, 225 Eastern Pkwy.,
National Bank Bldg. Watertown
Kings B B Berlyowitz 225 Factorn Dlever
Decality
Brooklyn LewisP. H. von Zierolshofen, Croghan LivingstonFrederick J. Bowen, Mt. Morris
LewisP. H. von Zierolshofen, Croghan
LivingstonFrederick J. Bowen, Mt. Morris
MadisonLynn B. Chase, Morrisville MonroeLeo F. Simpson, 221 Alexander St.,
Monroe Leo E Simpson 221 A1
Total Communication of the stander St.,
Rochester
Montgomery E. H. Ormsby, 37 Church St.,
A
NassauEugene Coon, Professional Bldg.,
Hempstead

S	OCIETIES
1	New YorkWalter P. Anderton, 59 East 77th.
	St., New York NiagaraO. F. Walker, Main & Pine Sts., Niagara Falls
	OneidaGeorge M. Fisher, 264 Genesee St., Utica
l	Onondaga John J. Buettner, 106 Strathmore Drive, Syraeuse
	OntarioA. M. Cranec, 407 So. Main St., Geneva
	OrangeJoseph E. Noll, Port Jervis OrleansC. E. Padelford, Holley OswegoH. S. Albertson, 131 W. 4th St.,
	Oswego OtsegoD. H. Mills, 76 Chesnut St., Oneonta
	QueensWm. J. Lavelle, 1 Hunter Ave., Long Island City
	RensselaerPeter L. Harvie, 34 First St., Troy RichmondV. G. Smith, 2153 Richmond Terrace, Port Richmond
	RocklandCharles D. Kline, Nyack St. LawrenceR. J. Reynolds, Potsdam
	SaratogaA. J. Leonard, 563 Broadway, Saratoga Springs
	Schenectady E. MacD. Stanton, 148 Barrett St., Schenectady
	Scholarie
	SteubenL. M. Kysor, 11 Center St., Hornell SuffolkG. A. Silliman, Sayville
	SullivanRalph S. Breakey, Monticello TiogaGeorge M. Cady, Owego
	Tompkins Minor McDaniels, 154 East State St., Ithaca
	UlsterB. W. Gifford, Saugerties WarrenE. B. Probasco, 36 Washington St.,
	Glens Falls WashingtonW. A. Leonard, Cambridge
	WayneRalph Sheldon, Lyons
	WestchesterMorton Ryder, Rye WyomingGeorge S. Skiff, Gainesville
Ì	YatesE. C. Foster, Penn Yan

LEGISLATIVE BULLETIN NUMBER 5

February 10, 1933.

Action on Bills

Senate Int. No. 142—Berg, to permit restoration by Regents of a license to practice medicine to a person pardoned after conviction of felony, for misconduct in his professional capacity, has passed the Senate and been referred to the Assembly Committee on Education.

Senate Int. No. 426-Twomey, relative to sale

of poisonous or habit-forming drugs or chemicals, has been advanced to third reading in the Senate.

Hearings

February 21—Committees on Codes—Joint Hearing.

Sen. Int. No. 604—Slater; Assembly Int. No. 780—Robinson.

Sen. Int. No. 622-Quinn; As-

sembly Int No 785—Robin son

Sen Int No 624—Quinn, As semble Int No 781—Robin son

\ssembly Int No 782-Robin

Assembly Int No 783—Robin

I chiraly 23—Committees on Labor and In dustry—Joint Hearing

Sen Int No 139—Numan, As sembly Int No 72—Cooncy, Assembly Int No 130— Breitenbach

Sen Int No 144—Esquirol Assembly Int No 75—Kan towski

Sen Int No 456—Berg Assembly Int No 145—Theo dore

Vew Bills

Senate Int No 703—Quinn, to amend the Criminal Code relative to proceedings when a person in confinement appears to be instance or a mental defective Referred to the Codes Committee This bill differs slightly in its wording being a little broader thrui Senate Int No 624—Quinn, Assembly Int No 781—Robinson, but the intent of the two bills is the same

Senate Int No 711—Byrne, adds new article to the Public Health Law for governing sale and distribution of ive and other caustic substances in containers for household use. Referred to the Health Committee. A law similar to this has been enacted by almost every. State in the Union within the last five years. We have liad many requests from physicians in neighboring States asking that a hill similar to this be proposed and enacted. Particularly, have these requests come from eye, ear nose and throat specialists.

Senate Int No 732—Cilnno, Assembly Int No 922—Marks, to amend the Vehicle and Traffic Law and Tax Law, by exempting from payment of registration fees on a motor vehicle owned by an individual, corporation or association and used exclusively for eleemosynary or charitable work, or to vehicles owned by a sewer or water district, and by providing for refund of motor fuel tax paid on account of vehicles used for charitable purposes Referred to the Internal Affairs Committee This bill would except ambulances from payment of registration fee

Senate Int No 757—Evans adds new section to the Public Welfare Law for central bureau of hospital clinics in each public welfare district to promilgate rules for persons applying for treatment in hospital clinics. Referred to the Health Committee. There has been much complaint from

New York City and other sections of the State of abuse of clime privileges. This amendment would set up additional inachinery for supervising clinic admissions.

Sente Int No 788—Berg, to mend the Ldu cuton Law by providing certain acts of Regents iffecting the professions must first be recommended by board of examiners of the profession involved. Referred to the Education Committee I his bill provides that the Regents shall secure a recommendation from the board of examiners before accepting from applicants for licensure evidence of preliminary and professional education or endorsing a license issued by some other state or country, or to endorse a certificate of rich ibilitation of the United States Veterans' Burgan

Senate Int No 810—Mastick, to amend the I ducation Law by requiring plans and specifications for new school buildings to assure proper ventilation instead of at least 30 cubic feet of pure air every minute per pupil and striking out provision on foul air Referred to the Education Committee

Assembly Int No 970—Mr Cuvillier has in troduced the following garnishee bill

"AN ACT to amend the Civil Practice Act in relation to less upon earnings or meoine of judgment debtor

"Section 1 Section six hundred eighty-four of the Civil Practice Act is hereby amended by inserting therein a new subdivision to be subdivision eight to read as follows

'8 No execution under this section shall be issued, except to satisfy a judgment entered upon indebtedness hereafter incurred for failure to just for the necessaries of life including rent of a dwelling, board and lodging, food clothing drugs or medicines, or professional services rend ered by a physician, dentist or lawyer

"This act shall take effect immediately Referred to the Codes Committee"

In a previous bulletin we stated that the American Medical Association had approved the Dickey narcotic drug bill, Assembly Int No 395 Since issuing that bulletin we have been informed by Dr Woodward, of the AMA, that we were technically not correct. Neither the house of delegates nor the board of trustees has ever passed upon the bill, bit drafts of it have been sent out by the AMA to the various State medical societies showing its stages of development and so far as practicable the suggestions offered by representatives of such associations have been incorporated into the bill

Information has reached us from several sources that the intent of the Public Welfare I aw

* * *

which was enacted two years ago, is being lost in its administration. You will recall that while the amendment was in process of enactment, we stressed forcibly that its administration would differ from that of the old Poor Law in that the family physician was to be given preference in providing services for the indigent. We insinuated that it was quite likely there would be difficulty in some sections of the State in bringing about such a drastic change, but felt it wouldn't be impossible. Our latest information from the State Department of Social Welfare is that a great improvement in the care of the indigent has resulted from the administration of this law; but recently, as was said above, it has been reported that in certain towns the commissioner of public welfare has discontinued the employment of family physicians and engaged with one physician to do all of the work. The principal reason for changing is an effort on the part of the commissioner to cut down expenses, but, unfortunately, the amount of medical work to be done will not have decreased and the result will be that if the indigent are to receive the same care, the appointed physician will be obliged to render services at a rate of fees far lower than that recommended by the Economics Committee, or other physicians will take care of some of the indigents and receive no pay.

Having secured the enactment of a law which assured a very definite advancement in the medical care of our indigents, it now seems important that the Medical Societies should exert themselves to maintain the effectiveness of this law.

HARRY ARANOW,
JOHN J. BUETTNER,
B. WALLACE HAMILTON,
BERNARD B. BERKOWITZ,
EDWARD E. HALEY,
Committee on Legislation.

LEGISLATIVE BULLETIN NUMBER 6

February 17, 1933.

Action on Bills

No action was taken on any of the bills in which we are interested since the issuance of the last bulletin.

Hearings

February 21—Committees on Codes—Joint Hearing.

Senate Int. No. 604—Slate; Assembly Int.

No. 780—Robinson.

Senate Int. No. 622—Quinn; Assembly Int. No. 785—Robinson.

Senate Int. No. 624—Quinn; Assembly Int. No. 781—Robinson.

Assembly Int. No. 782—Robinson.

Assembly Int. No. 783—Robinson.

Assembly Int. No. 783—Robinson.

Postponed from February 23rd—
Committees on Labor and Industry—Joint Hearing.

Senate Int. No. 139—Nunan; Assembly Int. No. 72—Cooney.

Assembly Int. No. 130—Breitenbach.

Senate Int. No. 144—Esquirol; Assembly Int. No. 75—Kantowski.

Senate Int. No. 145—Theodore.

Senate Int. No. 145—Theodore.

Senate Int. No. 147—Schackno.

Assembly Int. No. 147—Schackno.

Assembly Int. No. 147—Schackno.

Assembly Int. No. 63—Vaughan (Antivivisection bill)

Assembly Int. No. 181—Bernhardt (Antivivisection bill)

New Bills Introduced

Senate Int. No. 924—Schackno; Assembly Int. No. 1130—Close, adds new section to the Lien Law for liens of hospitals for care and treatment of certain injured persons. Referred to the Judiciary Committee. This bill is very similar to

Mr. Close's bill, Assembly Int. No. 131, except that it limits the actions to accounts where the injured person receives an amount in excess of \$200.00 in settlement for the injury.

Senate Int. No. 929—Howard; Assembly Int. No. 779—Kirnan, to amend the Civil Service Law by providing no person shall be appointed to position in classified service unless he is a citizen of U. S. and has been resident of state for at least five years preceding appointment or application for examination. Referred to the Civil Service Committee.

Senate Int. No. 993—Twomey; Assembly Int. No. 1314—Streit, would amend the Education Law relative to payment of certain monies into state treasury so as to postpone until July 1, 1935 time when act shall take effect. Referred to the Finance Committee. Last year the Education Law was amended so as to have all monies collected as fees and fines from the enforcement of the various professional laws, paid directly into the state treasury and the Department of Education authorized to prepare, annually, a budget to cover all of these activities. It is now found impracticable to put that law into effect immediately and this bill provides a postponement for two years.

Senate Int. No. 1006—H. L. O'Brien; Assembly Int. No. 1247—Monahan, amends the Penal Law relative to poisoning or attempting to poison dogs or other domestic animals. Referred to the Codes Committee. The law now provides a penalty for persons convicted of poisoning horses, mules, or cattle. This amendment includes dogs. It did not originate with the antivivisectionists and has no bearing whatever upon vivisection.

It was probably inspired by the report of the poisoning of thirteen valuable dogs in New Jersey a few weeks ago.

Assembly Int. No. 1150—Schwartz, adds new section to the Penal Law making it a misdemeanor to sell drugs, medicines and other pharmaceutical preparations including lotions not having affixed on bottle, box, vessel or package a label giving name and quantity of each ingredient. Referred to the Codes Committee.

Assembly Int. No. 1152—W. F. Smith, would amend the Penal Law to prohibit solicitation of employment by or in behalf of an attorney. Referred to the Codes Committee. This is an other "ambulance chasing" bill applicable to lawyers, but it is so rigidly written that it unight be considered a crime for a physician to advise with his patient regarding the employment of an attorney, even when the patient and physician are the closest friends. If any of our readers not receiving this bill would like to study it, we shall be glad to send copies upon request.

Assembly Int. No. 1319—Averill, amends the Health Law by providing birth certificates shall be

filed with registrar of district of which mother of child is a resident, and where birth occurs in district other than that in which the mother is a resident, duplicate certificates shall be made out, one to be filed in each district. Referred to the Health Committee.

Assembly Int. No. 1322—Cuvillier, establishing a system of compulsory insurance to furnish benefits for employees in case of old age, unemployment, death, sickness and accident not covered by workmen's compensation and for their dependents, and to furnish maternity benefits, etc., a health insurance commission being created and \$200,000 appropriated. Mr. Cuvillier reintroduces his health insurance bill of many previous years. Last year the session was too short for Mr. Cuvillier to reach the bottom of his barrel of bills, but this year he has resurrected it. You will observe that it carries an appropriation of \$200,-000 and has been referred to the Committee on Ways and Means.

At our meeting on Thursday, February 16th, we took action on the following bills as indicated:

Senate	Assembly		no ao majamo
Int. No. 119-Mandelbaum	Int. No. 70—Canney	State fund	Disapproved
139—Nunan	72—Cooney 130—Breitenbach 3	Ocenpational diseases	Disapproved
142—Berg 144—Esquirol 147—Schackno 184—Berg	354—Rice 75—Kantowski 63—Vaughan 131—Close 145—Theodore	Medical licensure Free choice State fund Physiotherapy license Antivivisection bill Hospital licen Free choice	Disapproved Approved Disapproved Disapproved Disapproved Disapproved Approved
261—Webh 392—Esquirol 471—Hanley 299—Warner 673—Feld	181—Bernhardt 246—Lewis 328—Close 329—Cohen 331—Hayes 342—Messer 345—Neustein	Antivivisection bill Health officers' fees Coroners' witnesses Survey of compensation Nurse veteran preference Medical care of welfare patients Pharmacy	Disapproved Disapproved Approved No comment Disapproved Approved Approved
349—Feinberg 772—Feld 365—Fearon 378—Cilano 426—Twomey 433—Crawford 434—Evans	346—Neustein 362—Bartholomew 395—Dickey 500—D. M. Stephens 794—Marks 638—Gimbrone 706—Coughlin	Narcotics Child welfare Habit-forming drugs Women physicians Veterans' relief Habit-forming drugs Hospital clinics Supervision of indigent ill in welfare	No action No action No action Disapproved Disapproved No action Approved
456—Berg 487—Esquirol 604—Slater 621—Quinn 622—Quinn 623—Quinn 624—Quinn	705—Austin 780—Robertson 786—Robinson 785—Robinson 784—Robinson 781—Robinson 772—Doyle	district Occupational diseases Public Health Law Venereal disease treatment Criminal experts Insane defendant Qualified psychiatrists Insane prisoners Bichloride of mercury	Approved Disapproved Approved Approved Approved Approved Approved Approved Approved Approved Approved
703—Quinn 711—Bynne 732—Cilano 757—Evans 788—Berg 806—Baxier 810—Mastick 924—Schackno 929—Howard	1042—McDermott 822—Marks 1039—Heck 1331—Pratt 1130—Close 779—Kirnan	Insane prisoners Caustic lye Ambulance license plates Central bureau hospital clinics Professional boards Income tax School bldgs., ventilation Hospital lien Civil service appointment	Approved

The committee recommends that the hospital lien bills be modified to include physicians and, if so amended, they are ready to urge the enactment

of either of the two bills now pending.

The special committee appointed by Governor Roosevelt made a study of medical and hospital problems in connection with the Workmen's Compensation Act and submitted its report to the Governor just before the close of his term of office. Governor Lehman the other day announced the appointment of a committee to review this report. The personnel of the committee follows:

Representatives of the New York Academy of

Medicine:

March 1-

Dr. Eugene H. Pool, New York City;

Dr. Frederick W. Bancroft, New York City;

Dr. George Baehr, New York City;

Dr. Adrian V. S. Lambert, New York City; Dr. Charles A. McKendree, New York City. Representatives of the Medical Society of the

State of New York:

Dr. David J. Kaliski, New York City;

Dr. Thomas McGoldrick, Brooklyn;

Dr. F. M. Miller, Sr., Utica; Dr. Harry R. Trick, Buffalo;

Dr. Frederick S. Wetherell, Syracuse.

The Temporary Emergency Relief Administration (T.E.R.A.), which has the responsibility of administering the state's relief with the thirty million dollars voted at the last election and recently supplemented by six million dollars from the federal government to be spent in the month of February, has made studies of the character of medical care administered in a number of communities up-state. It is stated that the surveyors reported medical care to be inadequate in many communities, and acting upon their reports, the T.E.R.A. has asked Commissioner Parran to be their medical advisor and he has designated Dr. Davis, of his staff, as his representative on the board. The Commissioner has asked Dr. Hyde to appoint a committee from the State Society to cooperate with him in formulating a program for improving conditions.

The Department of Health is cooperating with the T.E.R.A. in another way. Registered nurses engaged in case work, it is reported, made application to the T.E.R.A. for relief. Many of them are without work and it was suggested that they might be employed to work among those persons who are receiving either work relief or home During the last week the Commissioner has announced that a number of nurses have been appointed to work under the Department of Health, but more directly under such local agencies as there may be in accordance with this program. This is a temporary employment and may be discontinued at the close of this month, unless the committee feels their appropriation adequate to continue the work. These nurses are not employed to do public health work but family case work. This activity bears a close relationship to the administration of the Public Welfare Act to which we referred in our last bulletin. It would be well for each County Society to look into the matter of how that law is administered and how it is being supplemented by funds from the T.E.R.A., bearing in mind that the T.E.R.A. fund is an emergency fund and activities based upon it should be temporary in character and every effort should be made to keep them from developing a permanent aspect.

> HARRY ARANOW, Chairman, Committee on Legislation.

LEGISLATIVE BULLETIN NUMBER 7

February 24, 1933.

Hearings

February 28—Postponed from February 21st. Committee on Codes—joint hearing. Senate Int. No. 604—Slater; Assembly Int. No. 780—Robinson. Senate Int. No. 622—Quinn; Assembly Int. No. 785—Robinson.
Senate Int. No. 624—Quinn; Assembly Int. No. 781—Robinson. Assembly Int. No. 782—Robinson. Assembly Int. No. 783—Robinson.

Committees on Labor and Industry-joint

hearing. Senate Int. No. 139—Nunan; Assembly Int. No. 72—Cooney; Assembly Int. No. 130-Breitenbach.

Senate Int. No. 144—Esquirol; Assembly Int. No. 75—Kantowski. Senate Int. No. 456—Berg.

Assembly Int. No. 145-Theodore,

Senate Int. No. 119—Mandelbaum; Assembly Int. No. 70—Canney. Senate Int. No. 147-Schackno.

March 14-Assembly Committee on Codes. Assembly Int. No. 63—Vaughan (Antivivisection bills).

Assembly Int. No. 181-Bernhardt (Antivivisection bills).

Action on Bills

Senate Int. No. 426—Twomey, habit-forming drugs, was voted upon in the Senate and defeated. Senate Int. No. 924—Schackno, hospital lien bill, reported out of committee in the Senate.

A resolution was introduced in the Senate by Mr. Feld, creating a committee to study and investigate, generally, the narcotic drug problem. Referred to the Finance Committee.

resolution was introduced in the Assembly by Mr Dickey and referred to the Ways and Means Committee

New Rills Introduced

Senate Int No 1043-Esquirol, Assembly Int No 1424-McNamara, adds a neu article to the Health Law enacting a uniform narcotic drug law. Referred to the Health Committee bill differs from Senate Int. No. 772—Feld, As sembly 1nt No 395-Dickey, in that it includes cannabis indica as a habit-forming drug

Senate Int No 1056-Twomey, Assembly Int No 1458-Gimbrone, amends the Education Law relative to the practice of pharmacy to the Education Committee

Assembly Int. No. 1526, Print No. 1661-Mr. Garniost has introduced the following osteopathy bill .

"AN ACI to amend the education law in rela tion to the practice of osteopathy

'Section 1 Subdivision two of section twelve hundred and sixty-two of chapter twenty-one of the laws of nineteen hundred nine, entitled 'An act relating to education, constituting chapter six teen of the consolidated laws, 'as amended by chapter one hundred and forty of the laws of nineteen hundred ten, such section having been added by chapter eighty-five of the laws of nineteen hundred twenty-seven and amended by chapter four-hundred and ninety of the laus of mneteen hundred twenty-seven, is hereby amend ed to read as follows

"2 This article shall be construed to repeal all acts or parts of * * *

"[A license to practice osteopathy shall not per mit the holder thereof to administer drugs or perform surgery with the use of instruments] Licenses to practice osteopathy shall be registered in accordance with the provisions of this article and the [word osteopath] words osteopathic physician be included in such registration; and such license shall entitle the holder thereof to the use of the degree DO, or doctor of osteopathy

(New matter begins here) "Applicants for such licenses shall satisfactorily pass the examina tion of the state board of medical examiners pre

scribed for all physicians as provided in section twelve hundred and fifty-seven of this article license to practice osteopathy shall not entitle the holder thereof to perform any surgical operation involving incision for the opening of a natural body cavity, for the removal of cancer or other tumor, for the amputation of an extremity or an appendage, or for the removal of any gland or organ, or part thereof, of the human body, nor shall such license permit the holder thereof to ad minister drugs, except narcotics, anesthetics, antiseptics, serums, vaccines, and anti-toxins matter ends here)

It is further provided * * *

"Section 2 This act shall take effect immediately

"Referred to the Education Committee "* * # means same as old law

"[] means old matter to be left out " PLLASE COMMUNICATE YOUR OPPO-SITION TO THE FOLLOWING PERSONS IMMEDIATELY

Members of the Assembly Committee on Public 1 ducation

Your own Assemblymen Majority Leader Russell G Dunmore Speaker Joseph A McGinnies

Ask influential lay persons to support you by writing similar letters

As was stated in a previous bulletin, the committee decided that the hospital lien bills should be amended so as to make provision for the physi-Dr Lawrence was instructed to communicate the committee's wish to the proper persons in the Legislature and he reports that Mr Close, who carries the two bills in the Assembly, will communicate with the Hospital Association and if they are willing to have their bill amended, he will see that it is done. If they are not willing, then he will introduce a new bill which has been draft ed by our counsel

> HARRY ARANOW, JOHN J BUCTTNER, B WALLACE HAMILTON, BERNARD B BERKOWITZ, EDWARD E HALEY Committee on Legislation

PUBLIC RELATIONS OF THE MEDICAL SOCIETY OF THE COUNTY OF MONROE

Editorial Introduction -- County Medical Societies are expending their activities to such an extent that the larger ones employ executive secretaries; while the smaller ones find it desirable to utilize the facilities of the County Tuberculosis Associations, thereby evolving a practical cooperation between the professional and the lay groups engaged in public health work

The executive secretary of the Tuberculosis and Health Association of Monroe County, Mr Raymond H Greenman, is also the executive secretary of the Public Health Committee and other standing Committees of the Medical Society of the County of Monroe. His account of the "Participation of the Medical Profession in Health Education," was presented before the American Public Health Association on October 27, 1932. The following abstract of that address is given with the approval of the officers of the Monroe County Medical Society.

Origin of Organized Activities:—Prior to 1929. the Medical Society of the County of Monroe, as a recognized entity, was practically unknown outside the profession. At that time, physicians were almost solely concerned with meeting the sickness needs of individuals. They were serving as "emergency" men rather than counselors. They had not yet become conscious of the fact that in the field of personal preventive medicine, i.e., dealing with non-contagious diseases, the private practicing physicians are in a field peculiarly, uniquely and exclusively their own.

The dawn of a new era in Rochester may be said to have begun in January 1930, with the enlargement of the membership of the Public Health Committee, the creation of nine standing sub-committees, and the undertaking of a study of the work of the hospitals and health agencies of the City. Eighty-eight different physicians served as members of the different sub-committees. These sub-committees rendered service in the fields of personal hygiene, nutrition, child hygiene, social hygiene, mental hygiene, prenatal care, tuberculosis and diphtheria prevention, and in community efforts to control cancer, heart disease and communicable diseases. A Committee on Periodic Health Examination was created to develop a program for the information of the profession and the general public.

Results of Medical Leadership:—The Medical Society of the County of Monroe is making a successful pioneer effort which has the approval of citizens of the community and the support of the membership of the Society. The health education program has been planned as a permanent activity of the Society. No longer is the leadership in medical public problems, which properly belongs to the organized medical profession, assumed by others; and no longer in Rochester do the official and voluntary health agencies have to undertake without needed support, the entire burden of educating the public in the principles of healthful liv-The individual physician is seeing, and will increasingly see, the benefit of organized and coordinated community effort and the establishment of harmonious working relationships. Participation in a community effort to give needed health education to the public is one of the opportunities and privileges of membership in a County Medical Society. The response of the physicians of Monroe County in public health projects is shown in Table One.

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Table 1. Activities of the Physicians of Monroe County in the County Medical Society.

Fields of Practice:—The grouping of the physicians of Monroe County by their fields of practice is about the same as that in other counties as is shown in Tables 2 and 3.

•	· Institutional			
In	iternists	ond Industrial	Specialists	Total
Listed in Directory	410	27	132	569
Members of County				
Society	318	25	128*	471
Actively interested	276	25	74	375
Attended (at least one)	100	20	50	200
meeting	130	20	50	200
Made Health Examina-	226	10	1.4	250
tions	226	10	14	
Gave Radio Talks	52	12	70	134
Addressed Groups	5	10	6	21
Wrote Special Articles	8	5	12	25
Member of Committees	22	8	48	78
Member Voluntary				
Agency Boards	12	8	16	36
				

^{* 82} per cent.

Table 2: Physicians of Rochester and Monroe County Classified according to activity and field of practice, 1932

G. U
X-ray
Obstetricians 6
Dermatologists 5
Pathologists 2
Tuberculosis 4
Anesthetic 3

Table 3: Grouping of the Specialists in Monroc County, 1932

An effort has been made to make available to every member of the Medical Society up-to-date information and approved health education material. It was felt that physicians in general practice giving private instruction to their patients, have been, and will continue to be, the most important group of health teachers in any community. An effort has been made to enlist as many as possible of the members of the Society in a program of popular health instruction, i.e., informal adult education. The purpose of this instruction has been to arouse, stimulate and guide individuals to more healthful living, and to build up a feeling in the community of good will toward the organized medical profession.

In May, 1930, the opportunity to secure a regular fifteen minute sustaining period to undertake a radio broadcast program was provided by Stromberg-Carlson Station WHAM. Since that time the Sunday evening health talks of the Medical Society of the County of Monroe have been the most popular and successful feature of the Station's educational service. In the 110 broadeasts, 134 different private practicing physicians, eight public health officials and hospital superintendents, and three University Medical School Professors have participated. The worthwhileness of this effort is beyond question. More than 30,000 persons have received copies of the talks, as requested. Two hundred loose-leaf booklets containing the series of talks arranged by years have been sold to subscribers, including the Public Library, University, Schools, and practicing physicians and dentists.

In October, 1931, the Medical Society of the County of Monroe established headquarters in the Rochester Academy of Medicine Building and opened a Health Information Bureau. This Burean has been called on to answer many inquiries.

The initiation of the program was made possible by an appropriation made by the membership of \$600 from the capital fund of the Society, supplementing the service rendered without charge by the Tuberculosis and Health Association. In 1931, the County Medical Society shared in the cost of the extent of approximately \$1,900; and during the present year to the extent of approxi-

mately \$2,400.

Special credit was given for excellent use made of newspapers, pamphlets, motion pictures, lectures and radio talks as mediums of health education by the Medical Society of the County of Monroe, with the cooperation of the Tuberculosis and Health Association and the Chamber of Com-These activities were of essential service in making it possible for Rochester to win first place in cities between 250,000 and 500,000 population, after having been an honor city for two years in the Inter-Chamber Health Conservation Contest.

DUTCHESS-PUTNAM

The regular meeting of the Dutchess-Putnam Medical Society was field Wednesday, February 8, 1933, at the Chimney Corner, Poughkeepsie, N. Y. The neeting was called to order by the President, Dr. Samuel E. Appel, at 9:00 P.M.

The following candidates were elected to membership: Dr. Peter Montbello, Fishkill, N. Y., Dr. Norman T. Crane, Poughkeepsie, N. Y., Dr. Wesley G. Simmons, Dover Plains, N. Y. (trans-

ferred from Kings County).

A committee with Dr. W. A. Krieger, Chairman, was appointed to tender a dinner to Dr. Charles E. Lane, of Poughkeepsie, who has com-

pleted fifty years of medical practice.

The President announced the chairmen of the following committees: Public Health and Public Relations, Dr. Aaron Sobel; Legislative, Dr. C. Knight Deyo; Library, Dr. A. L. Peckham; Cancer, Dr. H. L. Palliser; Economics, Dr. J. T. Harrington.

Scientific Program

"Compensation Agreement," by Dr. Morris Rosenthal, Director of the Bureau of Compensation Arbitration, Medical Society of the County of New York.

Discussion by Doctors Lane, Harrington, Stein-

hardt, Krieger, and Sadlier.

"United to Help Each Other," by Dr. Irving D. Steinhardt, Treasurer, New York Physicians' Mutual Aid Association.

The meeting adjourned at 11:00 P.M. for refresiments. Present: Drs. Ashley, Cavanaugh, Lynn, Appel, Carpenter, C. E. Lane, Krieger, Sadlier, Rogers, Leonidoff, Rivenburgh, Stoller, Simon, Davison, Crane, Rosenberg, Harrington, G. E. Lane, Marks, Cadwell, Sobel, Morris Rosenthal, Steinhardt, Gosse, Price, Deyo, Thomson and Cotter (29).

II. P. CARPENTER, Secretary.

LIVINGSTON COUNTY

A regular meeting of the Livingston County Medical Society was held at the Old Madrid restaurant at Dansville, N. Y., on Tuesday evening, January 10th, 1933, at 6:30 p.m.

After a steak dinner the scientific program

was ably rendered.

Dr. H. E. Pearse of Rochester, N. Y., discussed "Neoplasms, Their Diagnosis and Treatment," accompanying his talk with lantern slides.

Dr. MacNaughton Wilkinson of Rochester, spoke on the "Use of Sodium Amytal in Obstetrics." He compared its qualities with that of Gwathmey's rectal ether anesthesia, and the so-called twilight sleep.

At the business meeting a schedule of medical economics was read by the secretary. After much discussion, this paper was referred to a committee of two appointed by the president.

There was a discussion relative to welfare medical care in Mt. Morris by several physicians.

George M. Doolittle, Secretary.



OUR NEIGHBORS



COMMITTEE ON THE COSTS OF MEDICAL CARE

The State Medical Journals have carried extensive comments on the Report of the Committee on the Costs of Medical Care ever since the report was made public on November 29, 1932. These comments have run the gamut from the severely critical to the mildly commendatory.

Critical Opinion from Illinois.—One of the more denunciatory criticisms is that contained in the Illinois Medical Journal of January which devotes a seven-page editorial to the subject, in which it says:

"From one end of the United States to another comes echo of unfavorable opinion of this thoroughly un-American report. The socialization of medicine does not set so well on the stomachs of those by whom this dose of sovietism was destined to be swallowed.

"There is scornful protest at the expressed hope of Dr. Ray Layman Wilbur that this Committee on the Costs of Medical Care might be propagated and that 'a continuing organization may immediately be formed to promote experimentation and demonstrations in local communities.'

"Now, Morris Llewellyn Cooke, an organization engineer, declares that we have come to a point where, if we are to survive, we must accept the contributions of science and engineering. Which is very fine coming from an engineer, but what has engineering got to do with the practice of medicine?—a lot of machine chicanery, economic jobbery, and socialistic tomfoolery.

"There has been founded a new group to carry on propaganda for the socialization and sovietization of medicine in America. The name of this new committee is the 'American Committee on Medical Costs.'

"What results this new committee will obtain, are more obvious than problematical. Its members, though, should study the public palate and put out findings more sugar coated than those embodied in their previous effort, and which have evoked a storm of criticism, indignation, revolt, condemnation, denunciation and even ridicule by the general public, the saner economists, and the medical profession. Especially is the press, lay and scientific, up to its ears on the question.

"Some ninety per cent of the lay press is against this report. Newspaper comment on the report of the Committee on the Costs of Medical Care is so favorable to the side of the physician and of the minority report that once more faith is justified in the lay press as a national leader and guide.

"Probably if a straw vote could be polled the

country over it would be discovered that 95 per cent of the population is better satisfied with its relations 'as is' with the family physician than they are with their relations with landlords, merchants, clergymen or their offspring's educators.

"Well, they should be. The physician gives his services without hesitation and his is the last bill to be paid. And though the Committee on the Costs of Medical Care insists that it is out to see that 'the doctor gets his' with the lure of government pay for government bossed doctors (which is exactly what will happen if this socialized medicine runs rampant with a heavy tax in an already tax-ridden country) this insistence is nothing but 'swamp fire,' an irresponsible will-o-the-wisp to lead the more credulous of the medical profession into a frightful quagmire.

"Let it be repeated, that quality of service has always been the thing dearest to the heart of the ethical doctor. This proximity will continue despite the dangling of false ideals by apostles of the soviet.

"The medical profession of the United States—the real medical men who know about medicine and not committees of butchers, coal dealers and ribbon merchants, professional philanthropists, or busybodies—will continue as they have always done. They must fix their economic balance to survive; but the scale must be their own, not that of the laity."

Laudatory Opinions from Massachusetts.—The New England Journal of Medicine, whose editor Dr. Walter P. Bowers, was a member of the Committee on the Costs of Medical Care, was the first State Journal to comment on the Committee's Report, which was made public on November 29, 1932. This Journal of December first said:

"The United States is said to be the only country in the world in which a substantial group representing the professions concerned with medical care have united with a group of social scientists and members of the general public in a careful study of the problems and needs of the situation. The subject is one in which there will be divergence on some points, but there can hardly be any difference of opinion that the present situation in medical service is neither satisfactory to the public nor to the profession; that many trends in economic life and in the scientific progress of medicine itself compel substantial changes; and that changes will be more advantageous to all concerned if made as a result of deliberate, purposeful and cooperative action.

(Continued on page 348-Adv. xiv)

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(Continued from page 346)

"An answer must be given to one important question and that is: Will organized medicine take its place in the solution of the problems now before this country respecting medical service to all the people?"

The New England Journal of December 8th says:

"The Committee may well feel satisfied with the work which has been carried on, and especially pleased with the many expressions of approval of its recommendations. A very significant feature of the minority report is that, in its dissenting opinions, modifying statements are given to the effect that there are possibilities of objectionable forms of group and contract practice and also that there is no opposition to the principle of insurance in dealing with the costs of illness, but only to those forms which are destructive of ethical medical practices.

"There is no real reason to believe that the foundations of the general practice of medicine and the close and intimate relations of the family doctor are to be torn asunder. The recommendations of the majority will supplement the work of the individual physician and provide for service not now available, or indifferently supplied, in many instances.

"There is sufficient evidence of support of the majority report by far-sighted physicians, so that there will not be any general reaction to catchword phrases designed to stampede the profession.

"The reports are now before the medical profession, sociologists and the people. In the last analysis, the people will decide many of these questions and a responsibility rests upon students of the problems to have recommendations passed upon by an intelligent jury."

The New England Journal of December 22nd says:

"The recommendations of the committee are not 'revolutionary.' On the contrary, it is possible that the committee has saved the American people from a change in the provision of medical care which might quite properly have been termed 'revolutionary.' Most countries in Europe and some in other parts of the world have adopted, during the past half century, systems of compulsory state illness insurance. Before the war, state insurance was proposed and considered in some eight or ten commonwealths in the United States and much public sentiment had developed in its favor. If the war had not come, the protagonists of this system of medicine would probably have become increasingly active in urging its consideration and some of the states might have adopted it before now.

"Those who read the report may trust its framers to interpret it. It will be seen that the importance of the personal relation between the patient and practitioner is recognized and repeatedly em-

(Continued on page 350-adv. xvi)



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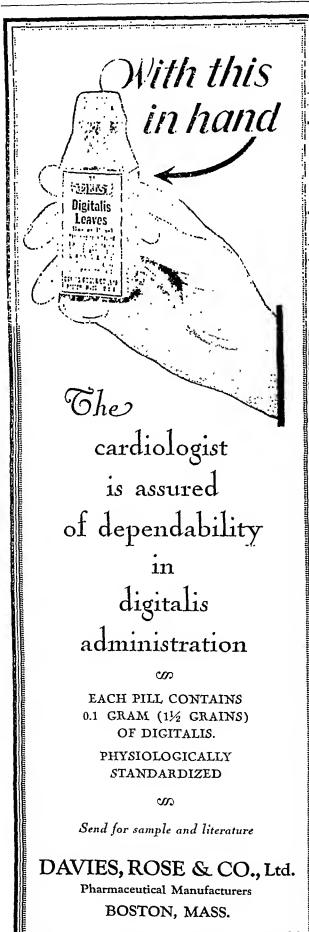
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It supplies the needed Minerals



(Continued from page 348-adv, xiv)

phasized. The recommendations of the main report definitely provide for its preservation. The report safeguards many other essential interests of both physician and patient. The committee has done its work thoroughly and given due consideration to these matters.

"That there should be honest dissent from the findings of the Committee is desirable, but it is reasonable to expect that bitter recrimination will not be the resource of the objector. There should be no personal quarrel in the medical family."

A Stimulation to Action in Indiana.—The February number of the Journal of the Indiana State Medical Association, discusses the reaction to the report as follows:

"As was to be expected, organized medicine opposed the recommendations of the majority of the committee. It was patent that we could not carry on under the proposed plan without sacrificing much of the progress we have made in recent years; and many of our lay friends, now that our side of the question has been explained to them, are strongly impressed with the fact that the recommendations cannot be carried out without jeopardizing our professional future.

"The committee has, however, rendered a valuable service to the profession; it has brought us to a stern realization that we have been fast asleep for many years; that our very existence has been and is being threatened, and that we have calmly sat by while this sort of thing was going on. In fact, we are many years late in realizing that sapping has been going on right under our very foundations. Just what we can do about it remains to be seen, but certain it is that we have our work

cut out for us.

"One of our greatest shortcomings is that we are slow in taking the laity into our confidence: for generations our profession has been shrouded in at least some degree of mystery. It is only in recent years that we have made any effort to publicize our achievements, to speak of the things we are trying to accomplish. True it is that some of our state associations are doing a most commendable work—Indiana is a leader in this field—through the very creditable work of its Bureau of Publicity. But even more active measures will have to be instituted to overcome the effect of the

"All of this convinces us that if we are to scotch the snake of state medicine and the paternalistic tendencies of our government we will have to quit this pussy-footing and get down to brass tacks. This is true not only of our state association but of the parent organization as well. The county society and the individual members of the profession have their work cut out for them. We have talked a lot; we have resoluted and resolved; we have admitted that something must be done

publicity given the committee report.

about it; but we have accomplished very little in (Continued on page 351—adv. xvii)

(Continued from page 350-adv. xvi)

comparison to the publicity attending the release of the final report of the committee.

"We have always maintained that we can and will have the support of the public in any of our worthy undertakings. This has been proved on so many occasions that it is almost axiomatic. No one can make better contacts than the individual physician because of his personal relations with his patients, many of whom will be very glad to render assistance in such matters as the case in hand. We should not enter into a long-winded discussion of medical conomics with all of our patients, but all of us have frequent opportunity to talk things over with thinking people,

The Data Valuable to lowa .- The January number of the Journal of the Iowa State Medical Society has the following editorial on the Report:

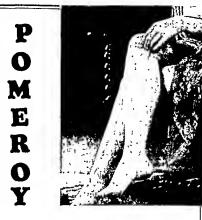
"Medicine has been developed as a profession upon a basis of medical ethics; ethics which demand a personal and intimate, confidential contact between physician and patient. The medical practitioner, busy with the exacting duties of his profession, has rarely paused to give consideration to the methods of mechanical efficiency of 'big business.' He has long been keenly alert to the problems concerned in rendering a better and more efficient service and his studies have been directed in these channels. He has been interested in the quality of professional service rather than the cheapness with which this service could be dispensed.

"Disturbed by the apparent high costs of medical care, a committee, unofficial in character, came into existence some five or six years ago to investigate this problem. In many ways the activity of this committee appears unfortunate. In its inception, the committee openly stressed the alleged high costs of medical care and thereby directed attention to the costs of illness in an unfair light; and in its conclusion recommended a plan for the socialization of medical care inimicable to the welfare of the medical profession. In spite of these facts, the tremendous amount of data accumulated by the committee in its five years of research has served a highly useful purpose in causing the attention of the profession to be focused on the cconomic aspects of medical practice."

Paternalism Deplored in Ohio.—The Ohio State Medical Journal for February criticizes the report of the Committee on the Costs of Medical Care in the following editorial:

"To those wishing to know what some of the leaders in industry and business think about the recently issued report of the Committee on the Costs of Medical Care, we recommend the following comment on the subject by Merle Thorpe, editor of Nation's Business, official publication of the Chamber of Commerce of the United States, and

(Continued on page 352-adv. vviii)



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(Continued from page 351-adv. xvii)

one of the best informed authorities of the day on social, economic, governmental and political trends and developments.

"Writing in the January, 1933, issue of Nation's Business, Mr. Thorpe declared:

- "'It is a thankless task to criticize the labors of the Committee on the Costs of Medical Care headed by Secretary-Doctor Wilbur of the Department of Interior.
- "'The descent into paternalism and from paternalism into socialism to easy—and doubly easy when the way is greased by sentiment, by the desire to better the health of the community, by sympathy for suffering, by the knowledge that costs of medical care fall with crushing effect on the overalled and white collared poor.
- "'The Committee would have medical service provided largely by "organized groups" an extension of the already increasing method of practice through clinics.
 - "'How pay for this group service?
 - "'Here's part of the Committee's recommendaons:
- "1. Voluntary cooperative health insurance, in which organized groups of consumers unite in

- paying into a common fund agreed annual sums, in weekly or monthly installments. . . .
- "'2. Required health insurance for low-income groups. . . .
- "'3. Aid by local governments for health insurance. Part of the people, because of their low income, cannot pay, even on a periodic basis, the full cost of complete service in cases where the community relies for the provision of medical service primarily upon the purchase by its people of voluntary health insurance. Such communities may well use tax funds to the extent necessary to supplement the payments of these low-income families. When health insurance is required by law, it may also be necessary and desirable that a contribution be made from government funds.
- "'The socialism of medicine is but a step toward the socialism of industry.
- "'To tax A to pay B's doctor's bill is an appealing plan particularly when we put in on the ground of conserving public health.
- "'But why not then tax A to pay B's food bill since it is nutrition that is essential to health?
- "'It is comforting to know that the doctors themselves are in revolt at the Wilbur report'

(Continued on page 353-adv. six)

THE "SLING" PRINCIPLE OF SUPPORT

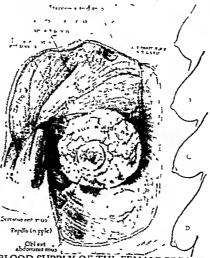


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Medical Society of the State of New York

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(Continued from page 352-adr. viril)

"It might well be added that it is interesting to doctors to know that those in other professional and business pursuits do not find the majority report of the Committee on the Costs of Medical Care wholly acceptable."

Judicial Attitude af Nebraska.—The Nebraska State Medical Jaurnal for January is judicial in its attitude towards the report of the Committee on the Costs of Medical Care, as is shown by the following editorial:

"Our first reaction to the report was that it would exert a tremendous influence in favor of state medicine; mature later reflection has modified this considerably. Few physicians are in favor of state medicine as found in European countries. Most physicians see the need of some better method of caring for the poor and the white collar class. We believe, with others, that few people suffer from actual want of medical care under the prevailing system. Rarely does radicalism prevail: it does call sharp attention to problems that cry for solution. Is it not possible that out of this study and from the recommendations made may develop a policy entirely wholesome to the profession and the laity?"

The Humanities in Medical Practice in Alabama.-The January issue of the Jaurnal of the

Medical Association of Allabama, discussing the medical needs disclosed by the report of the Committee on the Costs of Medical Care, says, editorially:

"This battle is sure to wage fiercest around the humanities, the traditions and ethics of our profession, which are as intangible and unstandardizable as love. Little as the public may realize, these are values which cannot be permitted to perish. Organized medicine today-yes, organized primarily for scientific pursuits, but not for economic struggle-finds itself steeped in a seething vat of commercialism with many forces seeking to absorb and appropriate it. The commodity which medicine alone possesses must be dispensed in a manner which will be both satisfactory to the people at large and acceptable to organized medicine—its dispensers. This means that the medical profession, speaking through its national, state and local organizations, must furnish the requisite leadership and shape the policies."

Uncertainty in Florida.-The January issue of the Jaurnal of the Florida Medical Association. Inc., takes a neutral attitude toward the report of the Committee on the Costs of Medical Care, as is shown by the following editorial:

"Even Einstein cannot explain his theory so

(Continued on page 354-adv. xx)



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(Continued from page 353-adv. xix)

they can understand it. This is much the status of the Committee on the Cost of Medical Care and its findings. We have the report and we also have writings everywhere, both doctors and laymen commenting on and explaining it, and many whether they know of its provisions or not. However, the Committee itself cannot tell how the report should be interpreted nor what the results of an attempted adoption would be. In a very blasé way the majority report states that 'a continuing organization may be formed to carry on experiments,' to see if their theory will work.

"We are constrained to believe that the best interest of medicine, and the public, will be served by pigeon-holing the whole report. We further are constrained to believe that each community should take care of its own medical indigent by the organization of a full-time county health unit, which the Florida Legislature has already authorized. Each unit should employ enough physicians to handle all indigent sick; indigency being determined by a welfare investigating group. If a county or city hospital exists, those needing hospitalization can well be taken care of, but when no county hospital is available, those needing hospitalization should be cared for in private institutions at a substantial, patient per diem rate."

FULL-TIME SECRETARY IN KANSAS

The employment of a full-time secretary by State Medical Societies was discussed in the Journal of the Kansas Medical Society of August, 1932, and abstracted in the New York STATE JOURNAL OF MEDICINE of December 1, 1932. The Kansas Journal of January continues the discussion as follows:

"The most recent information available in the Journal office is that seventeen state medical societies employ full-time secretaries. Sixteen of these states were listed in a previous discussion on the subject. Virginia, the seventeenth state, employs a lay sccretary.

"The average yearly salary received by fifteen of the seventeen sccrctaries is \$5,450.

"California was the first society to employ a full-time secretary, nearly thirty years ago; the most recent, Maine, approximately three and onehalf years ago.

"The 1932 dues for the seventeen societies averaged \$10.50. Prior to employment of a full-time secretary, the average annual dues of eleven of the societies was \$6.35. The average membership of the seventeen societies was 2,562. Colorado, Maine, Oregon and West Virginia, each have a lesser number of members than Kansas. Dues for the year 1932 for the four societies

(Continued on page 355-adv. xxi)

(Continued from page 354-adv. xx)

were: Colorado, \$10.00; Maine, \$8.00; Oregon,

\$20.00, and West Virginia, \$10 00.

"As stated in the previous discussion, the proposed plan of employing a full-time secretary was not in any way a reflection on the ahility or the work of the officers of the society. Any organization which employs a full-time official has the entire time of that official devoted to the interests of that particular organization.

"There are sufficient reasons why a full-time executive secretary should be employed. However, if such system is adopted by the society, it will undoubtedly result in an increase in the annual dues. Due to the economic depression, an increase in dues is not justified; the result probably would be a decrease in membership in proportion to the increase in dues. It has been suggested the Journal could be made a source of revenue for this purpose. More advertising could be secured for the Journal; however, with the publications of other state societies, the Kansas Medical Journal has made a policy of accepting only Council approved advertising. It is not believed the members wish to throw the columns open to indiscriminate advertising.

"The committee appointed at the annual meeting to make recommendations after a thorough investigation of the question includes: J. F. Gsell, Wichita; C. C. Nesselrode, Kansas City; Walter Stephenson, Norton; A. R. Chambers, Iola, and Milton B. Miller, Topeka.

"The committee report will be made at the midwinter meeting of the Council in Kansas City, January 17."

PHILIPPINE JOURNAL

The Journal of the Philippine Islands Medical Association was founded in 1921. The editor, Dr. A. S. Fernando, writing in the December issue, makes his annual report as follows:

"The position of Secretary-Treasurer and Editor were merged in order to effect a decrease in the expenses of publication of the Journal, but without decreasing the number of its pages. In spite of his lack of experience in editorship, the Secretary-Treasurer had to obey this mandate of the house—the governing body of the Association.

"In order to make the Journal a real official organ of the Association and to give the readers more information regarding medical matters and activities, there have been created or revived the following special departments which appear regularly in every issue: Current Medical Literature (Philippines); Society Activities; and News Items, covering medico-social and personal matters of interest and the like. Occasionally reports of the Board of Medical Examiners and those pertaining to medical legislation were published. "From January to November 30, 1932, the

Journal provided 596 pages of reading matter (Continued on page 356—adv. xxii)



MALNUTRITION

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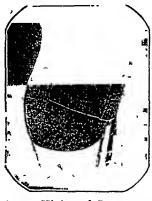


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(Continued from page 355-adv. xxi)

(excluding the advertising pages) and 64 pages of the proceedings, making a total of 660 pages. The number of pages for the corresponding period last year was 456, showing an increase for 1932 of 204 pages.

"Number of copies printed, 13,576, as against 12,813 for last year.

"During the same period 21 editorials appeared, as compared with 13 of last year. To the credit of the Journal, the editor has succeeded in encouraging the associate editors to contribute regularly to the editorial columns on diversified subject matter, thus presenting a good cross-section of the views of those who stand high in the medical profession of our community. This section, in fulfilling its function, has faithfully tried to reflect the highest ideals and aspirations of the medical profession within the territory the Journal serves.

"The quality, the world-wide distribution, and the increasing number of our exchanges seem to show that our Journal is fast forging ahead. A few manuscripts from foreign authors connected with well-known institutions have been received for exclusive publication in our Journal; these will appear in the near future."

SOCIAL TRENDS IN DELAWARE

The January issue of the Delaware State Medical Journal contains an editorial on social trends which begins with the subject of technocracy, and ends in a spirit of optimism as follows:

"To corroborate our own viewpoint, now comes the report of President Hoover's Research Committee on Social Trends, just released after a careful and painstaking study of three years. No report in recent years seems founded on better facts, or steeped with more common sense. The full report, which is the work of over 500 investigators, fills two volumes of 1508 pages, and is supplemented by 13 monographs. As pertains to the medical profession and public health, it states, primarily, that medical organization has not changed as rapidly as scientific medical research, that there is an uneven distribution of physicians, comparing rural with urban populations, with accompanying hardships to both people and profession; and that the total cost of medical care (of which the doctor receives only 30 per cent) is perhaps not too high, and totals approximately \$3,500,000,000 a year.

"This report, which is strictly fact-finding and contains no specific recommendations, bares the facts that our life has became disjointed and upset because the flow of credit is not synchronized with the flow of production; that machines are dislocating labor; that we devote far more atten-

(Continued on page 357-adv. xxiii)

(Continued from page 356-adv. xxii)

tion to making money than to spending it; and that the church and family have declined in social significance; and yet, in the midst of this terrific indictment against the national trends at large, the medical profession is, relatively, given a very clean bill of health.

"We thank God for these few kind words; they will go far towards ameliorating the hurt inflicted by recent previous reports, the chief connotation of which has been that medicine has become somewhat backward profession, almost devoid of social interest and advancement. On the contrary, we maintain the thesis that the medical profes-

sion has more than kept its place in the march of modern civilization, and that, further, more than any other group in our midst, it has projected itself into the future, and provided that vision without which, according to Holy Writ, the people shall perish.

"In conclusion, rating one report against another, balancing charges of collective insufficiency against collective proficiency; and comparing medical individualism with medical socialism, let

this be our slogan:

"The American medical profession will be sovietized only if and when it permits itself to be sovietized."

PACKAGE LIBRARY SERVICE IN TEXAS

The January issue of the Texas State Journal of Medicine describes the library service of the State Medical Association editorially, as follows:

"The Library now contains 3,703 volumes. One hundred and twenty-nine medical journals are received monthly (some are published bi-monthly and others weekly). Twenty-nine thousand, five hundred and forty reprints have been accumulated and are on file, indexed in accordance with the

subject index of the Quarterly Cumulative Index Medicus. These reprints are being continuously gathered at a rate of from 500 to 1,000 each month.

"While the package library service has perhaps a fairly good record for the approximate thirteen months of its existence, it is by no means being utilized as it should be. It is believed that despite

(Continued on page 358-adv. xxiv)

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Full information and prices on request.

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(Continued from page 357—adv. xxiii) announcements in the Journal, a few editorial references, the reports of the Board of Trustees to the House of Delegates, and so forth, the availability and practicability of this service is not generally known to the membership at large.

"The service has been used by the profession in almost every section of the state and the distance from the central office in Fort Worth has been of no consequence. Fifty-four counties and sixty cities have used the service. A total of 134 packages, containing 1,482 items, have been mailed."

GENERAL HEALTH COUNCIL IN PENNSYLVANIA

The February issue of the Pennsylvania Medical Journal contains a paper read before the twenty-eighth Annual Conference of Secretaries of the County Medical Societies of Pennsylvania, held in Harrisburg, December 6, 1932, by Lester H. Perry, Executive Secretary of the Medical Society of the County of Allegheny, in which the city of Pittsburgh is located. Mr. Perry describes the General Health Council of the County as follows:

"I have mentioned the General Health Council. This organization is separate and distinct from the Allegheny County Medical Society. It has been sponsored and nurtured for some time, however, by our Public Relations Committee. I should like at this time to discuss the reasons for such a liaison.

"The primary purpose of the General Health Council is to serve in a coordinating and planning capacity. Efficacy of the service rendered and economy of the operation of such are the benefits which accrue to the community when health efforts are carefully planned and properly coordinated. In any community in which several health groups are working independently, there are likely to be found those that are worthy and efficiently conducted, those that are useful but extravagant, and those that are both ineffectual and mismanaged. Often there is a group of pretenders who, for selfish or other personal reasons, are antagonistic to every sound health program which is proposed. The idea of the Health Coun-

cil is to aid in bringing about an adjustment of efforts among the legitimate forces and to help the community see the pseudo-health groups in their proper light.

"The Council is an organization formed jointly by organized medicine, individual physicians, lay representatives of health agencies, and other interested persons to serve in a planning, coordinat-

ing, and supervisory capacity.

"Here the community funding organization (by whatever name it is known—the Community Chest, the Welfare Fund, or some other) assume the financial responsibility, interested lay person cooperate in carrying on the activities, and physicians furnish the proper medical leadership This arrangement is almost ideal.

"For that reason, the Allegheny County Medi cal Society assumed the leadership in the re organization of the General Health Council and in its operation thus far they have maintained that leadership. Moreover, they are determined to surmount certain existing difficulties and se cure for the General Health Council proper rec ognition in the community. When these funda mental problems are solved, however, the worl will not be finished. In fact, it will never be finished, for as soon as the medical profession fails to direct the affairs of the General Health Council, then some other group will do so. Con sequently, the manifestation of active medica leadership in the administration of such a counci must continue indefinitely.'

Columbia University in the City of New York

NEW YORK POST-GRADUATE MEDICAL SCHOOL

SIX WEEKS' CLINICAL CONFERENCE IN

OTO-LARYNGOLOGY

March 13 to April 25, 1933

The sessions are to be somewhat in the nature of a round table conference, stressing the modern methods of diagnosis and treatment. There will be four sessions a week, beginning at 4 P.M. on Monday, Tuesday, Thursday and Friday. Each session will last about one hour. General practitioners, as well as those concentrating on this special branch of medicine, will find ample opportunity to keep pace with the most recent developments. For further information, address

THE DIRECTOR.

302 EAST 20th STREET, NEW YORK CITY

ADVERTISING IN THE TEXAS JOURNAL

The Texas State Journal of Medicine for February contains the following appeal for the pro-

motion of its advertising pages —

"This editorial will be short and, we hope, sweet It should be read by every member of the State Medical Association—If this is done, and a fair proportion of the readers will act accordingly, it will mean much to the success of the Journal and, consequently, to its standing as a first-rate publication

"Last year at this time the Journal carried the equivalent of 49 pages of paid advertising. This immber carries the equivalent of 39 pages, a loss of 10 pages. That means that we are out \$250 00, and must cut down our reading pages that much—or, to be more accurate, that much less the actual cost of printing. Or, to make it plainer still, if we had the same number of advertising pages we had last year we could without loss add

eight or ten more pages to this number

"Of course, it is very largely the depression, but we must not hastily conclude that it is entirely As a matter of fact, quite a few of our potential advertisers concerns which ordinarily do everything in their power to support organized, scientific medicine, are seeking their publicity and putting out their advertising propaganda in such a way as to short circuit those institutions which are doing all they can to increase the value of scientific medicine to its dependent public by the constant reeducation of the medical profession This will be clear to our readers if they will stop to consider how many of those concerns are now advertising by radio, by house organs, so called. by mail, and through the preparation of moving picture films, charts, and the like These may all be perfectly legitimate and proper from an ethical standpoint, and we can find no fault with them except that the results thus obtained could be as easily obtained through the Journal

"We might make the same complaint as relates to the technical exhibits at our annual session

"What can we do about it?

"Just this. There is hardly a member of our Association but who can exert some influence with some advertiser. He should exert that influence whether the advertiser is at the present time ad vertising with us, never has advertised with us. or has recently quit Detail men are quick to carry the news back home when there is criticism of their people. If our advertisers had all of the business our members are giving to non advertisers, we are sure the story would be a different one It would be different if our advertisers even suspected that our members were directly interested in their respective enterprises, and because of their cooperative status. This isn't a job for 'George' to do It is one that our members individually must attend to Do it now!"

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THE INDIGENT IN INDIANA

The February issue of the Journal of the Indiana State Medical Association describes the following plan for the care of the indigent in Lake County:

"The proposal of the Lake County Medical Association to divorce the care of township indigent patients from the blighting influence of politics is the most sensible that has been advanced thus far.

"According to the association's plan a rotating committee of three reputable physicians would be elected for alternate terms of three months with virtual control over township medical aid.

"This committee would permit family physicians to treat indigents whenever possible. It also would study each case, diagnose the treatment if necessary, and then allot payment to the attending physicians from a stipulated monthly total on the basis of an ingenious, but thoroughly practical, point system.

"Under this scheme, the township trustee and the township advisory board would exercise only supervisory power. The county commissioners, too, would be relieved of the necessity to scan each medical claim.

"Claims would be submitted to the commissioners by the committee only after they had been approved by a majority of the committee members."

"In other words, the township divisions of the Lake County Medical Association would supervise and control medical poor relief and not the trustee or the township advisory board. That would remove this phase of the trustee's duties from political control.

"We can think of no better plan than that. It certainly would be an improvement over the present method of doling out medical plums to physicians in conformance with the discredited 'spoils' system.

"Then, too, the Lake County Medical Association would be Diuresis is recommended in many forms of Heart Disease as an adjunct to other appropriate treatment.

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may be relied upon to induce diuresis without any untoward effects.



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POLAND SPRING COMPANY

Dept. C 680 Fifth Avenue New York more eager to protect the integrity of its profession than would a township trustee; for the latter usually is interested only in the political significance of each appointment."

EXAMINATION OF SCHOOL CHILDREN IN FLORIDA

The November issue of the Journal of the Florida Medical Association contains the following account of the attitude of two county medical societies toward the medical examination of school children:

"The doctors of Orlando and Orange County assembled in the lounge of the Orange General Hospital Wednesday evening, the 19th, for their regular October meeting, Dr. G. S. Osincup, president, in the chair.

"A letter from the Parent-Teachers' Asociation was received requesting the assistance of the doctors for their pre-school clinic This brought up much active discussion because of the stand taken by the County Society to discontinue taking any part in these hit and miss group examinations of school children. The doctors waste their time because the examinations are hasty and extremely superficial; very few of those being examined receive any benefit and the breasts of the P. T. A. members and the individual parents are filled with false security. Following much active discussion, in which probably every member took part, it was voted that the children be (1) advised by the Parent-Teachers' Association to go to their family physician and that (2) the examinations should be made at the office individually and not en masse; and that (3) a fee of \$2.00 should be demanded, this fee covering a complete physical examination of blood, urine, etc., or whatever may be deemed necessary. That, it was felt, would result in the individual getting a worthwhile examination and the doctors not subscribing to unscientific group examinations.

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THE OCULAR FINDINGS IN RETROBULBAR NEURITIS*

By ARTHUR J. BEDELL, M.D., ALBANY, N. Y.

ETROBULBAR nenritis as we will discuss it refers to an inflammation of some part of the optic nerve between the globe and the optic foramen. DeSchweinitz appropriately called this "orbital optic neuritis" and as his term is both descriptive and expressive, it is to be preferred to retrobulbar

or retro-ocular neuritis.

My confreres in this symposium are to speak about causes, treatment and pathology, so my remarks will be limited to a review of the classical ocular symptoms, a resume of some illustrative cases and a word of caution in differentiating orbital optic neuritis from the diseases which simulate it. The symptoms on which the diagnosis is based are present in many conditions, therefore, the opinion of an expert ophthalmologist is necessary to establish the case.

Sudden loss of vision, a central scotoma, pain on motion of the eyeball and tenderness on globe pressure, a suggestive pupillary reaction and absence of early fundus changes are the usual manifestations. Later in the disease a questionable pallor of the disc particularly the temporal half may be found. One

or both eyes may be involved.

Loss of vision: Some observing individuals speak of dim sight, which is worse in a bright light, others refer to a haze and read with difficulty while most of our patients simply say they cannot see. The degree of central vision reduction ranges from mere hesitancy in reading 6/6 to blindness. The light sense is reduced,

There is always a central scotoma which varies in size as well as intensity from the relative to the absolute. This is often only de-tected by using small color targets to determine the partial or complete lack of response to red or green stimuli. A permanent central scotoma may persist even in the severe acute cases but it is more frequently a sign of the chronic form. It is interesting to observe that in the alcohol and tobacco cases the scotoma

*Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N Y, May 25, 1972

including the macula and the blind spot, caecocentral, is oval whereas in others it is more commonly found. The loss of vision is often transitory. Recovery of part or all the function is the rule but there are some in whom recurrences are common. These recidives are

very suggestive of multiple sclerosis.

Pain on motion of the eyeball and tenderness on pressure seem to be present in certain acute cases. In our experience few patients have referred to globe pain and only rarely has tenderness been noted. The reaction to pressure is so equivocal that I only have to remind you of the unreliability and uncertainty of the degree of response when you press on the floor of an infected frontal sinus or antrum. Few individuals seem capable of accurately weighing physical sensations when alarmed by the sudden discovery of poor sight. When present these symptoms are helpful in differentiating this disease from others.

Much may be recorded for and against the value of the pupillary signs in orbital optic neuritis. It is said that the light reaction is impaired and particularly that the first pupillary contraction in the amblyopic eye is normal but that the pupil fails to maintain this contraction under continued exposure to the same light. This is not limited to the disease under discussion. The explanation may lie in the size and character of the scotoma just as in hemiopia under certain conditions the pupil fails to react because no light reaches the active retina or in optic atrophy with extremely contracted field where the examiner neglects to reflect the light on to the functioning retina. A suggestion of disease is, therefore, elicited when we note the pupil action but to me it is of little or no diagnostic value.

There used to be an old expression which defined this disease as one in which neither the patient not the ophthalmologist saw anything. This is to a great extent true in practice if we limit our consideration to the acute disease. If, however, we include chronic retrobulbar neuritis, we often find a pathological pallor of the disc usually limited to the outer

half. The question of color of the nerve head is a daily source of discussion and surely a limited experience in ophthalmoscopy and variable illumination will reduce the value of the observer's findings on this point almost to the complete disregard of them.

Before concluding that we have an orbital optic neuritis we must be very certain that retinal, choroidal, cerebral and mental conditions capable of producing this symptom complex have been excluded. This is sometimes so extremely difficult and confusing that operations are performed and the patient subjected to prolonged periods of observation before the correct diagnosis is confirmed. Fundus changes with the exception of those in the disc, must be excluded. The examination must be made through dilated pupils with the most instruments. Minute retinal choroidal alterations in the macular region may simulate the disease we are discussing and certainly an inspection without dilatation of the pupil is to most of us absolutely unsatisfactory.

The essayists to follow me will stress the causative agents and they will, I am sure, go into the differential diagnosis of orbital optic neuritis from hysteria as well as retinal and choroidal inflammations. The role of multiple sclerosis, nasal sinus infections and the host of other etiological factors including hypertension will be explained by them.

Some illustrative cases are included so that the particular causative agent may be suggested in their clinical summary.

Multiple Sclerosis.—R. T., female, 26 years old, has never worn glasses. About two months ago she noticed that the print gradually became less distinct. She did not have any réal pain in her eyes but a rather dull frontal headache. About three months before this attack she complained of a cold and referred to pains in her legs, knees, wrists and ankles. There was, however, no redness of any of these parts.

Examination of the right eye, vision 1/200. The 3 mm. regular pupil reacted very sluggishly to light. The disc was clear and distinctly outlined with a definite pallor of the The retintal arteries were very temporal half. evidently contracted and the retinal veins were very slightly distended.

Left eye in all particulars similar to the right. Vision 2/200. There was a large irregularly ovoid central scotoma. The roentgenograms showed that the nasal accessory sinuses were all clear. There was no evidence of sclerosis in the bony wall or chronic thickening of the mucosa.

She has recovered all of her functions except sight. The disc is becoming paler but the scotoma does not change. The physical examinations have been essentially negative except those for the signs of multiple sclerosis.

Tobacco Alcohol Diabetes .- It may of interest to some of you to recall that the late Lee Francis of this city, Buffalo, published two papers dealing with retrobulbar neuritis in diabetes.

An interesting example is A. S., a male, 52 years old, who said that his vision had been hazy for fifteen months and that the sight of the left eye had been practically abolished for one year. For thirteen years he has had diabetes and for two months before his vision began to fail he was on insulin, ten units twice a day.

The vision of the right eye 20/30. Pupil was 2.5 mm. regular, active, media clear, disc There were a great many small, rounded, deep retinal hemorrhages, with perivascular streakings about both arteries and veins. The disc was pallid with a large central excavation. The field of vision was contracted but no scotomata are demonstrable.

Left eye vision 5/200. Pupil 2.5 m.m. regular and active. The disc was white, clearly and distinctly outlined. The veins were of normal caliber but the lumen of the arteries He had an oval central was irregular. scotoma.

This patient used both alcohol and tobacco excessively and had diabetes. The etiologic discussion is one of considerable interest, but in deference to the next essayist it will not be entered into at this time.

Allergy.—When the various manifestations of unstable sympathetic control are understood, we will probably appreciate cases like that of Miss G. S., 26 years old. One week before her first visit she noticed a blur before the right eye, which has steadily increased until things seemed black. Vision reduced to 20/70. The pupil was 3.5 mm. regular and active, the media was clear and the fundus negative. There was a scotoma especially wide to the upper, outer side. The left eye was without change. As she had had hay fever and was known to be allergic, ephedrine was used. She made a rapid, complete recovery.

When intra-orbital neuritis is found with an infected nose, the relation may or may not be that of cause and effect but nasal treatment is demanded. Such experiences are common and for that reason no example is included in this short presentation.

Alcohol.—Even now we see in the parched United States of America cases like E. R., a 42-year-old man, who, after a drinking bout, found that he was unable to see clearly. After spending three weeks in a sanitarium he came in for evanimation and we found that the vision of the right eye was 20/70 pupil 3 mm regular, active, media clear, disc distinctly and clearly outlined. Left eye vision 20/70, physically the same as the right except that the temporal half of the nerve head was pale. With considerable difficulty he was kept from his tobacco and alcohol and in four months there was a complete restoration of function

If we were to include as retrobulbar neuritis the large group of lesions in and about the sella, local arachnoiditis or frontal tumors, we would encounter much more difficulty in

differentiation

There is one peculiar form of retrobular neuritis which deserves special mention because of its familial characteristics. I refer to hereditary blindness or Leber's disease. A typical case will emphasize the seriousness of the condition and perhaps serve to stress the necessity of a careful family history.

Leber's Disease, Hereditary Optic Atrophy—When TG was 19 years old he awoke one morning to find that he could not read with his right eye and within three days lost the sight of his left. He had no pain, no tender-

ness on pressure or on globe motion and he exhibited no signs of localizing value. The appearance of his fundus fifteen years after onset shows the characteristic optic atrophy with vision reduced to 3/200 and a large central scotoma. He was the third generation of a family in which there were several cases of Leber's disease.

Every ophthalmologist has had experience with intraorbital optic neuritis and has observed the subsidence or disappearance of symptoms following the removal of common infecting foci. Therefore, no histories are appended to represent that large class

With ordinary skill and knowledge, the diagnosis of retrobulbar neuritis can be inade without delay but to determine and remove the cause by establishing appropriate treatment calls for a display of superior intelligence, judgment and experience. Always remember that most acute orbital optic neuritis tends to get well, so that your careful analytical investigations and recorded observations will do much to conserve normal tissues and establish a rational method of procedure to the end that vision may be restored

DISCUSSION-R P HIGGINS, MD, CORTLAND, N. Y.

Dr R P Higgins There are two classes of cases of Retrobulbar Neuritis, the acute incre or less fulminating form and the slower developing

chronic idiopathic form

The acute form is rapidly developing and may involve one or both eyes. Loss of vision often comes so rapidly that there is not the opportunity to make field examinations to show the presence of scotoma, but the cardinal symptoms are present of sudden loss of vision in one or both eyes, sluggish or no pupillary reaction and an ophthalmoscopic picture of a practically normal fundus with possibly a slight pallor of the temporal half of the disc. There is generally pain on motion and pain on pressure of the eyeball and an etiological factor can be readily demonstrated

The following case is a good example of this type Mrs B, aged 40, who had always previously been well had an attack of grippe with acute The case was treated medi sinus infection cally and the chest symptoms cleared up in about ten days, but the pains in the head did not subside One day she complained that everything looked as though smoke was in the air and objects looked blurred and foggy next day she had no visual perception even of light in either eye The pupils were moderately dilated, were irresponsive to light and with the oplithalmoscope there was practically normal appearances of the fundus X-ray of the sinuses showed some cloudiness of the

The usual operative procedure of splienoids resection of the middle turbinate, opening the posterior cthmoidal cells, and drainage of the sphenoids was done and before the patient left the operating table she could dimly distinguish faces and objects, and by the next day she could see practically as well as ever mention the operative procedures and prompt recovery in this case to show how little organic destruction of the nerve can cause complete blindness In this case there was evidently no destruction of nerve tissue, but probably a pinching of the optic nerve in its passage through the optic foramen or some inflammatory pressure on the nerve in its course backward in the orbit

We were very fortunate in having under our eare at the same time as the above mentioned case, a case of fracture of the skull at the base of the brain and involving the optic This was a boy, aged 17, who was injured in a coasting accident. In this case he had at the time of the accident nearly complete loss of vision with field of vision reduced to a small segment, but the ophthalmoscopic picture showed a swelling of the nerve head with a blurring of the outlines at the edge of the disc with small hemorrhages around the dise and later partial pallor of the disc characteristic of descending atrophy of the nerve Many of the books in describing the ophthalmoscopic picture of the retrobulbar neuritis

speak of the swelling of the nerve head and the small hemorrhages which, in our limited experience, is caused either by traumatism or pressure symptoms such as would cause true optic neuritis or choked disc rather than the usual picture of retrobulbar neuritis.

The more slowly developing chronic forms of the disease are apt to be associated with organic destruction of the nerve tissue and while they are slower developing they are also slower in recovery and may never regain normal vision. Personally I could never understand why toxic amblyopias are always classified as examples of retrobulbar neuritis as the nerve cell affected by the toxic agent is in the ganglion layer of the retina, but these cases are always grouped in this class of cases. It is in these cases that we can demonstrate the enlarged central scotomata and the sluggish pupillary reactions so well described by Dr. Here, too, we get rather negative ophthalmoscopic findings and partial pallor of the disc, which by the way is pretty hard to demonstrate and is generally associated with atrophy of the affected nerve cells of the portion of the retina involved and more or less permanent loss of vision.

These cases are those caused by the more prolonged action of toxins or by septic absorption from some local focus of infection such as we get with infected teeth or tonsils or nasal sinuses which by proximity do not bring on the acutely developing cases. cases of multiple scleroses also fall into this class. It is a question whether the central scotoma in these cases is due to more extreme susceptibility of the fibers of the papillo macular bundle or a lessened resistance of the nerve cells around the macula from which they arise. It may also be due to a local action of the toxin or infection on the fibers from this region as they course backward in the nerve as there is a part of their course where they occupy a sector shaped area on the lateral aspect of the nerve.

One other class of cases in which neither the patient nor the doctor see anything are the common cases of amblyopia ex anopsia. Many times the squinting eye in infancy and early childhood has become straightened in adult life either by glasses or operation, and a realization of its presence and a few questions as to past history together with the refractive error will make the diagnosis clear.

DISCUSSION-THOMAS H. JOHNSON, M.D., NEW YORK CITY

Dr. Thomas H. Johnson: Although there may be no objective signs in retrobulbar neuritis the diagnosis is usually not difficult. The sudden or rapid reduction of central vision with a central scotoma and a comparatively normal peripheral visual field practically make a diagnosis. To determine the etiology and significance of the retrobulbar neuritis, however, is often a problem.

A careful history is important and a thor-

ough physical examination essential.

The importance of careful history taking is shown in the recent reports in the Journal of the A.M.A. this year by Mahoney, and Lillie and Parker of cases of retrobulbar neuritis due to the absorbing of thallium used as a depilatory in toilet creams.

A few years ago I had a patient who came to me with a large absolute bilateral central scotoma. His habits and general physical condition were good. By occupation he was a painter and because of his skill in matching colors he was kept constantly day after day mixing paints by hand. By exclusion a diagnosis of lead poisoning was made, the patient removed from contact with paint and in about 8 months his vision had returned to normal under eliminative treatment.

It is when retrobulbar neuritis appears as an early symptom of multiple sclerosis that its significance is most likely to be not recognized. This is due to the peculiar character

of multiple sclerosis. The symptoms may be transient or remittent. A patient with multiple sclerosis may have a central or paracentral scotoma which disappears after a few weeks with a return of normal vision with or without a later temporal pallor. Likewise transient diplopias are common in the disease, variableness of the symptoms is explained by the pathology, which consists of plaques of tumefaction, exudate and later sclerosis of the myelin sheaths of the nerves involved while the axones may remain normal, partially or wholly destroyed. It is in this disease that a thorough physical examination is cases of retrobulbar neuritis may lead to an early diagnosis.

A retrobulbar neuritis combined with a nystagmus induced by extreme rotation of the eyes, absent abdominal reflexes and the presence of the Babinski reflex make a diagnosis of multiple sclerosis almost certain.

Sachs and Friedman (Multiple Sclerosis, Hoeber Vol. 2, 1921, p. 49) found temporal pallor present in 22.6% of 141 cases of multiple sclerosis. Often we see in routine examinations of the fundi a definite pallor with some apparent excavation of the discs in eyes that prove to be entirely normal. There is a doubt as to the importance of temporal pallor as a diagnostic sign unless there is visual disturbance.

RETROBULBAR NEURITIS. RHINOLOGICAL FINDINGS* By GORDON D. HOOPLE, M.D., SYRACUSE, N. Y.

HAVE had a keen interest in Retrobulbar Neuritis for a long time. Perhaps this is because I learned, soon after my entrance into the rhinologic field that a cousin by the name of Hoople, nearly thirty years ago, was one of the pioneers in this country in the investigation of the rhinological origin of retrobulbar neuritis. Then I had the privilege of association with Dr. Leon O. White, than whom no one has done more for a solution of this problem, both by his own endeavors and the inspiration he gave to others. My association with Dr. White was during my house officership at the Massachusetts Eye and Ear Infirmary and was coincident with his change from radical to more conservative measures in the treatment of retrobulbar neuritis of rhinologie orgin. Finally, retrobulbar neuritis has intrigued me hecause of the difficulties surrounding the solution of its origin. One cannot very well attempt to produce the condition in the human. If the attempt is made to produce it in animals, one cannot know with certainty, that a retrobulbar neuritis has been created, because in establishing this diagnosis, too much depends upon the subjective responses of the victim.

If these difficulties face us, how can we intelligently discuss such a phase of the subject as the rhinological findings? Lacking definite pathological proof as we do, can we say that some cases of retrobulbar neuritis are due to rhinological causes? If so, can we further classify these causes? If we can it must be based upon clinical evidence. Of this we have an abundance. It has been handed down to us by an imposing array of observers whose deductions are reasonable and whose thinking is sound. There is a value in reviewing their work, for from it we can learn much about this obscure condition. One factor must be taken into consideration. We must be aware of the enthusiast, for prejudice warps his judgment and his conclusions may be unsound.

We are confronted with this difficulty the moment we try to determine the percentage of cases due to rbinological causes. Some reporters would have us believe that the nasal accessory sinuses are responsible for 80% of all cases of retrobulbar neuritis Still others, a litle less enthusiastic, insist that 50% of these patients fall into this class. More careful observers give us a different picture. After assigning most of the cases to multiple sclerosis, syphilis, diabetes, gallbladder disease, rheumatism, gout, Leber's disease and tuberculo-

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sis, they leave only a small number as due to multiple foci (such as teeth and tonsils), and the sinuses. Only a few of those who observe many cases state definitely the percentages of these various causes. They are all apparently agreed that multiple sclerosis is the most frequent eause. This may be the reason for their reticence in giving percentages to the other causes, knowing as they do, that a later check up may prove the presence of multiple sclerosis rather than some previously assigned cause. With these difficulties in mind it is probably fair to state that the sinuses, per se, are responsible for less than 20% of the total and may be as low as 4 or 5% in some series. Wilmer puts his rhinogenic cases at 11%, Langerbeck at 3.5% and Walker at 4%, and Scheerer, in a series of 203 cases, at 1.5%. If these and other observers are right, then as rhinologists we must be careful that a thorough examination has been made for the exclusion of other causes before we attempt nasal treatment for the cure of this condition. If these percentages are even approximately correct, then the internist and the neurologist hold a more important position in the diagnosis and treatment of this condition than the rhinologist, spectacular as his may be. One possible and perhaps important exception to the foregoing statement will be noted later when the relation of multiple sclerosis to retrobulbar neuritis will be mentioned. Here then, is our problem—to eliminate, if possible, any causes other than the sinuses; when this has been done, to treat each case on its merits alone. To do this we must know something of the anatomical and pathological findings in these cases. What are they and how should we make use of them in treating this condi-

There are three anatomical factors which have possible important relations to the subject under discussion. These are, first—the size and shape of the sinuses; second—dehiscences between the sinuses and the optic nerve, and third—the size of the optic foramen. The first two, the size and shape of the sinuses and dehiscences, would make us think of involvement of the optic nerve on the basis of the toxic theory as contrasted to the third, the size of the optic foramen, which could only affect the nerve by pressure.

The nasal accessory sinuses are formed by a pneumatization of the various bones in which they lie and after which they take their names. In some cases there is very litle pneumatization and the size of the sinuses is small. Then the great majority have an average

pneumatization with an average size to the Finally there is a third group in which there is an almost excessive pneumatization and in these cases the sinuses are, comparatively, very large. The capacity of the sphenoid sinues may be as great as 20 or 30 c.c. It is in this latter group that the walls of the sinuses are thin. The possibility of infection passing through these thin walls to the neighboring tissues is certainly greater than in the cases where the sinus walls are of average, or even greater thickness. It is in this group too, because of the excessive pneumatization, that the posterior ethmoidal and sphenoidal sinuses come into closer relation to the optic nerve. In fact, the optic nerve may pass through the sphenoid or one of the posterior ethmoid cells. Various bizarre relations may exist. Oliver and Crowe enumerate some which they found in the London Collection.

1. Left posterior ethmoid cell forms the medial wall of the canalis opticus on the right.

2. Right posterior ethmoid cell forms the lower and medial walls of the canalis opticus on both sides and the wall of the entire sulcus opticus.

3. Left sphenoid sinus forms the lower walls

of the canalis opticus on the right.

4. Left sphenoid sinus forms the lower and medial walls of the canalis opticus on both sides and the wall of the entire sulcus opticus.

An operator must be aware that these anatomical irregularities can exist and be pre-

pared to deal with them.

Only a word need be said about dehiscences. It is evident that infection can travel easily from the sinuses to surrounding parts if there are openings in the sinus walls. Walker calls attention, amongst others, to the following dehiscences: one-between the sphenoidal sinus and the optic chiasm and hypophysis; twothe bony wall of the canalis opticus has a thickness of from 0.2 to 2 mm. and is usually 2 to 5 mm. from the ostium of the sphenoid but with the canal in the sinus, dehiscences may vary from pin-point size to a complete surrounding of the nerve so that it may lie free in the sinus; three—this also may be true of a posterior ethmoidal cell. Walker points out that so far as he knows, retrobulbar neuritis cases at autopsy do not show a great percentage of dehiscences, but the search for these calls for expert dissection and are devastating and this may account for the fact that they have not been revealed.

Finally, in the anatomical discussion we come to the finding which was so well studied by Dr. Leon White, i.e., the size of the optic foramen. In 164 skulls the average size of this foramen was 5.19 mm. Those which were 5.5 mm. or 6 mm. in diameter, were found-

always to be round. Several which were 5 mm. in diameter were slightly oval. Those which were around 4.5 mm. were flattened at the top and were all partly surrounded by pneumatized cells. In these latter cases there was a frequency of dehiscences. Thus, the three important anatomical factors are often combined in the same case—excessive pneumatization of the sinuses with unusual shape and size, the presence of dehiscences and a small optic canal. It is reasonable to assume if infection is present in such a case, there is more likelihood of optic nerve involvement than in cases where those factors are not present. There are then, anatomical findings which seem important in the consideration of the etiology of retrobulbar neuritis.

When we come to discussion of the pathological aspect of the relation between sinus infection and retrobulbar neuritis, we are faced with difficulties. There is an abundance of evidence that in some cases of retrobulbar neuritis, a sinusitis is also present. There is even further but less abundant evidence that in some cases the infection has passed beyond the confines of the sinuses to surrounding tissues. In all these instances it can only be assumed that the sinus infection caused the retrobulbar neuritis. Here is our chief difficulty, in the attempt to prove whether or not sinusitis causes retrobulbar neuritis. We cannot establish the condition in animals for we cannot very well measure a loss in their central vision. The pathological proof, I feel, will be found when we have studied a sufficient number of optic nerves of patients suffering from this condition. It will take a long time to collect a sufficient number, for retrobulbar neuritis does not cause death and these nerves, to give the most information, will have to be studied shortly after the onset of symptoms. A few observers have started us on the trail. Redslob reported a case of a child with bronchopneumonia, who had a purulent sphenoiditis. At autopsy the diplococci were found in the optic nerve. Pickworth reported that a perforation through the sella allowed invasion of the optic nerve with demonstrable cocci in its sheath. In this case neither the sphenoiditis nor optic neuritis were evident in life. TenDoesschote's case had a chronic pansinusitis with a death from pneumonia. Diplococci were found in the sinus mucosa, in the bone marrow between the sphenoid and the optic nerve and in the dural sheath of the optic nerve and in its septa. VanderHoeve demonstrated pathologically in one case how inflammation can spread from the sinus to the optic nerve by penetrating the bony separating wall. In this case there was degeneration of the papillo macular bundle. In none of these cases

was there any ante mortem report of loss of central vision, yet they all show the possibility of involvement of the optic nerve when sinusitis is present. Two cases were reported where a central scotoma had been present for several months. In neither of these was there any significant pathological changes in the optic nerve at autopsy. One of these was reported by VanderHoeve; the other by Birsh Herschfeld. In their reports mention was made that the vein and capillaries of the nerve and sheath were more filled than usual. Pilcher attempted to show in rabbits that infection could travel to the optic nerve. He injected dyes into the sinuses and produced a sinusitis but none entered the nerve sheaths. Finally Behr conducted a very interesting experiment in which he transferred portions of the ethmoid bone from patients afflicted with multiple sclerosis to rabbits and produced paresis and symptoms of paralysis as well as changes in the optic nerve which closely resembled the changes in retrobulbar neuritis.

For an understanding of the possible pathological route by which a sinusitis may spread to the optic nerve, we can turn to an article by Herzog. He pointed out that when there were extensive marrow spaces in the bone between the optic canal and the sphenoid, they were intimately connected with the submucosa of the sinus and the dura or sheath of the optic nerve by means of cellular processes running from the dura into these spaces where they blended with cellular elements derived from the submucosa of the sphenoid sinus extending into the same spaces. There were many more openings into the marrow spaces from the sinus side rather than the optie nerve side. He demonstrated infection in the marrow spaces from the sphenoid side and found edema and other inflammatory changes in the marrow spaces without any changes in the sinus mucosa. Slight inflammatory changes in the superficial layer of the sinus mucosa could disappear while infection continued in the marrow spaces. He used this as an explanation of negative sinus findings in operation on retrobulbar neuritis cases.

Numerous observers have reported similar findings. These include White, Wright, Oliver and Crowe, O. Beck and J. Beck, and others. In their cases they report edema, fibrous hyperplasia and chronic inflammatory changes in the mucosa, sometimes involving the bone with a non-inflammatory rarefaction. All of them report these findings in retrobulbar neuritis cases where no pus could be demonstrated in the sinuses at operation. There is abundant evidence then, that despite apparently negative operative findings, infection of the sinus mucosa and bony walls can be present.

I have purposely refrained from a discussion of the merits of the pressure or toxic theories, and that the papillo-macular bundle of the optic nerve is chiefly involved, believing all this lies within the province of the ophthalmologist. I have tried to report only pathological facts from which certain inferences can be made.

Before considering the clinical aspects of the subject, one item should be brought under discussion. That is the relation between sinusitis, retrobulbar neuritis and multiple sclerosis. Numerous reporters, amongst whom are Symonds, Zeagler, Scheerer, Davis, Langerbeck and Fleischer, mention that retrobulbar neuritis may precede or be the first symptom of multiple sclerosis. Fleischer reports a followup of thirty cases of retrobulbar neuritis in which sixty-six per cent developed what he diagnosed multiple sclerosis. This question naturally arises; if retrobulbar neuritis may be caused by sinusitis, and many cases of retrobulbar neuritis apparently develop into a multiple sclerosis, may it not be possible that the virus which is the cause of multiple sclerosis has its entrance into the central nervous system by way of the sinuses and the optic nerve? In the light of our present knowledge the question cannot be answered positively in the affirmative. W. H. Wilmer has raised this question. He mentions that the papillo-macular bundle is a prolongation of the white matter of the brain, having medullated fibres, no sheaths or cells of Schwann, but containing true glial cells. Reaction to disease here would be as in the central nervous system. He feels that multiple sclerosis is due to a filterable virus and that it is quite possible for the portal of entry to be in the sinuses. Later, H. H. Vail mentioned the same findings and possible conclusions and asks, "Shall we deprive patients the possible chance of avoiding or postponing the onset of multiple sclerosis by neglecting to drain surgically those nasal sinuses nearest the optic nerve? I mentioned above that the internist and neurologist hold a more important position in the diagnosis and treatment of retrobulbar neuritis than the rhinologist, if the rhinologist is responsible for those cases only, in which all causes other than rhinological have been excluded. However, if we should consider all these cases in the light of possible invasion of the central nervous system with a filterable virus, then the position of the rhinologist would be an extremely important one and a tremendously important responsibility would rest on his shoulders. Here is a field for further investigation, where the work of Behr in producing what appears to be multiple sclerosis in rabbits should be substantiated and augmented. There

are possibilities, the importance of which cannot be denied. Yet, if proven, they will not lessen the responsibility nor the problems of the rhinologist, though he might be less hesitant to recommend operative procedures if he knew with some certainty the probable ultimate outcome of a particular case. This brings us then, to a discussion of some of the clinical aspects of this problem.

After a diagnosis of retrobulbar neuritis has been made by an ophthalmologist, it would seem that the next step in such a case would be consultation with a competent internist. He should determine the presence or absence of various possible causes or foci of infection. Even if he cannot isolate such, his value in the case cannot be denied, for proper care of diet, hygiene, etc., are of unquestionable worth in these cases. The next step should be consultation with those specialists who can help in discovering other foci. It is here that the rhinologist has his part. I think there can be no question about the advisability of operative procedures in the event that a purulent sinusitis is present. The ultra conservatives may say that no proof has yet been established that sinusitis causes retrobulbar neuritis, (and I think that is so), but any clinician would recommend operative measures if he had unearthed a purulent sinusitis in a patient who was going blind. There can be equal certainty that there should not be wholesale surgery. If the observations of the men mentioned above are correct, purulent sinusitis is present in only a small percentage of the cases.

change in attitude toward surgery of the sinuses of the posterior series by Dr. Leon White, cannot be passed by lightly. One who did so much in the investigation of this condition and who knew so much about it, must have had some real reason for saying that he felt 85% of the cases would recover on conservative local treatment and that teeth and tonsils were responsible for more cases than the sphenoid and posterior ethmoid.

What, then, should we do in a case where no discernible foci, or other causes are present and yet the patient's eyesight is seriously affected and with the passing of time after the use of local treatment there is no improvement in vision? It is my feeling that there can be no set rule. Each case must be judged on its own merits. The presence of large sinuses with a small optic foramen should be taken into consideration. We know that many rhinologists have had cases which did not have any operative procedures for one reason or another, where the vision gradually failed with subsequent development of optic atrophy. On the other hand, there are many cases on record where operation on the sinuses in face of negative findings has restored the vision to normal, by what means we cannot say. I feel that these facts should be brought to the attention of such a patient and let him decide whether or not he wishes to gamble on the success of operative procedures. I must confess that if the decision were mine to make, I should ask a competent rhinologist to do the operation.

DISCUSSION-WM. P. HALL, M.D., UTICA, N. Y.

It is a pleasure indeed to listen to such a complete coverage as given by Dr. Hoople, concerning the present opinion relative to nose pathology as one source of retrobulbar neuritis and especially to have it presented in such a conservative way.

When we consider that the men would vary from 1.5% to 80% in weighing the nose relationship, this discrepancy is rather startling and enlightening.

To me it shows while sinus involvement must have a place in the etiology, at the same time we must keep in mind the other toxic sources. In my own experience 5% relationship would about cover. It has been my opinion that the infection travels from the sinuses through the lymphatics to the optic nerve. One difficulty with which to contend is when a combined causation is present and this is particularly true in chronic cases.

I have in mind a recent acute case of a girl fifteen years old of the neurotic type, pain through the affected eye, hardly controllable

by narcotics or any anodyne. This case presented a marked papillitis and later bordering on a choked disc. With nausea and projectile vomiting there was good reason to suspect a Nose examination showed a brain tumor. marked hypertrophy of the middle turbinal but no pus above or below. There was a moderate mucus drainage. This case had no temperature, radiograph of sinuses indicated a normal state as well as the sella turcica area. was 20/100 and had been diminishing for several days. However, I removed the anterior two-thirds of the middle turbinal for better ventilation and drainage and within a few days vision was 20/40 but pain and papillitis persisted. Suspecting an endocrine imbalance she was put on the mixed glands and in a few days pain disappeared, vision was 20/15 and has continued well.

My experience has indicated that the very purulent posterior ethmoiditis and sphenoiditis are not as apt to lead to optic nerve trouble as the cases of obstructive nature, involving particularly the middle turbinal or a high deviation of the septum

I like to concede that we must not overlook sinusitis as a positive source of retrobulbar neuritis and at the same time emphasizing the need to keep in mind possible associative and combined factors which are listed mainly under the head of the toxemias

DISCUSSION-FRANK H VALONE, MD UTICA, N Y

I wish to congratulate Dr Hoople on the splendid paper lie has presented

He has not only gone into the clinical aspects but also into the anatomical and patho

logical findings What part is played by disease of the para nasal sinuses in the production of retrobulbar neuritis is still the cause of great discussions Only recently I had the pleasure of listening to a talk given by Dr Mullins of Cleveland on this subject, in which he emphatically stated that he had never seen a case of retrobulbar neuritis due to sinus disease

So that it seems to me that we are still con-

fronted with these questions

1 Can sinus disease produce retrobulbar

neuritis?

2 Can retrobulbar neuritis be due to discased sinuses of which there is no clinical or

Roentgenologic evidence? If we accept the pathological findings of such observers as Vander Hoeve, Pickworth and Redslob we must admit that sinus infec tion can produce retrobulbar neuritis, while the work of Herzog confirmed by similar findings of such men as White, Wright, Oliver,

Crowe and the two Becks seems to substantiate the contention that retrobulbar neuritis can be produced by sinusitis of which there is no elinical or Roentgenologic evidence

Sinusitis according to the most conservative, is responsible for 35% of all eases of retro bulbar neuritis, multiple sclerosis for more than 50%, while syphilis gout, rheumatism brain tumors, pituitary disease, and the teeth and tonsils are other important causes of retro bulbar neuritis Yet, according to Gifford of Chicago, there still remain 15-20% of the cases of retrobulbar neuritis in which in spite of the most diligent search, no etiological factor can be found

These are the cases in which we are confronted with the question. Shall we operate on the sphenoid and ethinoids, or shall we not operate?

The answer I believe, is one of personal opinion but were my vision seriously affected from a retrobulbar neuritis, and if I faced the possibility of permanent loss of vision due to a subsequent optic atrophy, I feel as the writer does, that I would call on a competent rhinol ogist to operate on my sinuses

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RETROBULBAR NEURITIS*

By ALBERT C. SNELL, M.D., ROCHESTER, N. Y.

TRUE retrobulbar neuritis implies that there is an inflammation of the optic nerve stem posterior to the globe. Generally such an inflammation is confined to the orbital portion. The inflammation may involve (1) either the papillo-macular bundleaxial neuritis, (2) the peripheral fibers onlyperipheral neuritis, or (3) the entire nervediffuse neuritis. The latter may involve isolated patches or the entire nerve may be in-The visual fields will reveal which portion of the nerve is involved in the inflammatory process. In all three types of retrobulbar neuritis there may or there may not be ophthalmoscopic findings. In the terminal stage in all three types there may be found secondary optic atrophy or complete recovery without clinical lesions and with full restoration of vision. The course may be acute or chronic.

A differential diagnosis between optic neuritis and retrobulbar neuritis is impossible on an anatomical basis. The usual differentiation depends on symptoms and signs or their absence. The inflammation commonly classified as optic neuritis evidently is always retrobulbar but it is not so designated. It is impossible to conceive of an optic neuritis which does not involve some portion of the optic nerve which lies posterior to the globe. those cases which do have ophthalmoscopic findings although evidently the inflammation is retrobulbar, are classified as optic neuritis, and, by general custom, only those cases in which there is no papillitis, no papilloedema, and no other ophthalmoscopic findings, are diagnosed as retrobulbar neuritis: That is, a diagnosis of retrobulbar neuritis is made when there is loss of vision without fundus signs of neuritis, with the exception that some definite optic nerve diseases are not included in this definition; e.g., tobacco amblyopia and central nervous diseases.

Hence the diagnosis of retrobulbar neuritis is largely a matter of definition or of personal opinion. For this reason there is much confusion concerning the cause, frequency and nature of the disease classed under this term. By some authors toxic amblyopias, especially alcohol and tobacco, are regarded as definite clinical entities and are not classed as retrobulbar, by others they are so classed. Fuchs thinks that a descending optic neuritis should be distinguished from a retrobulbar neuritis, though by most authors—multiple sclerosis is regarded as one of the most frequent causes of

retrobulbar neuritis. Thus those, who include as retrobulbar all cases in which the orbital part of the optic nerve is involved in the inflammation, find retrobulbar neuritis of frequent occurrence; while those who exclude all toxic amblyopias, descending neuritis, central nervous disease, as well as those cases which have ophthalmoscopic signs of optic neuritis, find relatively few cases of retrobulbar neuritis.

The only constant symptom of retrobulbar neuritis is loss of vision which may be complete or partial. This may be central, peripheral, or both, with the accompanying characteristic field changes. In the axial type there is central scotoma, relative or absolute-at times absolute only for colors, especially for red and green. See Figs. 1, 2, 3, 4 and 5. The absolute central scotomas are usually found in the acute cases, and even when there is complete sudden blindness the periphery of the field clears first leaving a central scotoma which later may disappear or leave some permanent loss of central acuity. In the peripheral type of retrobulbar neuritis there is usually an enlarged blind spot. This may be associated with decrease of visual acuity but rarely is there an absolute central scotoma. or central visual acuity may not be affected. See Figs. 6, 7 and 8. Peripheral retrobulbar neuritis is generally unilateral, while the acute axial type is bilateral in fifty per cent of all cases. The toxic amblyopias are also usually bilateral.

Since the pathology, etiology, treatment and prognosis of retrobulbar neuritis are still obscure many contributions concerning all these phases may be found in medical literature. It is not the purpose of this paper to review this voluminous literature or to discuss in detail these phases of the subject but to present to you simply a clinical study of some acute cases which have come under our observation. Any one interested in a review of the subject I refer to a recent contribution by Sanford Gifford, Archives of Ophthalmology Vol. 5, p. 276, and to the papers listed therein.

The chronic cases of retrobulbar neuritis are more common than the acute if the toxic amblyopias of tobacco-alcohol are included. In our experience we have recorded 138 cases (including tobacco amblyopia); of these 104 were chronic, 10 acute alcoholic, and 24 acute due to various causes. Only these latter 24 cases will be considered here. Twenty of the acute cases are classified as axial and three as peripheral, one was diffuse.

The following is a summary of these 20 cases

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371

of axial neuritis: ages-9 months to 62 years: onset-sudden in 17 cases (2 to 8 days), 3 gradual (2 weeks to 3 months): recoverycomplete in a week or two in 18 cases, one died, one (age 62 years) unimproved: causeschronic alcoholism 4, lues 2, mixed foci of infection 3, one each of pneumonia, tuberculosis, multiple sclerosis, urethritis (g.c.), diabetes, mastoid, and surgical trauma (sinus). In 6 cases no cause was found. All had central scotoma or were blind. In 9 the affection was bilateral, 5 having severe loss of visual acuity in both eyes, and in 4 the visual acuity in one eye was slightly reduced: All had negative fundi at first, later 2 showed slight ocdema of the discs, one papilloedema, two bilateral neuritis, and one panophthalmitis (iritis, eyclitis, retinitis, etc.). All these cases had normal blind spots except where the scotoma included this. The scotoma varied greatly in size as is shown in illustrations. In approximately 50% of the eyes the scotomas were absolute, the others were relative or only for color. In the blind cases there was a tendency for the peripheral vision to be restored first leaving a central or paracentral scotoma.

Treatment: Most of these cases were hospitalized and complete physical and laboratory examinations were made by the internist, neurologist and other specialists, including an examination of the nose and sinuses. They were put to bed, placed on a moderate diet, and elimination was carefully attended to. Pilocarpine sweats were given in 9 cases and 4 cases had no medication. In 9 the treatment was either specific, directed to foci of infection, or to general conditions. We did not do a routine tuberculin test. In none of these acute cases did we open nor treat the sinuses except in one case. In this a nasal and sinus operation was followed by an acute amaurosis the following day.

Three cases are presented to illustrate the peripheral type of retrobulbar neuritis. All of these cases had infected sinuses. All were unilateral. In all the onset was acute—2 to 4 days. In one visual acuity was restored to normal in 11 days, in one it required three years for restoration of normal acuity, in the third final outcome was unknown. Fields illustrating the enlarged blind spots of these cases are shown. In all sinuses were opened and treated according to the orthodox method.

It would seem that in these three cases there must have been a direct inflammatory extension from the walls of the sinus to the peripheral structures of the optic nerve.

The diffuse type of retrobulbar neuritis is found among the chronic toxic amblyopias, especially those due to tobacco-alcohol, which will not be considered in this communication.

One additional case is presented briefly since it illustrates the difficulty in making a complete and positive diagnosis during the early period of the optic nerve involvement, and the changing characteristics which required a revision of a tentative diagnosis.

Case report: C. Scanlon, 42 years of age: First consultation Sept. 29, 1917: History: for two months past has observed a recurrent disturbance of vision in right eye lasting one or two days, and for past two weeks vision has been misty. General health good—no serious illness.

Ophthalmoscopic examination: Right eye fundus negative; visual acuity 2/200; blind spot is very much enlarged—See Fig. 9: Form field normal for 10 mm white object. Left eye normal fundus and fields; visual acuity 20/25; Wassermann, sinus and physical examination negative. Diagnosis—retrobulbar neuritis,

April 14, 1919: Right eye third degree optic atrophy; no light perception. Left eye v = 10/200; nerve head shows first degree atrophy; field cut concentrically to 30°; Wassermann negative, repeated tests; sinus negative. Diagnosis—descending optic atrophy.

Nov. 7, 1919: X-ray revealed floor of sella

completely absorbed.

Dec., 1919: Dr. Frazier removed a parasellar tumor using the nasal route.

Apr. 16, 1921: O.S.V. = 20/25. Peripheral fields cut, nerve white. O.D. blind—3rd degree optic atrophy.

Aug. 6, 1923: O.S.V. = 10/200, optic

atrophy.

The following is taken from a contribution by Langenbeck (Arch. of Ophthal. p. 226, Vol. 87) who tabulates the result of his study of 176 cases of retrobulbar neuritis, giving the etiologic factors found, the number of cascs for each, and their percentages.

Multiple sclerosis	58 cases	33.0%
Multiple sclerosis suspected	14 cases	8.0%
Idiopathic (hereditary) affection	32 cases	18.0%
Lues	13 cases	7.0%
Affection of post masal sinuses	6 cases	3.5%
Sudden loss of blood	5 cases	3.0%
Pregnancy	3 cases	1.7%
Lactation	3 cases	1.7%
Articular rheumatism	1 case	0 6%
Etiology unknown	36 cases	20.0%

To this list other reported etiologic conditions, found in reports of retrobulbar neuritis, may be added; arteriosclerosis, burns of the skin, acetonuria, diabetes, tuberculosis, colds, pneumonia, foci of infection (teeth, tonsils, genitourinary), gall bladder, thalium poison (a depilatory), brain abscess, frontal lobe tumor, infectious disease, Leber's disease, menstrual disorders, intestinal autointoxica-

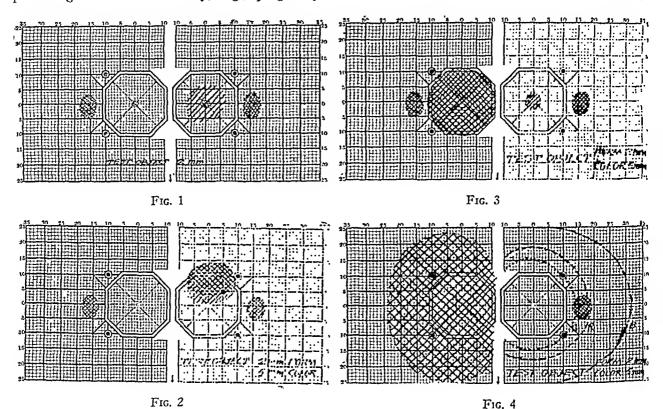
tion, multiple foci of infection, encephalitis,

ependymitis and trauma.

This formidable list of diseases, each of which may be conceded as a possible etiologic factor, differ greatly in their nature but most are capable of producing toxins. Multiple sclerosis is the producing cause in approximately 33% of all cases and some remaining causes may be regarded as contributory by producing a state of debility, e.g., pregnancy,

statement of a well known rhinologist, and since in many cases no other pathological condition can be found, the sinuses naturally, by exclusion, become the object of our desire to do something. There is no glory or professional profit in a record "cause unknown" or in stating the etiology as idiopathic.

Many of the later contributions indicate that these authors now place less importance on the rhinologic etiology than formerly.



Figs. 1 to 4 illustrate the axial type of retrobulbar neuritis. Fig. 1. A relative central scotoma O.S. and small absolute central scotoma O.D. Fig. 2. Absolute paracentral scotoma. Fig. 3. Large central scotoma O.B., small scotoma for color O.D. Fig. 4. Very large monocular absolute scotoma,

lactation, loss of blood. The relationship to toxemia may be regarded as established. It may also be conceded that the optic nerve may become inflamed by extension of inflammatory processes of adjacent structures and further it may become involved in either an ascending or in a descending neuritis. However, the causal relation between posterior sinusitis and retrobulbar neuritis remains a debatable question, especially its relative importance and its frequency. Many American writers have found in the sinus the chief cause, while others have found it relatively unimportant. As Gifford points out this difference of opinion in regard to the frequency of rhinogenic retrobulbar neuritis is due to the fact that recovery following operation on the sinuses has been regarded as proof of the etiologic relationship. Since there is no such thing as a normal sinus, according to the

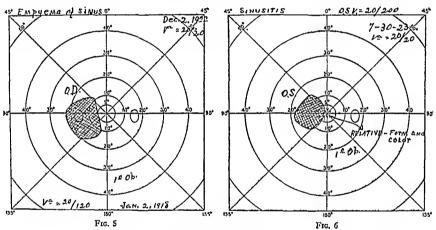
There are some who still hold the view that a simple hyperplastic catarrhal thickening of the membranes of the sinuses is sufficiently pathogenic to cause retrobulbar neuritis. I believe this view to be an extreme one. It is not sustained by my observations. My experience (sinus infection being found in 3% of my cases) is similar to that of Langenbeck who found sinus affections in 3.5% of his cases.

The incidence of any form of ocular involvement is small compared with the common occurrence of sinusitis. Many authors have studied their cases from this point of view but their conclusions vary greatly. However, the possibility of its pathogenesis must be recognized, only one should not hold the sinuses responsible for all of our cases of doubtful etiology.

From our experience with these acute axial

cases there is noted a strong tendency to a spontaneous recovery. The sudden onset and the prompt and complete recovery of many acute cases would seem to indicate that a real inflammation is not always present, but more probably the sudden loss of vision in these is due to stasis, oedema, or more probably to a toxic effect on the more susceptible nerve fibers of the papillomacular bundle. In these tabulated cases although many systemic diseases were found to be present, with the exception of multiple sclerosis, these per se do not seem to be the direct cause for the amaurosis or amblyopia but the toxemias resulting from them do. The progress-a complete recovery within two weeks-and the result of the treatment or its absence would also seem to bear out this conception. Also, since optic will develop multiple sclerosis, and the possibility of frontal lobe or parasellar tumors must not be forgotten.

The proper management and early treatment of acute retrobulbar neuritis is most important whatever may be considered the ctiology, as a prolongation of the inflammatory process may cause irreparable damage to sight in the form of a permanent central scotoma or secondary optic atrophy. Those cases where there is a definite demonstrable sinusitis associated with a blocking of fluid or with empyema require prompt drainage. These acute cases should be hospitalized, regarded as emergencies and all examinations should be undertaken simultaneously so as to avoid delay in instituting the proper treatment after determining the most probable cause. In most of



Figs. 5 and 6 illustrate the peripheral type of retrobulbar neuritis. Fig. 5. A Case of empyemo of sinus. Fig. 6. Acute sinusitis.

nerve fibers do not regenerate, any inflammation of such violence as to produce total blindness or a severe loss of visual acuity cannot reasonably be expected to make a recovery in a week or two and without any later complications. Therefore a toxemia seems to be the more rational explanation in these acute cases which recover so promptly.

Some of these cases demonstrate the propriety of making, at first, a diagnosis of retrobulbar neuritis a tentative one, since with the progress of the disease other symptoms and lesions will often be discovered later which force a change of diagnosis. A number of cases in which no fundus change can be seen at first, later will show macular lesions, others

our cases we gave pilocarpine sweats while the various examinations were being made: Patients were put to bed with attention to elimination but with no other medication. 90% of the acute axial type made a complete recovery or were very much Improved within a week or ten days with this treatment alone. In the acute axial cases I find that the sinuses are very rarely the possible seat of the trouble and therefore can find no ground for advocating post masal surgery in the absence of any definite sinus disease.

I am aware that there are some authorities who still advocate early sinus operations even when the usual rhinologic and roentgenologic examinations are negative. They reason that the

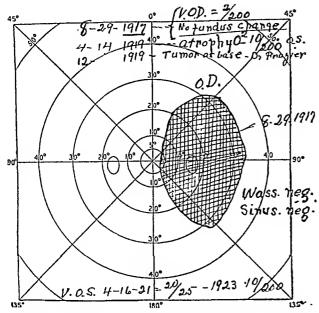


Fig. 7. A field in a case of a parasellar tumor.

proof of the benefit of such operation lies in the fact that many of these patients get well after operation. But the fact, established by the experience of many observers that a large proportion of these cases especially the acute axial type make a spontaneous recovery without surgical interference, shows the fallacy of this post hoc logic.

In all three of our cases of peripheral retrobulbar neuritis there was positive evidence of infected sinuses. Thus it seems to me that in this type one should more strongly place suspicion on the sinuses. However, in any type of retrobulbar neuritis the possibility of sinus disease should be placed beyond mere suspicion before operation. It is my conviction that by far too many sinuses have been the field of unnecessary surgical interference.

The etiology and the pathogenesis of retrobulbar neuritis is not definitely known, therefore all cases should be most carefully studied and when the sinuses are suspected the ophthalmologist and rhinologist should cooperate with scientific methods of investigation both before and after operation if we are to advance our knowledge of this disease and render the proper service to these patients who suffer from the condition.

DISCUSSION-S. B. MARLOW, M.D., SYRACUSE, N. Y.

Dr. Snell has so fully presented the pathology of retrobulbar neuritis that any discussion of his paper can only serve to emphasize some of its contents. The first point is the definition of the condition. As Dr. Snell insists the term retrobulbar neuritis should be restricted to those cases with marked loss of vision in one eye usually without ophthalmoscopic changes, which may be present in rare cases in later stages.

Unfortunately from the point of view of pathological study our knowledge of this disease is based principally upon clinical observation which has resulted in the long list of etiologic conditions cited by Dr. Snell. Disease of the para-nasal sinuses, in recent years advocated as a common factor in these cases, is now declining in favor as a causative agent and the tendency to attribute the disease to disseminated sclerosis seems to be increasing. Whether this latter condition will finally be held to be the cause in a high percentage of cases it is impossible to say. It seems reasonable, however, to warn against making use of this diagnosis without sufficient proof. cases are rare in which it is possible to say with certainty what the etiology is. It may well be that when proof is forthcoming multiple sclerosis will not be found of such etiologic importance as at present and that we shall be forced, for want of a better explanation, to fall back, upon the earlier designation "idiopathic."

Inasmuch as the evidence for a particular etiology has commonly been based upon the results of clinical treatment some excuse for classifying these cases as "idiopathic" is found in a review of (35) cases observed in my father's practice. Prior to 1915 disease of the nose had not appeared in the diagnosis. Taking all the cases together the average period of recovery was 25 days. The average period of recovery in 24 cases which were treated by potassium iodide alone was 22 days. In 5 cases submitted to nasal operation the average period of recovery was 18 days. Three cases with syphilis 57 days, 3 others 31 days. A tentative diagnosis of multiple sclerosis has been made in not more than two or three cases. It is possible that further observation after recovery would have revealed a larger percentage.

In contrast to the treatment described by Dr. Snell in the 20 cases summarised in his paper, not one of the 24 patients in this series treated with potassium iodide and strychemia was hospitalized although a careful inquiry as to possible causes was instituted. It is surprising how rapidly complete restoration of vision occurred in many cases even when the loss was extreme. One case, to be mentioned further, had complete loss of light perception

but vision returned to 6/6 at the end of 21 days. In another vision improved from the counting of fingers to 6/5 in 10 days. A third had only light perception in the beginning but improved to 6/9 after one month. The recovery which took place in these 24 cases is shown in the following table.

TABLE SHOWING VISION AT LAST EXAMINATION

		AFTER RECOVERY HAD									
Cases With	Hand Motion	6/24	6/18	6/12	6/9	6/6	6/5				
Light Perception			_	1	2	1		4			
Hand Motion			1		1			2			
Counting Fingers	1			2	1		1	5			
6/60			1		2	1	_	4			
6/36		1			2		_	3			
6/24				1		1	-	2			
6/18						2		2			
6/12				1		1		2			
	1	1	2	5	8	6	1	24			

Analysis of this table shows that 75 per cent of the cases had vision of 6/36 or worse when first seen, 82½ per cent had vision of 6/12 or better at the last examination. The vision of one case was 6/5, of 6 cases 6/6, of 8 cases 6/9.

From the point of view of etiology and differential diagnosis this small series is of some interest. Syphilis was present in four cases, One early case (1890) was seen by Noyes in New York and diagnosed by him as tobacco amblyopia. In view of the fact that only one

eye was affected that the defect was not limited to the central area but extended over the whole field, complete loss of light perception ensuing, and that recovery took place under potassium iodide and strycliemia to 6/6 in 21 days, this diagnosis was not justified. One case occurred during recovery from cycloplegia. The loss of vision was followed down to hand movements and back to complete recovery This was probably due to periositis at the apex of the orbit. Two cases had scotomata strongly suggestive of disease in the occipital cortex. Two cases were possibly on a pituitary basis One case is strongly suggestive of hys-One case can possibly be explained by a tonsillar infection for after an improvement almost to normal under potassium iodide vision failed following an acute tonsilitis. One recent case was due to thallium poisoning

Some accent experiences in addition to this series have made it particularly apparent that unless a careful ophthalmoscopic examination is conducted through a dilated pupil some cases of central retinitis will be confused with retrobulbar neuritis if the case is seen in its earliest stages before patches of exudate are discerni-These cases of retinitis will present a scotoma sometimes not unlike that of retrobulbar neuritis In this connection the remarks of Mr Richardson Cross in the Discussion on Vascular and other retinal changes in association with general disease in the Transactions of the British Ophthalmological Society for 1913 are of interest. He calls attention to some points of analogy between retrobulbar neuritis and retinitis. He suggests that many cases of retrobulbar neuritis may be due to hidden haemorrhage in the nerve axis, spasm, embol-

ism, or thrombosis of a small vessel to the

nerve fibres.

CLINICAL STUDY OF BCG VACCINATION

By CAMILLE KERESZTURI, M.D., WILLIAM H. PARK, M.D., MILTON LEVINE, M.D., PETER VOGEL, M.D., and MARGARET SACKETT, R.N. NEW YORK CITY DEPARTMENT OF HEALTH

This study was made possible by the kind cooperation of the hospitals and the clinics of New York City. We are especially grateful for clinic facilities for our follow up work to the Children's Services of Bellevic, Fifth Avenue Harlem, Long Island College, Greenpoint Babies' and Sea View Hospitals. For the financial support of our study we are undet ted to the Metropolitin Life Insurance Company and to the Milbank Memorial Fund

THE BCG vaccine is composed of greatly attenuated tubercle bacilli of the bovine type BCG stands for bacilli Calmette Guerin. Calmette chose bovine bacilli because they are less virulent to man than is the human type. In infants the fully virulent bovine bacilli may produce fatal tuberculosis but in older children and in adults, progressive

bovine infection is practically unknown. There appears to be, therefore, no reason to fear that as the child grows, the attenuated bovine type of the bacilli used in the vaccine may become virulent even if they remain alive in the body until adult life. When the cultures are grown under the conditions advocated by Calmette, we do not believe that any culture ever

became virulent. For more than one year before beginning the vaccination of babies we tested with King, the stability of the attenuation of the culture and found that it was constant. We used monkeys as well as many other animals in this investigation. We also tenuated bacilli per milligram. The new-born infants were fed within the first ten days of life with three 10 mgm doses of BCG vaccine. The interval between doses was two days. Recently we have doubled the dose because only half of the infants receiving the original dose

TABLE 1.
STATUS OF BCG STUDY—5/8/32.

	Va	CINATED	Babies-	-413		Controls-	–608	
Kn	own Fro Birth Oral	m Subcut.	Intrad.	Dead Bac.	Controls Known From Birth	Pos.** Mantoux Controls	Neg. Mantoux Controls	No Mantoux Done
Cases being followed *Cases discontinued T. B. Deaths	191 54	29 1	93	13 3 0	136 30	117 25	180 43	8 29
Non-T. B. Deaths	0.7 25 9%	0	1 1%	0	2.7% 9 5%	$\frac{4.5\%}{4}$	10	0
Total Cases	272	30	95	16	180	153	238	37

Remark: We have endeavored to obtain an autopsy in every fatal case. However, only 40% of the controls and 43% of the vaccinated babies who died were autopsied.

tested the amount of increased resistance to tuberculous infection developed in the animals. Those given the vaccine subcutaneously developed a very considerable resistance while those given it orally developed resistance to a less extent. Convinced that the BCG vaccine

developed a positive tuberculin reaction. But even with this large dose there has not been a great increase in the number of positive reactions evolving. It is the general opinion that a hypersensitiveness to tuberculin evolves along with the development of resistance. Be-

TABLE 2. EXPOSURE AND TBC MORTALITY RATES—5/8/32.

	VAC	CINATED BAI	BIES		Controls	
	No. of Cases (& %)	No. of TBC Deaths	% of TBC Deaths	No. o Cases		% of TBC Deaths
Total Cases	413 (of)	2	0.5%	608	17	2.8%
Exposed to Positive Sputum	(total)	1	0.9%	357	15	4.2%
Exposed to Neg. Sputum	(27.8%) . 140	0	• • • • •	181	2	1.1%
No Known Exposure	(33.9%) . 158 (38.3%)	1	0.6%	70	.8%) .5%) 0 	

Table 2: Demonstrates the inequality of the type of exposure in the vaccinated and control groups. It gives the number and percentage of the deaths in the different groups.

In Table 2 exposure is considered in all cases from birth on. If, however, we considered the exposure not from birth on but from the date of vaccination or the date of the first tuberculin test, the amount of exposure of the BCG and control cases would have been almost alike.

was safe and developed a considerable resistance in the animals injected with it, we began in 1927 to treat human infants. During the first two years we followed Calmette's advice and administered the vaccine only by the oral method. This vaccine, contains 40,000,000 at-

cause of the frequent lack of the occurrence of a positive tuberculin test in the oral cases and also because of our better results with animals which received the BCG vaccine by injection, we changed our method of administering the BCG vaccine, using instead of the oral or

^{*} Moved and left no address or moved out of town.

** Positive or negative Mantoux refers to the first tuberculin test. No ease is admitted in the positive Mantoux control group who shows any sign of clinical tuberculosis other than a positive tuberculin test or maybe some enlarged bilus shadow by x-ray. The positive and negative Mantoux controls are not known since birth.

enteral, the parenteral method. The advantages we gained by this change were -

I Infants vaccinated by either the subcutaneous or intracutaneous method develop a positive tuberculin test in about 84% of the cases which is almost twice as much as the percentage following the oral method we know approximately the number of bacilli mtroduced into the body, while when we give it orally, we have little idea of the amount absorbed from the intestines. We found that the great majority of the bacilli are exerted with the feces.

4 Annual experiments of Birkhaug King

TABLE 3

CASES KNOWN FROM BIRTH (EXPOSED TO POSITIVE SPUTUM)—5/8/32

		FIRST YEAR										
		ORA	LBCC		Controls							
	Total Cases	TB Deaths	%	Non-TB Deaths	%	Total Cases	TB Deaths	%	Non TB Deaths	%		
TOTAL CASES	46	1	2 1	1	2 1	33	4	12 1	2	6		
Social Score 0- 20	1											
20- 40												
40- 60	1			1	100	3	1	33	1	33		
50- 80	27	1	3 7			23	2	8 7	1	4 3		
80-100	17					7	1	14				
TBC Score 0- 20	17	1	5 8			12	1	8 3	1	8 3		
20 40	25			1	4	19	2	10 5	1	5 3		
40- 60	4				·	2	1	50				
60- 80												
80-100												
Total Score 0- 40	1											
40 80	_					3	1	33				
80-120	42	1	2 4	1	2 4	27	2	7 4	2	7 4		
120-160	3					3	1	33				
160-200												

Acmarks Two control deaths are included, however, these children would not be one year of age if alive

Table 3 Deals with the yearly mortality rate of those oral BCG and Control children whom we knew from the time of their birth and who were exposed sometime during their life to some open tubercular member of their families. The mortality rates are given with and without scoring the cases. There is a decrease in the the mortality among the vaccinated babies in practically every group but there is no decrease in the non tibercular death rate.

As the the deaths both in the control and in the vaccinated group occur within the first year the second and the third years are omitted from this table

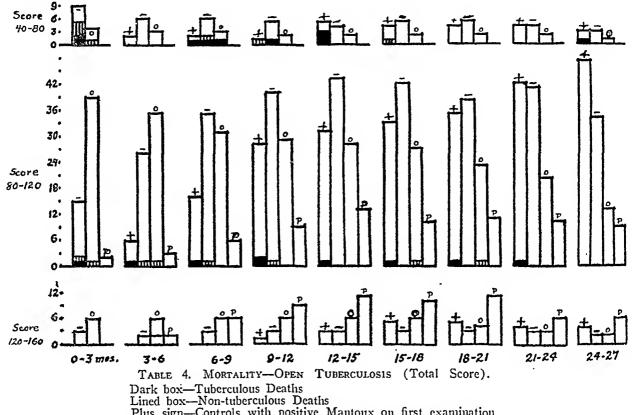
2 The parenteral method is suitable to use on patients of any age if the tuberculin test just preceding the time of vaccination is negative, whereas the oral method is used only on new borns

3 When we inject the vaccine parenterally,

and Park and others show that the parenteral method gives a higher resistance to tubercul losis than does the oral administration of the BCG vaccine. Our study on human beings seems to bear out this point, because among our 272 orally BCG vaccinted babies 2 died

of tuberculosis, whereas, among the 125 parenteral cases, we have no tubercular deaths. However, we must not forget that the parenterally vaccinated babies received their Calmette inoculations at different ages from birtli to 3 years whereas the orally vaccinated in-

above 3 years of age is so slight under any condition that we hardly could evaluate the effect of the vaccine on older subjects. We try to select BCG vaccinated and control children who are alike. However, even if at the start of our follow-up the cases are alike, later on



Plus sign—Controls with positive Mantoux on first examination Minus sign-Controls with negative Mantoux on first examination

Letter O—Orally BCG vaccinated cases Letter P—Parentally BCG Vaccinated cases

Remarks: As all our the deaths occurred in the first 27 months of life of our children, we omitted the part of the table which represents the age groups beyond 27 months.

Table 4: Shows the death rate of children exposed to open tuberculosis per three months periods. The introduction of these three month periods was necessary because the children come under our observation at different ages. This chart illustrates the value of our scoring system by showing that the deaths occur in the two lowest score groups whereas the children in the highly scored group who suffered no handicaps show no mortality. Scoring was done per total life and not by years.

fants were fed with BCG within ten days after birth, and, therefore, being younger were in more danger of developing fatal tuberculosis than was the older parenteral group.

Our plan is to vaccinate only children of the families and observe parallel with these immunized children, a similar group without vaccination, as controls. We employ the oral method of vaccination only in the new-born; the parenteral method, we at first employed on children less than three years of age, but more recently we have accepted for parenteral vaccination, only children under one year of age. We do not wish to extend our study to older children because the tbc mortality and incidence of clinical tuberculosis in children they become dissimilar because of change in the separation conditions and because of unforseen environmental factors in the household, all of which determine the survival chance of the baby and most of which are beyond our control. Therefore, it seemed to us the wisest to take the children as they are, make them controls or vaccinated babies on the basis of a rough analysis when we get them and evaluate their likeness or dissimilarity at the end of each year of their life, thus comparing only similar controls and vacci-In order to nated babies with each other. tacilitate this comparison we had to design a scoring system which according to our present knowledge, covers all the more important

factors which can have an influence on the development of tuberculosis or the escape from it. The constitutional and social factors make up our so called "Social Score". The minimum figure for this factor for the absolutely handicapped children is 0 and for the children who have all the advantage which constitution and social conditions c in give, is 100. Of course, every child has a social score some where between these two extremes. The "TBC Score" handles the tbc influencing factors in the same fashion. The "Total Score" is the sim of the Social and TBC Score's

The items considered in our scoring system with the point values are attributed to them as follows -

TOTAL OF SOCIAL SCORE	0-	100
12 -All other diseases which lessen resistance	0	10
11 —Pertussis with consideration for age Man- toux test and severity	0-	10
10 —Measles with consideration for age Man- toux test and severity	0-	5
9 -Later feeding	0	5
8 —Duration of breast feeding (scored first year only)	0-	5
7 —Intelligence of the parents in regard to care of the baby	0-	5
And I want of hard feet and a second	0~ 0- 0-	
people in the apartment of the family 3 —General condition of the baby 4 —Birth weight of baby (scored for first year		10 10
1 —Earning condition of the family 2 —Number of rooms as well as the number of		20
Social Score		ore

TOTAL OF TBC SCORE	0-100
6 —General condition of tuberculous member	0~ 10
5 -Stage of the of the source case	0~ 10
4 Relative number of positive and negative sputa of the member	0~ 20
3 -Age of baby at first exposure	0 20
2 —Intensity of exposure	0~ 20
1 Length of exposure to the	0~ 20
Score	
TBC	

There are many little technical details as to the intelligent application of this scoring system which will be discussed in a separate paper to be published. We realize that the points allowed for the individual factors are chosen arbitrarily on the basis of our common sense and experience. However, if we apply the same scoring system to both the vaccinated and control children, the possible error is a rela tive one only and is the same for both groups In this way, even an imperfect scoring system can be of value. As time goes on we shall have the opportunity to improve and modify our scoring. The following series of tables illustrate the necessity of such a scoring system -

TABLE 1 Shows the present status of our BCG study The total number of eases with which we dealt in the past five years, exceeds one thousand

At the meeting of the National TBC Asso eigtion in 1931, we reported 3 the deaths in the oral BCG group. However, on the basis of the histological examination which had not

TABLE 5
COMPARATIVE STUDY OF VACCINATIONS AND REVACCINATIONS IN THE PARENTERAL BCG GROUP

TYPF OF CASES	Time of Local Lesion	of Local	% Necrosis of Local Lesion	Time of Gland Enlarge- ment	% of Gland Enlarge- ment	% of Gland Abscess	Time of Spleen Enlarge- ment	% of Spleen Enlarge- meet	Time of First Posi tive Tuber culin Test	% of Positive Tubercu Im Test	Time of Last Posi- tive Tuber culinTest**	Remarks
Intradermal First Vaccination	3½wk		55% 58/32	9 nk	70% 58/41	8% 58/5	9¾ wk	28% 58/17	41⁄4 wh	84% 58/49	58¹ € nk	Dosage 0 001 0 3 mgr BCG
Intradermal Re- Vaccination	1¼nk.		51% 31/16	2½ wk	61% 31/19		3½ wk.	16% 31/5	41½ nl	45% 31/14	17 wks.	
Subcutaneous First Vaccination	10% Wk	56% 25/14		12}{ n k	52% 25/13	12% 25/3	13½ nk	8% 25/2	63 5 wk	84% 25/21	4716 wk	Dosage 0 001- 0 05 mgr BCG
Subcutaneous Re- Vaccination	4 wk	10%* 29/3		5 n.l.	24% 29/7		12 wk	3% 29/1	4 nk	13% 29/4	17 nk	*About 50% infiltration in site of in jection without abscess formation

^{**} The average time of last positive tuberculin test is approximal only because some of the cases were so recently vaccinated that they have no chance yet to lose their positive tuberculin test.

been reported at that time, we have had to classify one of these deaths as due to bronchopneumonia and not to miliary tuberculosis. The details of the case are as follows:-R. M. had been orally vaccinated at birth and was exposed occasionally to a brother who had third stage tuberculosis with positive sputum. Child developed a positive tuberculin test at the age of 5 months, but had no other clinical signs of tuberculosis. She was progressing very nicely until at the age of 31 months, when she developed whooping cough and became feverish, had fine rales over both lung fields and the x-ray, 14 days before death, showed generalized mottling suggestive of miliary tuberculosis. We made the clinical diagnosis of whooping cough complicated by miliary tbc. The child was autopsied at our request, by Medical Examiner, Dr. Fratkin. He reported the case after macroscopical examination as:-

- 1. Bronchopneumonia.
- 2. Peribronchial lymphnode tuberculosis.
- 3. Miliary tuberculosis of the lungs.

Dr. Paul and Miss Mishulow of the Research Laboratories made a bacteriological study of selected material from the organs of the child and found the human type of the bacilli in the lymph gland but no bacilli in the lung tissue. The histological examination of this case failed to show miliary the, but the scattered areas simulating tubercules in the lungs macroscopically and by x-ray proved to be bronchopneumonic foci. The finding of the bacilli can be explained on the basis of a latent quiescent lymphnode tuberculosis, which was suggested by the positive tuberculin test. The cause of death was bronchopneumonia and not the.

The "known from birth controls" are an ideal match for the orally vaccinated BCG babies. The negative Mantoux controls correspond to the parenteral BCG babies as all the children who received BCG vaccine intradermally or subcutaneously had a negative tuberculin test, prior to vaccination. The purpose of following up children who have a positive tuberculin test without other clinical manifestation of tuberculosis is to compare from the point of view of immunity and hypersensitiveness to tuberculin produced by natural infection with the immunity and hypersensitiveness attached to BCG vaccination.

TABLE 5 illustrates the difference between intradermally and subcutaneously vaccinated children both in the primary and secondarily vaccinated groups. Differences in the local lesions, gland enlargements, spleen enlargements, time of first positive Mantoux tests, frequency of positive tuberculin tests and the approximate time of last positive Mantoux tests are tabulated. The routine tuber-

culin test dose in this study was 0.2 mgr. O. T., intradermally.

It is interesting to note in Table 5 that giving the BCG vaccine intradermally we did not observe cold abscesses in the site of the injection as we did in the subcutaneous group. A very much more desirable papulo-macular tuberculide with central necrosis is the typical lesion of the intradermal method.

As far as revaccinations are concerned, our limited experience indicates that local lesion gland enlargement and palpable spleen develops quicker in the revaccinated group than in the primarily immunized children. We are not sure whether the development of the palpable spleen is in causal relationship with the vaccination. As far as tuberculin tests are concerned, we were surprised to see that our revaccinated children much less frequently develop positive tuberculin tests after vaccination and they keep their positive test for a shorter period of time than the children who received only one vaccination. Also the frequency of cold abscesses in the revaccinated subcutaneous group is considerably lower than in the group vaccinated subcutaneously the first time.

As a small experiment in addition to our BCG study, we vaccinated 16 children with heat killed the bacilli. The total number of the cases vaccinated with heat killed the bacilli is so small that we cannot draw any reliable conclusions at present.

Conclusions

- 1. Our five years' study on 413 BCG vaccinated babies indicates that the BCG vaccination is harmless.
- 2. The vaccinated children show a lower tuberculous mortality than similar controls.
- 3. In order to evaluate the effect of the BCG vaccine on the the mortality rate, scoring of the other influencing factors is necessary.
- 4. The handicapped low-score children are best fitted for the evaluation of the BCG vaccine.
- 5. Parenterally vaccinated children became tuberculin positive in 84% of the instances, whereas the orally vaccinated children became so only in 40-50% of the cases.
- 6. Intradermally vaccinated children tolerate higher doses of BCG vaccine and give a more desirable local lesion than the subcutaneously vaccinated ones.
- 7. As a whole, the parenterally BCG vaccinated children show the lowest tbc mortality of all the groups.

DISCUSSION

Kanrad E. Birkhaug, M.D., Rochester, New York: It has appeared of late to many European investigators that conservatism in American medicine was earried a little too far in not giving BCG a trial in this country. It is a hopeful sign, therefore, to have the clinical results of vaccination with BCG in New York City as well as the recent extensive study by Gasparis and Overton at Nashville, Tennessec. A similar study is carried on at Nantreal and surrounding districts. These studies afford a valuable corrective to the attitude assumed by Drs. Petroff, Medlar, Sasano and Watson in this country that BCG is a dangerous virus capable of producing progressive tuberculosis. A six months' visit last year to numerous European centers of BCG vaccination convinced me of the harmlessness of the Calmette-Guerin strain. Likewise, a two-year investigation in my own laboratory on a colony of about 150 guinea-pigs, injected with large doses of whole and dissociated BCG cultures, las yielded results which uphold Calmette's original contention of BCG avirulence and immunizing powers. The series of more than 1,000 cases presented by Dr. Kereszturi suggests that this mode of artificial immunical possible of conducines to be described in the content of the conducines to be described in the content of the conducines of the conducines and the con

nization is capable of producing a higher degree of immunity against tuberculosis than that produced in the controls living under natural conditions. What interests me in particular in this study is the close similarity of cutaneous allergy produced in infants with BCG injeeted enterally and parenterally and the tuberculin sensitivity obtainable in guinea-pigs vaccinated in similar manner. The oral administration of BCG yielded the least allergy and the subcutancous or intradermal in-jection the highest and most durable allergy both in infants and in guinea-pigs. Following the ingestion by mouth of 10 mgm. of BCG in newly-born guinea-pigs I ohtained only 20 to 30% cutaneous allergy and as late as 14 weeks after vaccination, while 100% positive tuberculin reactions were obtained as early as the sixth to eighth week following the parenteral administration of BCG. The reason for this large difference is easily demonstrable by cultural means. Newly-born guineapigs fed 10 mgm. BCG by mouth shed the organisms in the feces in large numbers for four to nine days following the oral administration. BCG viable organisms are only irregularly isolated from mesenteric lymph-glands following the oral feeding. On the other lymph-giands following the oral recoing. On the other hand, BCG injected intradernally remains viable in the local abscess for as long as 110 days, Only recently I was able to isolate viable BCG organisms from 3 very small retroperitoneal glands of a guinea-pig that died from a non-tuberculous intercurrent infection as late as 577 days after the intraperitoneal injection of 20 mgm. of BCG. I believe this is the longest period on record in which a BCG strain has remained viable in animal tissue without producing progressive tuberculosis.

The relationship of cutaneous allergy to the period of survival of BCG vaccinated guinea-pigs, subsequently infected with 250 virulent "H37" tubercle bacilli, is referable to the enteral and parenteral mode of administering the BCG vaccine. The average period of survival of enterally vaccinated animals was 220 days and the controls 197, an almost negligible difference. The average period of survival of subcutaneously vaccinated animals was 300 days, intraperitoneally vaccinated animals was 300 days, intraperitoneally vaccinated animals

mals 304 days and intradermally vaccinated guinea-pigs 420 days. The controls in these series lived only 187 days, less than half the life-span of the intradermally vaccinated animals. There seems very little doubt in this connection that cutaneous allergy is a definite expression of immunity to virulent tuberculous infection.

The occurrence of clinical tuberculosis in probationer unrese with negative tuberculin reactions and exposed to open cases of tuberculosis has been emphasized by Dr. Geer, of St. Paul, Minn., and Drs. Scheel and Heimbeck at Oslo, Norway. The danger of contracting clinical tuberculosis is much less among tuberculin positive probationer nurses entering upon tuberculous wards. The latter authors have clearly demonstrated that a change in cutaneous allergy is readily accomplished by the subcutaneous or intradermal injection of 0.025 mgm. of BCG and that subsequently the resistance of the vaccinated nurses equals that of the tuberculin positive persons. For practical purposes it is very important to bear in mind the figures presented in Dr. Kereszturi's paper that only 10 to 20% of persons vaccinated by mouth become tuberculin positive, while 84% of persons vaccinated either subcutaneously or intradermally become allergic. There seems to be universal agreement that the intradermal mode of vaccination with a dose of 0.025 to 0.05 mgm. BCG is the ideal method which yields the highest percentage of allergy.

Striet isolation of the vaccinated infant from sources of virulent tuberculosis infection until cutaneous allergy has been established is insisted upon by Drs. Wallgren and Wasen at Gothenburgh, Sweden. This earnest endeavor to assess the real immunizing action of BCG is based on the observation that the majority of vaccinated infants become allergic first 4 to 8 weeks after the parenteral BCG vaccination. These authors believe that there is real danger of the infant contracting clinical tuberculosis during this interim if Intimately exposed to open virulent infection. This ideal and logical lygicanic arrangement entails far too many economic and social difficulties to be of practicable significance except in very small experimental series. Tuberculin studies should be insisted upon in every vaccinated infant or adult and revaccination performed until cutaneous allergy is established. Allergy remains the most tangible proof that immunity has been established.

Although it is still too early to assess the real significance of BCG vaccination, there is much evidence available-especially on series of probationer nurses—that BCG does increase resistance to development of clinical tuberculosis in persons intimately exposed to tuberculous infection must of necessity take place in inlants successfully vaccinated with BCG. Little or no fear should be harbored about the potential virulence of the BCG vaccine, if the strain is properly subcultured. My personal experience during the past three years, with a series of strains of BCG obtained from Drs. Calmette, William H. Park and Florence Sabin, has convinced me of the truth in the recent statement by Dr. Stanley A. Griffith, the eminent Cambridge University tuberculosis expert, that the BCG strain may be used as a vaccine without risk of causing progressive tuberculosis.

INHALATION ANESTHESIA*

By JOHN H. EVANS, M.D., BUFFALO, N. Y.

THE safety of an anesthetic agent is dependent chiefly upon three things, namely, its toxicity, its controllability and the qualifications of the one who administers it. A fourth consideration is proper equipment which is essential in its administration of the gaseous anesthetics.

While the factor of controllability belongs alone to the inhalation anesthetics yet there are two of these, namely, chloroform and ethyl chloride, which are such cardiac depressants that not infrequently death results before it is possible to reduce the amount of the anesthetic in the blood stream.

The others in the inhalation group, which include ether, nitrous oxide and ethylene are always under the control of the skillful anesthetist.

When an anesthetic is injected into the blood stream, subcutaneous tissues, spinal canal or rectum, or applied to mucous membranes it is impossible to reduce the amount of the anesthetic agent already absorbed, should an indication arise for doing so. Anesthetics used in this manner are uncontrollable once they have been administered, while the dosage of the inhalation anesthetics is reduced with each exhalation, after the administration of the anesthetic has been discontinued, or it may be reduced more rapidly by the intermitten forcing of oxygen or CO₂ and oxygen into the lungs.

The uncontrollable anesthetics include cocaine, novocaine, neocaine, sodium amytal, pernocton, quinine urea hydrochloride and avertin.

In the writer's opinion the routine use of a controllable anesthetic is justifiable, but the routine use of a toxic uncontrollable anesthetic is questionable.

There are three in the noncontrollable group whose toxicity when used for infiltration anesthesia is so slight that their routine use would seem justifiable. These are novocaine, quinine urea hydrochloride and neocaine. However, when these agents are injected into the spinal fluid it is a more serious procedure in spite of improved technique; it is possible, according to Miller¹ to find reports of one death to 100 cases.

As the death rate for a given anesthetic agent as shown by statistics are not illuminating because the majority of deaths are not reported and the qualifications of the anesthetist are left out of the picture, the selection of an anesthetic is more intelligently arrived at by a study of the anesthetic itself as regards to its effect upon the vital functions of the body. Unless there is a contraindication to the administration of an in-

halation anesthetic the maximum safety in anesthesia is procured when the least toxic of the controllable group is selected and administered by a properly trained anesthetist who has made a study of the case before operation so that he is aware of the patients handicaps.

While the relative merits of the inhalation anesthetics are familiar to you all, it may be

profitable to review them briefly.

ETHER

The chief advantages of ether are its wide margin of safety and its ability to produce muscular relaxation. It is a valuable adjuvant to nitrous-oxide and ethylene.

Its disadvantages are its disagreeable odor, which is objected to by most patients during induction and recovery; its tendency to produce nausea, vomiting and acidosis; it is an irritant to pulmonary tissue and may cause a quiescent tuberculosis to become active and its effect upon diseased kidneys may prove fatal; it is explosive in the presence of a flame or cautery. When skillfully administered it is doubtful whether it is more likely to produce post-operative pneumonia than the other inhalation anesthetics. It is possible that there is more tendency to produce an atelectasis because of mucous plugs, yet this possibility is now guarded against by the administration of CO2 and oxygen, or oxygen under pressure, at the close of the operation.

When the patient is in shock from trauma or other cause, ether should not be used as it is essentially a circulatory depressant in spite of its apparently early stimulating effect and the fall it causes in blood pressures often continues for some time after its administration has been

stopped.

CHLOROFORM

While chloroform has a pleasant odor and is capable of producing muscular relaxation, it is a powerful circulatory depressant. A large percentage of deaths occur during the induction stage. Its prolonged administration may produce degeneration of the liver and kidneys, especially in children, which often results in death. While its use may be justified in obstetrics, the general opinion at the present time is that it should not be used for either major or minor surgery.

NITROUS OXIDE

Nitrous oxide combined with oxygen is the most popular of the inhalation anesthetics from the patients viewpoint. Consciousness is quickly and pleasantly lost and quickly regained. It is not a respiratory irritant and has no deleterious

^{*} Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

effect upon kidney function. It is not a circulatory depressant and there is less tendency to produce nansea, vomiting and acidosis than with ether or chloroform. When skillfully administered the blood pressures are not lowered but

are either maintained or elevated.

The preliminary medication is more important than with the other inhalation anesthetics, especially when muscular relaxation is desired. Relaxation is often inadequate and ether must be added to the gases. While relaxation depends to a certain extent upon the skill and experience of the anesthetist, yet it is impossible to produce sufficient relaxation in every case to meet the demands of the surgeon.

It is important that the anesthetist be thoroughly trained in order to recognize the danger signs, which strange to say, closely resemble

those of too light anesthesia.

It is easy to understand how a novice might have a fatality when he mistakes the signs of danger for those of light anesthesia. His impression would be that death came out of a clear sky without any premonitary symptoms.

When there is too great a reduction of oxygen. muscular spasm occurs. The increasing spastic condition of the muscles of the chest produces prolonged exhalations and the air forced through spastic vocal cords causes phonation which may be a grunt or a piercing cry. The eyes may be wide open due to the spastic condition of the lids and opisthotones may develop. The pupils will dilate and if oxygen is not given the respirations will cease, in which case it may be necessary to force oxygen into the lungs, altho in the great majority of cases the patient will eventually take a deep breath. To be on the safe side the forcing of a breath or two of oxygen is advisable and every gas-oxygen apparatus should be so constructed that this can be quickly accomplished.

As nitrous oxide is not explosive it can safely be given in the presence of a cautery.

It is especially applicable for tonsillectomies, either alone or with the addition of a small percentage of ether as the laryngeal reflexes are not abolished, which is a protection against the inhalation of infected material.

As a smooth anesthesia is difficult to maintain in very young children because of their increased metabolic rate, as compared with older children or adults, the addition of ether is usually advisable. When the metabolic rate is lowered by an appropriate dose of morphine or other narcotic, so that the need for oxygen is reduced, nitrous oxid-oxygen can be satisfactorily administered.

While the indication for a preliminary narcotic is greater in rapidly growing children than in adults, it has been customary to omit it.

The safety of nitrous-oxid-oxygen is more depent upon the skill and experience of the anesthetist than with any other anesthetic.

ETHYLENE

Ethylene; administered with oxygen, has the advantage over nitrous oxide of usually producing a greater degree of nuscular relaxation, while its elimination is somewhat slower. Its effect upon metabolism and vital organs is very similar to that of nitrous oxide. Its disagreeable odor and its explosive properties have prevented its general adoption.

ETHYL CHLORIDE

Ethyl chloride has a rather pleasant odor and for this reason it is used to produce loss of consciousness preliminary to the administration of ether. It is rapidly eliminated by the lungs, there is little tendency to produce nausea and vomiting, the liver and kidneys are little affected and it is not a respiratory irritant. Like chloroform, it markedly depresses the circulation and a momentary overdose may prove fatal.

It is often impossible to secure muscular relaxation without a dangerously large dose.

In the hands of hospital internes it has been found to be too dangerous to be used as a preliminary to ether.

PRELIMINARY MEDICATION

A preliminary narcotic of some kind is usually an advantage as it gives the patient a sense of well being, tends to minimize his fears and makes it possible in most cases to lessen the amount of the inhalation anesthetic.

When nitrous oxide or ethylene is to be the anesthetic preliminary medication is especially desirable not only to aid in securing muscular relaxation but to fortify the patient against post-operative pain as consciousness is so quickly regained.

Over preliminary medication should be avoided in tonsillectomies or other operations where there is liable to be bleeding into the throat. It is important to maintain the laryngeal reflexes to prevent the aspiration of infected material with the possibility of a resultant pneumonia or lung abscess. The writer has omitted all preliminary medication in a series of over 6,000 tonsillectomies in which nitrous-oxid-oxygen was administered without the addition of ether.

The object of not giving morphine or other opiates in these cases was to eliminate the nausea and vomiting which is occasionally produced by these drugs.

In many of these cases the need of preliminary medication was evidenced by the impossibility of maintaining a uniformly smooth anesthesia.

Avertin as a basal anesthetic is still in its trial stage but reports indicate a growing enthusiasm in its favor. The idea of going to sleep in one's own room and not awakening for several hours later is appreciated by most patients.

N. Y. State J. M. March 15, 1933

Its use usually makes it possible to procure muscular relaxation without the addition of ether to nitrous-oxid-oxygen or ethylene-oxygen. A certain per cent of cases require no other anesthetic than the avertin.

It is a valuable addition to the field of anesthesia and surgery. However, it is uncontrollable and occasionally produces circulatory collapse. It may cause necrosis of the intestinal mucous membrane especially when it is not properly prepared for if the temperature is higher than 104 F. hydrobromic acid is split off and dibromacetaldehyde is formed which produces marked irritation. As the laryngeal reflexes are usually abolished it should not be used for operations where blood or vomitus is liable to be present in the throat.

It is important to keep the avertin in the lower bowel so that its absorption is not too rapid.

In view of the fact that avertin is a toxic agent and once given the dose cannot be reduced, its routine use does not seem justifiable.

The deaths which occurred when avertin was employed to produce complete anesthesia led to a lessening of the dose with the idea of obtaining only partial anesthesia so that it would be necessary to use some form of inhalation anesthesia to complete it. When complete anesthesia results from the avertin alone, the dosage is now considered dangerously large.

The writer's experience with avertin is limited to about 50 cases, the first of these being given over two years ago. The reason the number has not been greater is due to his dislike to the marked fall of blood pressures which occurred in some of the cases and to a fatality in which the avertin possibly was a factor. This was a six months old baby to whom a 60 m.g. dose was The proposed craniotomy progressed only to the point of turning back of the skin flap over the cerebellar region when the operation was stopped because of the poor condition of the Nitrous-oxid-oxygen ether was needed to complete the avertin anesthesia. The baby died two hours after leaving the surgery. There was some hemorrhage but apparently not enough to account for the serious condition of the patient. Patients with intracranial pressure are decidedly poor operative risks and it is possible that avertin was not responsible for the fatal outcome.

The writer has been informed of two other deaths following craniotomy in which avertin was used. One died in 12 hours without regaining consciousness while the other regained consciousness but died 36 hours after operation. In the opinion of the anesthetist avertin was not the cause of death.

From the records of 940 cases kindly loaned by the surgeon who operated the cases, the following facts were disclosed:

There were 92, or about 10 per cent in which

no anesthetic other than avertin was required, 13 of which were for laparotomies; of the 13 there were 6 to whom an 80 m.g. dose was given while the other 7 received a 100 m.g. dose. The majority of the other cases were given an 80 m.g. dose, 75 of which were for currettage.

There were 6 cases in which circulatory collapse occurred which was apparently due to avertin. All recovered.

One case developed a post-operative pneumonia due to aspiration of regurgitated stomach contents which contained blood. The patient recovered.

There was one death which was possibly due to avertin. This case was a 36 year old female to whom a 60 m.g. dose was given for currettage and insertion of radium (50 m.g. in a brass capsule), no other anesthetic being required. She died 7 days later from peritonitis which was probably caused by one of two things, either the perforation of the uterus by the currette or by a perforation of the rectum or colon caused by the corroding effect of the avertin. In favor of this later possibility is the fact that the patient had a severe colitis which developed 48 hours after the operation, the colitis progressively growing worse until she died. The urine on the second day showed a heavy trace of albumin and many casts. There was no autopsy.

The following data has been collected from other local sources:

A male of 44 years who suffered from asthma was given an 80 m.g. dose for cholecystectomy, appendectomy and removal of external hemorrhoids; following operation there was marked cyanosis, shallow respirations and imperceptible pulse. Three days later urine showed albumin and casts and there was edema of the thighs and legs. He died on the 14th day.

The surgeon is of the opinion that the avertin was a factor in the cause of death in this case.

A woman of about 50 years developed circulatory shock following an 80 m.g. dose of avertin. The operation was postponed for a few days when it was successfully performed under nitrous-oxid-oxygen anesthesia.

Circulatory collapse and suspension of respirations occurred in a 65 year old male following a prostatectomy—Resucitation measures were successful and he recovered. An 80 m.g. dose of avertin was given in this case.

A 48 year old female was given an 80 m.g. dose of avertin for radical breast amputation. For a week previous to the operation she was given 3 grains of sodium amytal daily, and 9 grains before the injection of the avertin. Ether was used as the supplementary anesthetic. She regained consciousness in 3 hours. After 12 hours she went into a coma which lasted for 6 days. There was contraction of the arms, legs

and one side of the face. The blood chemistry was normal including Wassermann. A spinal puncture was done which was negative—The pressure being only 10 m.m. Following the puncture she regained consciousness and recovered. As there was no pathology discoverable to account for her alarming post-operative condition, the blame apparently falls upon either the sodium amytal or avertin. As it does not seem likely that the doses of sodium amytal given could produce the post-operative condition in this case, the avertin must at least be suspected of doing so.

A female age 27 was given an 80 m.g. dose for a laparotomy. She was unconscious for 12 hours and died in 22 hours. In the opinion of the sur-

geon avertin was the cause of death.

An 80 m.g. dose of avertin given to a 38 year old male for appendectomy was followed by delerium which lasted for five days. The patient recovered. As he was an alcoholic it is probable that avertin was not responsible for the post-

operative delerium.

A female 29 years of age was given an 80 m.g. dose of avertin for an operation upon the lower jaw. Nitrous-oxid-oxygen was employed as the supplementary anesthetic. Following operation her urine which had heen previously negative, showed albumin and casts. She died 42 hours after the operation. There was no autopsy.

Whether or not avertin is helpful in reducing the number of post-operative emboli, as some be-

lieve, is a question.

In going over the records of one of our hospitals for a 12 year period, 1920 to 1932, 49 post-operative emboli were found, or an average of about 4 a year. Of these there were 39 deaths and 13 recoveries. In the year 1931 there were 7 cases of post-operative emboli in 6 of which avertin had been used. Of these there were 5 deaths, and two recoveries.

So far in 1932 there have been three cases of emboli in one of which a 60 m.g. dose of avertin

had been used. This was a male 46 years of age, the operation being for drainage of left antrum and ethmoids. Death occurred ten hours after operation.

The writer has been informed of three other post-operative embolic deaths which occurred in Buffalo following the use of avertin. The deaths in these cases occurred 10, 14 and 21 days respectively, after operation. One of these cases was a male of 62 years who had been treated by his physician for myocarditis. An 80 m.g. of avertin was given for an appendectomy, following which there was a severe colitis which lasted for three weeks, when the patient died suddenly. There was no autopsy.

While it is not probable that avertin was in any way responsible for the production of emboli in these eases, it would not appear that it is instrumental in preventing them, judging from

this limited data.

In the writer's experience in the administration of approximately 35,000 inhalation anesthetics there has been five deaths which occurred

on the operating table.

One patient drowned when her stomach poured out the large amount of fluid with which it was distended; one died of hemorrhage after the lapse of a two-hour operation for toxic goiter, being conscious for ten minutes hefore death; another died of hemorrhage when the necrosed carotid blood vessels gave way following the opening of a peritonsillar abscess; one died during a laminectomy upon the second and third cervical vertebrae which were fractured; and the fifth died when the dura over a large cerebellar tumor was incised and the intracranial pressure suddenly released.

That the anesthetic was directly responsible

for any of these deaths is doubtful.

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"AVERTIN" ANESTHESIA

By HERMAN E. PEARSE, JR., M.D., and MARJORY M. WIEDRICH, R.N., ROCHESTER, N. Y.

From the Department of Surgery, the University of Rochester School of Medicine and Dentistry, Rochester, N. Y. Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

In the last analysis, the purpose for any anesthetic is to abolish pain, relieve apprehension and facilitate a surgical procedure. There are many drugs which will do this, some better than others. The number of compounds available permits a surgeon to choose the anesthetic that is best suited to the patient's needs. Such a choice

will be based upon the patient's physical condition rather than upon the surgeon's enthusiastic addiction to one particular method. A well rounded anesthetic program must include a variety of drugs. After an experience of two and onehalf years with "Avertin" we feel that it deserves a place on the list of useful anesthetics.

CHEMISTRY AND PHARMACOLOGY

The trade name "Avertin" was used for tribromethyl alcohol prepared in 1923 by Willstatter and Duisberg.¹ The drug was first obtained by the reduction of bromal hydrate in yeast-sugar fermentation, but is now synthesized through the same reduction by alcohol in the presence of aluminum ethoxide. Tribromethyl alcohol (or Tribromethanol) is a white, crystalline substance soluble to a 3.5% solution in water heated to 40° C. (104° F.). Higher temperatures result in the formation of hydrobromic acid and dibromacetaldehyde.

Commercially the substance is marketed in solution with amylene hydrate as "Avertin Fluid." Supposedly each 1 c.c. of "Avertin Fluid" contains 1 gm. of tribromethyl alcohol and 0.5 gm. of amylene hydrate. This combination is important to bear in mind since amylene hydrate (dimethylethylcarbinol) is a potent soporific, being from two to three times as powerful as paraldehyde (Cushny). It is probable that at least a part of the effect of "Avertin Fluid" can be ascribed to the presence of amylene hydrate contained in it. This being true, it is thought best to use the term "Avertin" rather than to speak of Tribromethanol anesthesia.

Absorption. Straub³ has studied the absorption rate after rectal administration of a 3% solution. He found that 50% was absorbed in ten minutes, 86% in twenty-five minutes and the remainder more slowly. As much as 10% remained in the rectum after two hours. There is a rapid rise in the amount of drug in the blood to from six to nine mg. per cent after which the concentration falls, being between 1. and 1.5 mg. per cent when the patient awakens. This rapid absorption gives narcosis quickly. Approximately 75% of the patients are asleep in ten minutes. The faster the solution is injected the sooner will narcosis occur. Rapid injection causes an accentuation of blood pressure fall according to Kennedy.4 At least five minutes should be used for rectal instillation.

Excretion. It was first shown by Endoh⁵ in animals that Tribromethanol was excreted in the urine in conjugation with glycuronic acid. This has been verified in the human by Straub.⁸

Amylene hydrate, the other constituent of "Avertin" is likewise excreted in the urine as a glycuronic acid compound. A portion may be exhaled by the lungs.

This detoxicating process by conjugation with glycuronic acid occurs principally in the liver. The resulting glycuronates are reducing agents and their presence in the urine may lead an observer to confuse them with glucose particularly in diabetics. It is possible to distinguish them since the glycuronates are levorotatory and do not ferment.

THE PHARMACOLOGICAL EFFECT OF "AVERTIN"

Cardiovascular System. Studies on the effect of "Avertin" on the blood chemistry show a rise in blood sugar, a reduction of the glycogen reserve, a fall in blood calcium and no change in pH, N.P.N., urea, uric acid, lactic acid, creatinine or chlorides.^{4, 7, 8} Slight acidosis may occur though this is not a constant finding.⁸

There is apparently no effect on the heart muscle or conducting mechanisms^{9, 10, 11} in ordinary doses. There is likewise no change in the strength of contraction or output per beat.³ However, in larger doses than those used for anesthesia there may be cardiac depression or even systolic arrest.

The circulating blood volume may be diminished.¹² A moderate fall in arterial blood pressure usually occurs which is rarely of significance but may occasionally be alarming.

Respiratory System. The respirations are depressed by "Avertin." This has been demonstrated in experimental animals and in man. Eichholtz felt that the minute volume was unchanged. If respiratory embarrassment occurs the use of carbon-dioxide has been found to be the best stimulant. 14, 15, 16

Excretory System. Kidneys. In the great majority of instances there is no effect upon the kidneys but transient albuminuria has been reported. Experimental studies in nephritic animals¹⁷ show a narrow margin of safety with a close approximation of the anesthetic to the lethal dose as well as increased susceptibility to the drug. "Avertin" is contraindicated in nephritis because of the retardation of its excretion and narrow margin of safety.

Liver. Experimental evidence would indicate that cloudy swelling of the liver occurs¹⁸ with repeated large doses. In the early clinical trials, cases of liver damage occurred. With the relatively small doses used at present this need not be feared ¹⁹ except in the presence of hepatic disease. Biliary disorders without jaundice or hepatitis do not form a contraindication to "Avertin."

CLINICAL USE

Our experience with "Avertin" is derived from 410 cases observed in the past thirty months. During this same time 9,420 anesthetics of all kinds were administered (exclusive of obstetrical cases). Thus, since its introduction in November, 1929, we have used "Avertin" in less than 5% of our cases. At first it was tried for a variety of conditions. As experience was gained it was found to be particularly indicated under certain conditions and the patient's condition permitting, was used as the method of choice. At no time was an effort made to achieve full surgical anesthesia. Instead it was always intended as a basal-anesthetic with the expectation of using supplementary anesthesia.

TECHNIQUE

Pre-operative Preparation. Our routine procedure is to administer a cleansing enema the night before operation and to give hypodermically morphine gr. 1/6 (.010 gm.) and atropine 1/100 gr. (.0006 gm.) one half hour before the "Avertin." This procedure may be modified. enema is not essential. It is better omitted unless given at least six hours before operation. It is not used in hyperthyroid cases since it is desired to keep them in ignorance of their operation. An unaccustomed enema would arouse their susnicion. Likewise in case of emergency the enema is not given. The only effect noted from its omission is a slight delay in absorption. The morphine and atropine are desirable but not necessary. Since morphine is a respiratory depressant the dose of 1/6 gr. (.010 gm.) is not exceeded. If a larger amount has been given either another anesthetic is chosen or the operation is cancelled.

Administration. With each carton of "Avertin" there is inclosed directions for its administration. They need not be repeated here. Suffice to say that a 2.5% solution is made with distilled water heated to 104° F. (40° C.) or less (not lower than 35° C.), tested with Congo red, the exact dose carefully measured and the solution slowly injected into the rectum through a soft rubber catheter. Between five and ten minutes are used for instillation. The blood pressure, pulse, respiration and color are observed.

The patient is left in bed in the ante-room for twenty-five to thirty minutes before being trans-

ferred to the operating table.

Dose. We have adhered to the statement that 0.1 c.c. (100 mg.) per kg. body weight is the maximum safe dose. More has never been given. No more than eight c.c. is ever used for one individual.

The effect of age and general physical condition upon the reaction to the drug should be stressed. Children and excitable adults are resistant, while aged, debilitated, cachectic or toxic

patients are susceptible.
We first used "Avertin" with caution, using. in the majority of patients, 80 mg. per kg. or less. As confidence was gained larger doses were used until 100 mg. per kg. was the usual dose. Now an intermediate dosage is employed as follows:

Hyperthyroid patients and children receive

100 mg. per kg.

Average adult receives 90 mg. per kg. Aged patients, cachectic patients, debilitated patients, very obese patients receive 80 mg.

per kg.

It is interesting to compare the results with this change in dosage. For example, in the initial period 78% of the patients receive 80 mg. per kg. or less, with 96% adequate narcosis. In the next period 77% receive 100 mg. per kg. with 96% nacrosis. At the present time 75% receive 90 mg. per kg. with 93% satisfactory narcosis. It would seem that the changes in dose has had no appreciable effects on the results. This might be expected since no drug given by body weight will have a uniform action. Individual susceptibility determines the result.

In the group studied 28% received 80 mg. per kg. or less, 42% received 90 m. per kg. and 30%

had 100 mg, per kg.

RESULTS

Soon after the rectal instillation of "Avertin" the patient appears drowsy, may yawn or say he "feels sleepy" and then goes quietly to sleep. There is no nausea, struggling, excitement or discomfort. The process is entirely effortless. The majority (about 75%) have their narcotic effect within ten minutes. The pharyngeal reflex is soon abolished after which an airway is inserted. There is no excessive secretion of perspiration or mucous.

The narcotic effect was judged complete (sound asleep) in 68%, incomplete (drowsy with amnesia) in 23%, and absent in 9% of the cases. From the standpoint of basal anesthesia this gives 91% with a satisfactory narcosis. If those with incomplete or absent nareosis are grouped according to dose it is found that 35% received 80 mg., 42% had 90 mg. and 23% had 100 mg. per kg.

The relative use of supplementary anesthetics was as follows:

Nitrous-oxide Oxygen	.59.2%
Ether	18 %
Procaine	6.6%
Procaine	16.2%

Spinal anesthesia is unsafe to use as a supplement for "Avertin" since both depress the blood pressure.

Blood Pressure Changes. The average systolic pressure for the group was 122 mm. Hg. The lowest systolic pressure average 90 mm. Hg. This gives an average fall of 32 mm. Hg., or 26%.

The effect of "Avertin" on the systolic blood pressure was tabulated as follows:

No change or rise	7.5%
Did not fall below 80 mm. Hg	77. %
Lowest systolic pressure between 79-70	8.2%
Lowest systolic pressure between 69-60	4.3%
Lowest systolic pressure between 59-50	2.5%
Lowest systolic pressure between 49-40	0.5%

If 80 mm. Hg. is taken as the "shock" level then in 15.5% of the cases the blood pressure drop was of consequence. It was usually transient and rose spontaneously or with the use of supplementary anesthesia. The operative procedure was never delayed because of this hypotension. In 12% of the cases ephedrine sulphate

was given to sustain the pressure.

The narcosis is of a variable duration. In susceptible individuals it may last for six to eight hours, while in those who are resistant to the effects of the drug anesthesia may last no more than thirty minutes. Nine per cent of the patients did not go to sleep. Some of these were not drowsy, could carry on an intelligent conversation but had complete amnesia.

The usual period of narcosis was from three to five hours. The patients frequently arouse, for a few minutes after returning to their rooms, then go quietly to sleep for several hours. This materially reduces post-operative excitement and promotes a smooth convalescence.

Post-operative Period. When regaining consciousness from "Avertin" the patients appear to be awakening from a normal sleep. The absence of excitement is conspicuous. Nausea or vomiting was recorded in 15.6% of the series.

Respiratory depression with cyanosis was noted in five cases (1.2%). This promptly cleared with the use of oxygen-carbon dioxide inhalation. Post-operative pulmonary complications occurred in sixteen cases (3.9%). This figure corresponds closely with the general incidence of post-operative pulmonary complications (3-4%) as given by Cutler.²⁰

Post-operative excitement occurred in only three cases (0.7%).

One patient had diarrhea for three days. Two patients showed blood in the stools after operation. One of these had blood streaking with the return of the first enema, the other had blood present on three occasions. There was no evidence of colonic ulceration, tenesmus or pain.

In the early use of the drug rectal ulceration occurred. This was due to hydrolysis from standing or excessive heating of the solution. Hydrobromic acid and dibromacetaldehyde were formed, the latter of which is irritating to the intestine. Care to use only freshly prepared and tested solutions should avoid all difficulty on this score.

DEATHS

The work of Karber and Lendle²¹ has shown that full surgical anesthesia is obtained with 65% of the lethal dose. Others¹⁷ have found only 55% of the lethal dose necessary. With the smaller amount used for basal anesthesia this margin of

safety is much greater.

At a German clinical congress in December, 1928,²² it was decided that "Avertin" had a mortality of 1 in 7,500 cases. A more recent analysis is given by Schuberth,²³ who collected 72 so-called "Avertin" deaths from the literature. After careful study he has classified these as follows:

- 18 cases—Insufficient information for critical judgment.
- 23 cases—No reason to consider "Avertin" as cause of death.
- 17 cases—"Avertin" possibly the cause of death.
- 3 cases—"Avertin" probably the cause of death.
- 11 cases—"Avertin" certainly the cause of death.

The first group is separated since there was no information on dose, condition of patient, diagnosis, operation or autopsy findings. If the first two groups are excluded this leaves thirty-one cases in which there is a suspicion or certainty of "Avertin" causing the lethal effect. It was estimated that there were 250,000 cases who had received "Avertin." This gives a mortality of 1 in over 8,000 cases which compares favorably with any anesthetic. The most recent figures on spinal anesthesia give a mortality of 1 in 672 cases.²⁴

In the series here reported (410 cases) there were seven deaths within twenty-four hours of the operation. These cases were reviewed by five surgeons. In six of these cases it was unanimously agreed that "Avertin" was not responsible for death. These six cases were operated upon for (1) large meningioma originating in the olfactory groove; (2) mediastinal tumor; (3) intestinal obstruction; (4) substernal goitre; (5) retroperitoneal tumor; (6) septic hip. Autopsy was performed in four of the cases and confirmed the clinical impression.

In the seventh case it was felt that though "Avertin" was not directly responsible for death yet its influence could not be excluded. This patient, a woman of 69 years, with arteriosclerosis and arteriosclerotic heart disease was operated upon for relief of tracheal compression from a large adenomatous goitre. After giving "Avertin" (90 mg. per kg.) her pulse was 100 per minute and blood pressure 140/80 mm. Hg. Nitrous-oxide oxygen was used as supplementary anesthesia, after which her blood pressure arose to 180/100 mm. Hg. As the right lobe was being resected there was a steady drop in pressure to 65/50 mm. Hg. and she was given ephedrin .050 gm. with improvement in her condition and a rise in blood pressure to 100/80 mm. Hg. The operator felt that the left lobe could safely be removed, but during this procedure the blood pressure dropped to 60/50, the pulse became weak with a rate of 150 and the patient went into extreme shock. The operation was hastily terminated. The operating time was one hour, thirty-five minutes. The estimated blood loss was 250 c.c. The patient was given adrenalin, caffein sodium benzoate, and intravenous glucose. She was placed in shock position and external heat applied, but no benefit was derived. She died two hours after operation without recovering from the shoek. Autopsy

There are several phases to this patient's death that might be considered. In the presence of the arteriosclerotic heart disease would it have been better to use procaine or open ether as the supplementary anesthetie? Could she have had a vascular accident with the rise in systolic pressure to 180 mm. Hg.? This appears improbable. Would she have lived if the operation had been done in two stages? The operator states that he was misled by the apparent improvement after the ephedrine. In retrospect he feels that it would have been better judgment to stop at this time and do the left lobe at a later date. Did the operative manipulation cause the shock and death? The answer to this is doubtful, for on the one hand the patient was an obviously poor risk and on the other hand it must be considered that the surgeon was skillful, the operating time not prolonged and the blood loss moderate.

The reviewers differed in their opinions on this ease. Some thought that "Avertin" might be the chief cause of death. Others thought that it had nothing to do with the outcome. In the absence of post-norten findings it is thought best to consider that "Avertin" could not be excluded as a contributing factor in eausing death, but could not be directly charged with the lethal result.

INDICATIONS

The following arc the operative procedures done under "Avertin":

Thyroidectomy	55 cases
Operations upon the neck	33 cases
Operations upon the mouth, jaw or face	70 00 000
Mastectomy	25 cases
Thoracotomy	14 cases
Miscellaneous operations	42 cases
Herniotomy	

Thyroid operations head the list because of the ease with which the hyperthyroid patient is operated upon under "Avertin." There is no anxious period of waiting for operation. There is no apprehension induced by the sights and sounds of the operating room. There is no psychic shock to cause fluctuations in pulse or blood pressure. The hyperthyroid patient receives tap water enemas for several days prior to operation. "Avertin" is then substituted. The patient goes to sleep in his bed, is shaved and prepared, moved to the operating room, is operated upon and is back in his room for several

hours before he is aware that anything has happened. Thus the principle of Crile to "steal the gland" is realized with a more convenient method.

The absence of excitement, struggle or psychic shock makes "Avertin" desirable in any apprelensive adult or child. The long duration of the anesthesia and the low incidence of struggle or vomiting which would increase intracranial pressure make this anesthetic desirable in brain operations. Dandy²⁵ has commented upon this.

The gastrie operations were listed separately from the laparotomies since the low incidence of nausea and vomiting is desirable in gastrie surgery to prevent hemorrhage or weakening of a suture line. Under laparotomy are listed splenectomy, diaphragmatic herniotomy, appendectomy, colectomy, hysterectomy, release of intestinal obstruction, cholecystectomy, etc. "Avertin" is a satisfactory basal anesthetic for abdominal surgery, but usually requires a supplementary anesthetic for relaxation.

The difficulty in administering inhalation anesthetics for operations about the face, mouth or neek accounts for the number of eases where "Avertin" was used in this region. Here, procaine local anesthesia is the best supplement.

The miscellaneous procedures consisted of operations upon the eye, ear, nose, throat, or extremities, and the use of "Avertin" for sedative in uncontrolled pain, in manie states and in convulsions from tetanus.

The number of times "Avertin" was given for herniotomy or for drainage operations was listed separately merely to show how infrequently it was used for these common procedures. If an abseess is to be opened and drained there is no point in having the patient anesthetized five hours for a five-minute operation.

The principal advantages of "Avertin" have been found to be:

Absence of psychie shock or apprehension.

Amnesia.

Absence of excitement and struggling.

Low incidence of nausea and vomiting with

early ingestion of food and fluids.

Long duration of anesthesia with diminution

in anesthetic burden.

Convenience for operations about the face.

DISADVANTAGES

(1) "Avertin" is contraindicated in severe renal or hepatic disease and in cases with ulcerative lesions of the rectum or colon.

(2) Respiratory depression or obstruction is a relative contraindication since the drug may cause respiratory depression with cyanosis. The addition of the respiratory depression of "Avertin" to a patient who already has embarrassed respirations may eause serious anoxemia.

(3) The long duration of the narcosis may be a disadvantage when only a short, minor opera-

tion is to be done. This long anesthesia is an

asset for major operations.

(4) "Avertin" occasionally,6 though not always,8 causes acidosis. This might be a disadvantage in diabetics. We have noted no deleterious effect in our patients with diabetes.

(5) Any drug administered by a body weight method will have an uncertain action. "Avertin" is no exception to this rule. The variation in individual susceptibility accounts for this effect. Under identical conditions of age, physique and dosage one patient will have surgical anesthesia and another be wide awake.

(6) The patients require constant nursing care until fully conscious. They must be watched for cyanosis or respiratory obstruction from "swallowing the tongue." This need of observation may be a disadvantage with insufficient nursing service.

One the whole, given suitable indications, we feel that "Avertin" has a definite place on any anesthetic program. The amount of its use will depend upon existing conditions, but in a certain percentage of patients it will be indicated as the anesthetic of choice.

SUMMARY

(1) Tribromethanol, originally marketed as "Avertin," is now generally used in solution with amylene hydrate as "Avertin Fluid." Amylene hydrate is a potent soporific being from two to three times as powerful as paraldehyde. Because a part of the narcotic effect is probably caused by this "solvent" it is thought to be more proper to speak of "Avertin" rather than tribromethanol anesthesia.

- (2) The drug has been used in this clinic since November, 1929. During this time 9,420 anesthetics (exclusive of obstetrical analgesia) have been administered, while "Avertin" has been given 410 times. Thus it has been used in less than 5% of our cases.
- (3) In 9% of the cases there was no appreciable effect from the "Avertin." The remaining 91% went quietly to sleep, without excitement or struggle within ten minutes after its rectal instillation. After a period of from three to five hours, the patients regain consciousness without excitement or sweating, with a minimum of nausea or vomiting (15%), and with complete amnesia for events during the anesthetic period.
- (4) It was intended to use "Avertin" for only a basal anesthetic, but 16.2% obtained full surgical anesthesia with the doses used (100 mg. per kg. or less). Of the remainder nitrous oxideoxygen was used in 59.2%, ether in 18% and procaine in 6.6% as a supplementary anesthetic. It was felt that in these cases the amount of anesthetic used and the anesthetic burden on the patient was reduced by the "Avertin."
- (5) In our hands, "Avertin" has been found useful in operations upon hyperthyroid or other apprehensive patients, in gastric and brain surgery, in operations about the mouth or face and in intra-thoracic procedures.

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EXPERIMENTAL STUDIES ON SUBARACHNOID ANAESTHESIA

The Effect of Procaine Hydrochloride on the Respiratory Center FRANK WANG COTUL M.D., NEW YORK, N. Y.

From the Laboratory of Surgical Research, University and Bellevue Hospital Medical College, New York City. Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

THE possibility of paralysis of the respiratory center by drugs used to induce spinal anaesthesia was recognized by different writers of what may be called the older school of spinal anaesthesia. Among these were Allen, Jonnesco and Babcock. With the advent of the new school, however, under the leadership of Labat, Pitkin, Evans and Koster this danger, far from being emphasized, has been minimized. The introduction of what were thought to be new teclnique and new drugs apparently produced a sense of false security.

Thus Labat1 states, "respiratory failure is not due to the diffusion of the injected fluid to the brain and to the deleterious effects of the drug on the respiratory center." Evans² categorically states, "the respiratory depression is from bulbar anaemia consequent upon the fall of blood pressure." Koster and Kasmans on an experiment in which they failed to cause respiratory paralysis by applying 21/2% neocaine solution to the medulla of a eat, based the conclusion that since neocaine in such a high percentage applied directly was devoid of harmful effects on the respiration, the small amount that diffuses upward from the spinal canal during anacsthesia can certainly cause no harm. This work has apparently been confirmed by Harrison' and Sousa, and has been quoted by a number of writers on the subject as evidence of the impunity with which spinal anaesthesia can be used. It will be shown further along how much justification there is for Knster and Kasman's conclusion.

Bloch, Camus and Hertz, on the other hand, in 1921 demonstrated that stovaine and syncaine when injected into the cisterna magna of the dog caused a sequence of symptoms terminating in paralysis of respiration. Camus' in 1922 showed the same train of events with novocain, and Soupalt's in 1923 could identify the same phenomena in a patient who had received 100 centigrams of novocain in the spinal canal between the first and second lumbar space. CoTui and Standard's recently reported experiments which confirmed Camus.

The experiments were reported in Surgery, Gynccology and Obstetrics, lv, 290, 1932. They will be reviewed below and additional data will be reported.

Dogs were used in these experiments, each dog being anaesthetized with morphine hydrochloride 5 milligrams per kilogram subcutaneously and sodium amytal 25 milligrams per kilogram intravenously.

The costal respiration was registered by a tambour connected with a pneumograph applied around the cliest; while the diaphragmatic respiration was registered by a lever attached to the anterior abdominal wall by a string. A brief explanation of the mechanism of these two systems of recording may be desirable. During inspiration the expansion of the cliest stretches the pneumograph, causing the lever to fall; and the bulging of the abdomen slackens the string attached to it, allowing the lever to fall of its own weight. During inspiration, therefore, both the costal and diaphragmatic levers fall, while during expiration they both rise. The blood pressure was recorded by connecting a registering mercury manometer with the femoral artery,

I. Spinal Injections.-When procaine was introduced into the subarachnoid cavity at the first lumbar space in dosages of 100 to 600 milligrams the following train of phenomena occurred. Both the blood pressure and the pulse pressure registered a fall. There was at first an acceleration of the respiration, both costal and diaphragmatic. At the end of some 3-18 minutes, however, depending upon the dose of the drug given, the bulk of the injected fluid and the rapidity of the injection, there occurred a dissociation of the respiratory mechanism. The costal excursions gradually decreased in amplitude until a complete stoppage occurred, while the diaphragm kept on contracting and even seemed to try to compensate for the intercostal paralysis by increased amplitude. By the use of 2 or even 3 pneumographs at different levels of the chest wall, above the eighth rib, it was demonstrated that this costal paralysis was ascending; that is, the intercostal nerves were paralyzed one after another as the drug diffused upwards. This intercostal paralysis was assumed to be peripheral; that is, the nerve roots were affected where they came in contact with the drug in the subarachnoid space.

Injection into the Cisterna Magna.—When procaine was injected into the cisterna magna, however, an entirely different sequence of events was presented. As small a dose as 60 to 70 milligrams in a 17 to 20 kilogram dog swiftly produced a simultaneous stoppage of both intercostal and diaphragmatic respiration, and a fall in blood pressure without any preliminary rise in response to asphyxia, as would be expected from a normal vasomotor mechanism. Sometimes, however, when the dose injected was small, the blood pressure registered a rise. The effects on the vasomotor mechanism will be taken up later.

The comparatively small size of the dose injected into the cistern and the simultaneous paralysis of the whole respiratory mechanism and the fall in blood pressure, suggest an effect on the medullary centers themselves. The fact that the cisterna magna communicates by the foramina of Luschka and Magendie with the fourth ventricle, on the floor of which are located the respiratory and the vasomotor centers, makes the probability of this direct effect very strong.

Two other possibilities, however, must be con-First, a paralysis of the phrenic and intercostal roots by a diffusion of the drug from the cisterna downward. Offhand, if this were so, we would expect from analogy with our spinal experiments, a paralysis of the diaphragm to occur first, followed by that of the intercostals in a descending order. This, however, was not the case. The second possibility is the permeation of the drug into the cord substance in sufficient quantity to paralyze the neurones arising from the respiratory center and running in the cord down to the anterior horn cells of the phrenic and intercostal The localization experiment described in the next paragraph excludes the last two explanations.

Localization of Action.—By removing the atlas, the second cervical vertebra, and a part of the basilar portion of the occipital bone, the cisterna magna was opened and the inferior aspect of the cerebellum, the closed portion of the medulla, and the upper cervical cord, were exposed. A pledget of cotton soaked in 21/2 per cent solution of procaine in cerebrospinal fluid, carrying about 5 cubic centimeters and containing 150 milligrams of the drug was placed over the closed portion of the medulla and the upper cervical cord. The head of the dog was then tilted slightly upward to allow gravitation of the excess fluid downward. Tracings taken in the course of 30 minutes showed neither respiratory paralysis nor appreciable changes in the blood pressure. This shows that neither downward diffusion nor permeation of the drug into the cord had occurred in sufficient concentration to paralyze either the phrenic and intercostal roots or the neurones going out of the center.

A curved, blunt, capillary pipette was slowly slipped through the posterior medullary vellum into the fourth ventricle, care being taken not to injure the floor of the latter by keeping close to the cerebellum. Tracings taken for about a minute during and after the introduction of the pipette showed that no change due to the mechanical introduction had occurred either in the respiratory or blood pressure curves. Then 2.5 cubic centimeters of the solution containing 75 milligrams of procaine was allowed to flow by gravity through the pipette into the fourth ventricle. In less than 30 seconds the costal breathing stopped, followed soon after by paralysis of

the diaphragm. The blood pressure first showed a rise, then fell to zero, as the dog died.

Our explanation for the occurrence of paralysis when injection was made into the cisterna and for the non-occurrence of paralysis when application was made to the closed portion of the medulla, is that in the first case, in the closed system of an intact cisterna magna, diffusion could take place through the foramina to the fourth ventricle; while in the second case the fluid having been spilled, no vehicle for diffusion was pres-To verify the correctness of this explanation, methylene blue was injected into the cisterna magna of an intact dog in one case and applied to the closed portion of the medulla exposed by an upper cervical laminectomy similar to the one described above in another case. On examination of the brains at the close of the experiment, it was found that in the case of injection into the cisterna magna, the floor of the fourth ventricle was colored blue, whereas in the animal in which the methylene blue was applied to the exposed medulla and upper cervical cord, the floor of the fourth ventricle showed barely any traces of methylene blue.

At this point it may be pertinent to examine the experimental technique by which Koster and Kasman³ and Sousa⁵ obtained results that are so different from the foregoing. Since we duplicated the above experiments on the cat, it cannot be claimed that a difference in the experimental animals accounted for the divergent results. From a description of their experiments and from the accompanying illustrations, it seems evident that instead of applying the drug to the floor of the 4th ventricle they applied it to the closed portion of the medulla. With the cisterna magna opened as demonstrated above, the drug could not diffuse into the 4th ventricle in sufficient concentrations to bring about paralysis of the respiratory center.

In the case of blood pressure, whether a rise or fall is registered depends upon the dose. In some experiments, there was a fall from the beginning of the experiment, in spite of the asphyxia occasioned by the respiratory cessation. This would indicate a primary paralysis of the vasomotor cen-In the experiments with smaller dosage there was either first a rise in blood pressure, followed by a gradual fall to zero in spite of the institution of artificial respiration; or there was a primary rise without any subsequent fall. Whether this rise was due to the asphyxia, or a combination of both factors or to other factors, yet unknown, we are unprepared to say. The fact that paralysis of the respiratory centers occurred first would suggest either that the vasomotor center is not anatomically as exposed to the injected drug or that it is more resistant. The finding of Tatum¹⁰ that in poisoning by cocaine systemically administered, the respiration stops before the heart, is interesting in this connection.

The Difference Between Lethal Doses of Procaine in Normal and in Anaesthetized Animals

As stated before, the above experiments were done on dogs which had been narcotized with morphine and sodium anytal. The dose sufficient to cause respiratory paralysis was found to be 30-70 mg. per dog. (Table II.) In normal, that is, mnarcotized animals, however, it was found that larger doses were required. Tables I and II show the marked differences between the small size of the fatal doses in the case of the narcotized group as compared with the comparatively large sublethal doses in the unnarcotized group.

This difference in the lethal dose between dogs narcotized with sodium amytal and non-narcotized animals, striking even in experiments where no attempt was made at quantitation, brought up the question—What other pharmacologic agents and what disease conditions have this effect of making the respiratory center more vulnerable to the

paralyzing effect of procaine?

The Minimum Lethal Dose of Procaine Intracisternolly. Before proceeding with the investigation of the problem just brought up, it was desirable to determine the minimum lethal dose of procaine eisternally. CoTui11 showed that in dogs, the weight method of determining the minimum lethal dose of novocaine cisternally was not reliable. He found that the spinal length taken from the occipital protuberance to the base of the tail, with the animal in maximum flexion, gave a more reliable index than the weight. Thus, while with the weight as an index, the variations of the lethal dose in an individual dog may range from 30.5 to 72.9 mg.; with the spinal length as an index, the variations lie between 11.4 and 16 mg. Only healthy animals as determined by autopsy were included into the series. Two samples of procaine were used in this and in subsequent in-The M.L.D. of one sample was vestigations. found to be 1.3 to 1.5 mg. per centimeter length, while that of the other sample was 1.4-1.6 per cm.

The Effect of Different Narcotics and Their Combination on the Minimum Lethal Dose of Proceine Introcisternally. Using the two samples of procaine whose minimum lethal dose was de-

TABLE I. NORMAL DOGS

Weight (kg.)	Sublethal dose procaine (mg. cisternally
15	
18.5	
12	
14	
11.5	
10	
*75	
*8	
*5	90

^{*}From Vehr's (20).

TABLE II.

Morphine-Sodium Amytal Dogs*

	morpinic C	 . 402
/eight (k	g.)	Fatal dose procaine (mg.) cisternally
7.5		 50
20.		 60
17.		 70
18.		 70
11.75		
19.		
13.		 30

*Morphine hydrochloride 5 milligrams per kilogram was given subcutaneously and sodium amytal 25 milligrams per kilogram intravenously before the experiment.

termined above, CoTui¹² determined the lethal doses of procaine intracisternally in dogs that had been narcotized with (1) morphine, (2) morphine scopolamine, (3) morphine-avertin and (4) sodium amytal. Throughout the course of this investigation the two samples used were continually cheeked against normal dogs in order to assure ourselves that neither the procaine used had changed in potency nor the animals used in sensitiveness.

In the case of morphine (Table II), it was found that of 8 dogs receiving subcutaneously 5 or 10 mg. of morphine per kilogram, all survived from 1.33-1.5 mg. of procaine per cm. spinal length, the M.L.D. of the sample being 1.45-1.60 mg. Of 3 dogs receiving 30 mg. morphine hydrochloride per kilogram, all died from 1.38-1.4 mg. procaine per cm. spinal length. Thus it appears that, morphine in small effective doses causes no appreciable reduction in the lethal dose of procaine cisternally, although in large doses a reduction takes place.

In the case of morphine scopolantine, of 6 dogs receiving subcutaneously 5-10 mg. morphine and .67 mg. of scopolamine per kilogram, 5 survived from a dose of 1.45 mg. procaine per cm. and 1 died from 1.5 mg. a dose well within the mininum lethal zone. So that morphine scopolamine narcosis seems to cause no appreciable reduction in the lethal dose of procaine.

Of 4 dogs receiving subcutaneously, 2.5 mg. morphine per kilogram and 100 mg. per kilogram of avertin rectally, 3 survived from 1.4 mg. procaine per cm., while one died. Of 4 dogs receiving twice the amount of morphine but the same amount of avertin, one survived from a dose of 1.4 mg. procaine per cm. spinal length, 2 died for the same dose, and 1 died from 1.3 mg. per cm. It thus seems that avertin with small doses of morphine causes no appreciable reduction, while with larger doses of morphine, a measurable reduction is evident.

In the case of sodium amytal, of 6 dogs receiving intravenously from 28 to 45 mg. per kg., all died from doses ranging from 1 mg. to as low as 5 mg. of procaine per cm. spinal length. It is thus seen that sodium amytal in effective narcotizing

doses causes a marked reduction in the lethal dose of procaine.

The finding, that a barbituric acid derivative reduces the lethal dose intracisternally of procaine hydrochloride, is apparently at variance with the work of HofVendahl,18 Tatum, et al,10 La Mendola14 and Martin and Meyers,15 who showed that members of the barbitutric acid series raise the minimum lethal dose of cocaine administered subcutaneously. The discrepancy, however, is more apparent than real. In cocaine poisoning brought about by the systemic administration of cocaine, the convulsive phase is the striking feature, whereas in injection into the cisterna magna, the paralytic phase is predominant. The works of Jacobj and Roemer, ¹⁶ Impens, ¹⁷ Jackson ¹⁸ and Bouckaert, 19 showing that the barbitals in large doses have a depressing effect on respiration, explain the increased vulnerability to procaine of animals narcotized with sodium amytal.

This lowering of the lethal dose of procaine injected intracisternally by the previous administration of barbituric acide derivatives possesses practical significance in view of the increasing tendency to use them as "basal anaesthetic" in cases of spinal anaesthesia. According to our findings, it is distinctly contra-indicated, and is a misapplication of the findings of HofVendahl, Tatum and others.

TABLE III.
DISTEMPER
M.L.D. procaine 1.45-1.6.

No. 1.	Sp.L. cm. 66	Dose pro- caine Mg. 90.	Mg. pro- caine per Sp.L. cm. 1.36	Result Died	Autopsy Left lower lobe
2.	62	55.	.887	46	consolidated Consolidation both lungs
3.	71	45.	.634	и	abscess Left lung patchy consol.

The Effect of Some Pathologic States on the Minimum Lethal Dose of Procaine Intracisternally

We have so far conducted only five experiments in this series but expect in the near future to be able to report more extended work. Of the five experiments, three were on animals with distemper, which was taken as a representative disease in the dog and two were on animals that had post-operative peritoneal infection. Tables III and IV show that in both distemper and post-operative peritoneal infection, the minimum lethal dose is appreciably reduced.

Measures of Resuscitation in Respiratory and Vasomotor Center Paralysis

The record of one such an experiment will be set forth as representative. A 20 kilogram dog was given 60 milligrams of procaine hydrochlo-

		11	TABLE NFECTI L.D. 1.6	ONS	
Wt.	Sp. L.	Dose pro-	Mg. procaine	Result	Autopsy
12.	74	89	1.2	Died	Gen. Periton- itis. 6 days
12.5	78	7 8	1.0	16	post operative Gen. Periton- itis. Wound infection

ride at 4:45. Respiratory paralysis and a steady decline of the blood pressure soon set in, no asphyxial rise having occurred. Artificial respiration was instituted 30 seconds after respiratory stoppage, but the blood pressure continued to fall finally reaching about 5 millimeters. At 5:08, 23 minutes after the injection, 30 milligrams of ephedrine sulphate was injected into the femoral vein; after a latent time of 38 seconds, the blood pressure started to rise until at 5:14 it was above normal. At 5:33 artificial respiration was discontinued to determine if the respiratory center had recovered. Such interruptions of the artificial respiration were repeated at 5:43 and 5:53, but recovery had not yet taken place then. At 5:58. 1 hour and 13 minutes after the injection, artificial respiration was again discontinued, and in a little over a minute, both the intercostal and diaphragmatic breathing recovered spontaneously. At the end of the experiment, therefore, the dog was, to judge from the respiratory and blood pressure tracings, as well as it was when the experiment started.

Summary

1. Respiratory stoppage due to paralysis of the respiratory center does occur when procaine is introduced into the subarachnoid space in sufficient dosage.

2. This dosage is not a fixed one but varies with different body states. Some narcotics and disease conditions make the center more sensitive to the paralyzing effect of procaine. The statement often made that spinal anaesthesia is perfectly safe in bad risks is not confirmed by our

experimental work.

3. When complete paralysis of both the respiratory and the vasomotor centers occurs, artificial respiration and the intravenous injection of ephedrine are effective as measures of resuscitation. Hospitals in which spinal anaesthesia is employed must be prepared to combat with paralysis of the medullary centers; that is, an artificial respiration equipment and measures for sustaining blood pressure, must be at hand.

This work represents one phase of the survey on local anaesthetics in progress at the New York University Division of the Bellevue Hospital under the supervision of Professor George D. Stewart and Dr. Arthur M. Wright.

Grateful acknowledgment is made of the kind permission given by Surgery, Gynecology and Obstetrics for

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RESUSCITATION

By PALUEL J. FLAGG, M.D., NEW YORK, N Y.

Comments preceding a demonstration of equipment and motion pictures of technique of resuscitation. Given at the Annual Meeting of the Medical Society of the State of New York, at Buffalo N Y, May 25, 1932

T is a pleasure to have an opportunity to disenss with you modern scientific methods of resuscitation now available to the physician.

While our heartiest tribute is extended to the well organized work of the rescue squads, working under the direction of the police department, fire department, the various gas and electric compames, the Red Cross group and the life savers, working under the direction of the Federal Government, nevertheless, we must grant the limitations of this lay personnel in the treatment of these dramatic medical emergencies, and bestir ourselves to awake an enthusiasm for the assistance which the physician can, alone, provide

The first problem in the treatment of cases of asphyxia is, to make known, in a form easily recognizable by the layman, the various degrees of asphyxia which present themselves for relief. Asphyxiated patients readily divide themselves into two large groups.

First, the depressed semi-conscious patient who can be roused; secondly, the unconscious asphyxiated patient who cannot be roused

The first group responds to the stimulation of the prone-pressure Schaffer treatment with or without the use of an inhalator. The second group is distinctly a medical problem requiring the energetic services of the physician

This group of unconscious asphyxiated patients may, furthermore, be divided first, into those patients, who, while asphyxiated and unconscious, are breathing, even though irregularly. whose muscles are fixed in spasm, whose reflexes are active, and whose eirculation is fairly well Secondly, into the desperately ill maintained. patient who has become apnœic, who is completely relaxed, whose reflexes are in abeyance, and whose circulation is rapidly failing

The first of these two classes requires the assistance of a physician in order to prevent the progression of the asphyxia into the second class This is likely to occur as respiratory obstruction from masseteric spasm or from foreign body obstruction gives rise to a vicious errcle ending in apnœa and complete relaxation,

Such patients, since they are breathing, will frequently be rescued by the use of an inhaler delivering oxygen and CO2 Where respiratory obstruction is marked, reducing the tidal volume breathed to such an extent that oxygen and CO2 is not inhaled in sufficient volumes to relieve the aspliyxia, then it becomes necessary to introduce this gas past the obstruction by means of a pharyngeal tube, where the teeth may be separated to permit this, or by the use of a nasal tube, in cases of severe spasm. This procedure, if promptly instituted, will usually relieve the patient

Our interest, as physicians, however, is particularly directed to the second group of unconscious patients, the patient in extremis, the patient who has been referred to, as the apparently dead Owing to the fact that in extreme asphysia the chest is fixed in a position of expiration, lit-He or nothing can be hoped for from prone pres-

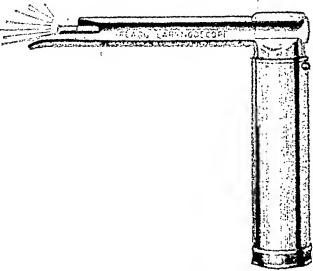


Fig. 1. The Laryngoscope

sure methods with or without the use of an Such a patient can only be revived by the insufflation of oxygen and CO2 under measured pressure directly within the trachea.

Fortunately, the condition of such a patient, namely, the absence of muscular rigidity and reflexes, permits of direct treatment without trauma.

Complete asphyxia is not an infrequent occurrence. It is seen, occasionally, during the complete relaxation which accompanies anesthesia, the anesthetist being suddenly faced by such an apparently dead patient. When ether, the safest general anesthetic, has been employed ,resuscitation will be successful, as long as the circulation is still functioning. These apparently dead patients occur with regular frequency in the newborn to the extent of at least one in every hundred.

It is believed that death may be pronounced where there is no change in the color of

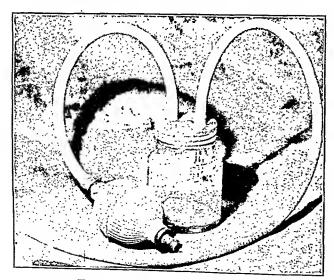


Fig. 2. Flagg Portable Suction

an asphyxiated patient after intratracheal insufflation of oxygen under pressure over a period of five minutes. A constant cyanosis, under these conditions, is proof that the heart no longer beats. and that the circulation has ceased.

Aside from the life-saving value of such technique, the economy, in the gases consumed, and the labor of a squad for hours after a patient is dead is a worthwhile consideration.

The instrumentarium assembled, and the technique described is designed to meet the requirements of the extremes of age and anatomical variations, as well as asphyxia from every possible cause, such as anesthesia local and general, drug poisoning, foreign body obstruction, asphyxia neonatorum, submersion, electric stroke, carbon monoxide poisoning, etc. The equipment is adapted to operating-room and ambulance use.

The instrumentarium consists of laryngoscope, suction facilities, intubation tubes, and a gas supply under regulated pressure.

The laryngoscope (Fig. 1) is a strong onepiece instrument with a large light, powered by small cells procurable anywhere. This is available in three sizes.

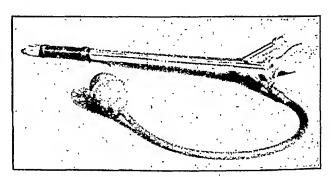
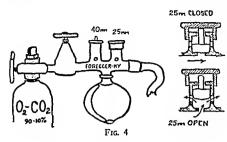


Fig. 3. Intubation Tubes

Portable suction (Fig. 2) will take care of most emergencies. For ambulance use, connection should be made with the intake manifold of the gasoline engine, where abundant suction is available.

For operating-room use, steam, or electric suction is routinely available; steam suction being always preferable because of its quiet, powerful suction with no parts to get out of order. It is inexpensive to install and to maintain. equipment is now available through commercial channels.

The intubation tubes are made up for infant use, and for the resuscitation of the adult (Fig. 3). The infant tube is of such a length and such a diameter that it may not be introduced past the corina. It has a velvet, non-trumatic tip. adult tube is a typical bronchoscope reduced in length to prevent its introduction into a bronchus. An extremely valuable accessory to this tube is a rubber balloon which may be distended after intubation, thereby allowing full control of the



intra-pulmonary pressure. All of the intratracheal tubes are operated by simply closing a vent at the proximal end to produce inspiration, opening it to allow expiration. This is the only manipulation required in the use of these tubes.

The gas supply, consisting of an oxygen and CO₂ mixture—90% oxygen and 10% CO₂—is available in small cylinders, under a pressure of from twelve to fifteen hundred pounds. This

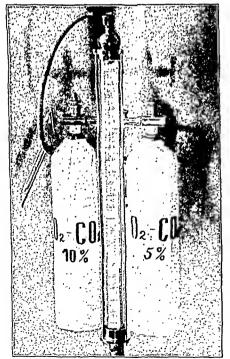
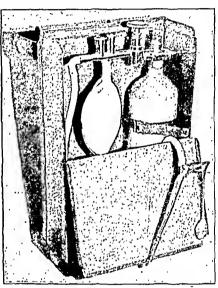


Fig. 5. The Flagg Hospital Resuscitation Apparatus

pressure, released by a reducing valve, is delivered to the patient with the added protection of a pressure manometer which may be set to accurately measure the pressure at which the gas is delivered. For operating-room use, where delicate adjustment is desirable, the water manometer is the manometer of choice. Water pressure is translated into mercury pressure, as follows:

The specific gravity of mercury is thirteen; water is one; there are twenty-five millimeters to the inch. If we consider an inch as twenty-six millimeters for purposes of easy measuration, one-half inch of water would equal thirteen millimeters, or one millimeter of mercury, and



F16. 6. Resuscitation Apparatus for Ambulance

one inch of water would equal two millimeters of mercury. Therefore, a column of water twelve and one-half inches deep would equal a mercury pressure of twenty-five millimeters. The water manometer is preferred because it indicates the volume flow of gas, shows any aspiration effect, and affords protection against pressure. For use in emergency work in the ambulance, or elsewhere, a weight manometer acts as a safety valve (Fig. 4). This valve is constructed so that it will blow off at twenty-five or forty millimeters, as desired; the maximum pressure for adults being forty millimeters, and that for infants, twenty-five millimeters.

The volume of the gas delivered is regulated according to the rapidity with which one wishes

to bring about insufflation. This volume varies from two to ten liters a minute. Where a balloon tube is used, there is little necessity for a large volume delivered.

Figure 5 shows the author's hospital rescusci-

tation equipment with a water manometer.

Figure 6 is a rescuscitation assembly for ambulance use.

TECHNIQUE OF APPLICATION

The asphyxiated patient is immediately laryngoscoped. The mere act of laryngoscopy, by raising the soft parts and freeing the air-way, often

relieves the asphyxia.

Foreign bodies, fluids, etc., are promptly removed by suction. The intubation tube is then quickly introduced. The introduction of this tube immediately renders effective manual pressure upon the chest, which may be in progress (Sylvester). If the balloon tube of Coryllos is used, the balloon is now distended, and the oxygen (CO₂) connected; the vent of the intubation tube is then closed by the thumb, and is held in this position while the lungs are distending and until the manometer begins to blow off, at the pressure for which it is set. Insufflation is repeated at intervals of about sixteen times a minute. Upon the first evidence of voluntary respiration, the patient is allowed to breathe through the tube, his respiration being encouraged by an occasional insufflation, or by partly closing the vent of the tube. When the laryngeal reflexes have become active, the balloon is decompressed, and the intratracheal tube is withdrawn. From this time forward, any further depression in the respiration may be satisfactorily met by rebreathing oxygen CO₂ through a pharyngeal tube, or from an inhaler.

COMMENTS

Of the methods available for resuscitation, the only method offering hope of recovery, in the case of extreme aspliyxia, absent respiration, absent reflexes, complete relaxation, and failing circulation, is intratracheal insufflation of oxygen carbon dioxide, under pressure, because this technique, alone, fulfills the three urgent and essential requirements for asphyxial relief:

First, anoxemia is overcome by the highly concentrated oxygen thrown directly into the absorbing area; the respiratory center is stimulated by the specific action of carbon dioxide; and, finally, the Herring-Breuer reflex is directly stimulated through the physical distention of the chest by

the insufflated gas.

In the case of the newborn, an additional vital benefit is conferred by the relief of ante-natal atelectasis.

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Annual Meeting, April 3-5, in the Waldorf-Astoria, New York City,

ORGANIZED MEDICINE

The modern practice of medicine demands an almost contradictory combination of individualism and cooperation among physicians, so that today the medical society is as essential as the family doctor. Scientific physicians everywhere adopt uniform standards and methods which are determined and expressed by their medical societies.

The community, too, in distinction from the individual patient, is developing standards and methods for cooperating with the medical profession. The part to be taken by lay agencies, both voluntary and governmental, in the practice of medicine will be a basic subject for discussion in the coming meeting of the Medical Society of the State of New York.

FEATURES OF THE ANNUAL MEETING

The last issue of this Journal—that of March first—was almost entirely on the subject of the annual meeting, seventy-four pages being with the annual reports, the programs of the events, and descriptions of the exhibits and other features of the meeting. This issue contains some final announcements, beginning on page 408.

The wealth of features for which careful preparations have been made will insure unusual satisfaction to every physician that attends the meeting. For those who come early on the opening day, Monday, April third, there is a choice of clinics in twenty-three hospitals listed in the last Journal, beginning on page 326, so that a visiting member may be profitably occupied from nine in the morning to half-past five. But many will wish to attend the sessions of the House of Delegates and the dinner in the early evening.

The most serious appeal of a State Society meeting is that of the scientific sessions. Members not only wish to hear papers which will aid them in their practice, but also they wish to see the speakers, especially the guests who have been specially invited to deliver lectures. The Scientific Program which was printed in the last Journal, beginning on page 319, listed 87 subjects to be presented by 178 physicians, in addition to unlisted discussants, among whom any member is privileged to be numbered. Surely this is a professional feast suited to every taste and digestion.

The visiting member will be well entertained and instructed if he spends all day Tuesday and

Wednesday in the scientific sessions; but as he passes from one meeting room to another, he will do well to pause for a study of the Scientific Exhibits, of which 48 are listed on the last Journal, beginning on page 325.

The annual meeting will have a social appeal in the Banquet on Tuesday evening. Members are expected to bring their ladies and to entertain them afterward at a Dance, which is scheduled to continue until two o'clock in the morning. While the after-dinner speaking will technically constitute *The Annual Meeting*, it will also demonstrate the amenities of the professional life of the doctor.

Wednesday evening will be given over to the public so that the prospective patients may hear what the doctors expect them to known about professional matters. This meeting will be of interest to those physicians who are engaged in the new practice of public health education.

A doctor must have medical equipments and supplies, which he will find demonstrated in sixty booths which are listed and described in the last Journal, beginning on page 332.

Finally there are the unlisted opportunities to meet one's colleagues in the assembly rooms, along the corridors, and at the dining tables. Probably the events which will arise in memory the most frequently will be those of casual conversations with friends, both new and old. The inspiration of their personalities will be the greatest influence of the annual meeting.

LOOKING BACKWARD

THIS JOURNAL TWENTY-FIVE YEARS AGO

Functional Nervous Diseases: This Journal of March, 1908, comments on functional nervous diseases as follows:

"Joseph Collins, in a recent article, makes the statement that nervous diseases, contrary to the general tradition, yield more uniformly to treatment than any other class of diseases of comparable nature and severity. Nor is a correct diagnosis necessary for the successful treatment of many neuroses. While this is not in abrogation of the necessity for correct diagnosis, still it has a very practical bearing upon the results secured by faith curists, Christian Scientists,

shrines, systems, osteopaths, and charlatans innumerable. What these people have been able to do without diagnosis has been decidedly suggestive and helpful to the science of medicine. Pretense and fraud have taught medicine some valuable lessons. Collins is opposed to the claim that no one but the neurologist can treat nervous diseases; the general practitioner should study the proper manner of treating them with the same care that he studies infant feeding or the treatment of typhoid. These patients are sick and are entitled to better treatment than being told that there is nothing the matter with them."

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MEDICAL PROGRESS



The Medical Treatment of Spastic Conditions,-Despite the well founded scientific basis for the use of papaverine to relieve spastic conditions of the smooth musculature, says Hanns Löhr, writing in the Münchener medizinische Wochenschrift of December 23, 1932, papaverine administered alone has never been able to secure a foothold in medical practice. This is due possibly to poor results from underdosage, or possilly to individual sensitivity to the medicament. On account of the wide variety of therapentic effects exhibited by papaverine, Löhr has been trying for the last 6 years to place its therapeutic action upon a firmer basis by combining it with atropine and barbituric acid. By a combination of atropine 0.0005 gm., papaverine 0.025 gm. and diallylbarbituric acid 0.02 gm., he has produced a preparation which has given remarkable results in the prevention of spastie states of the smooth musculature. The advantage of this combination lies in the fact that by adding small amounts of barbituric acid, the usual dosage of atropine and papaverine can be reduced without loss of efficacy, thus preventing the secondary effects frequently observed from atropine. Gordonoff in 1931 demonstrated in the laboratory that this combination has an effect of high potency in relieving spasms experimentally produced, thus confirming the clinical results already obtained by Löhr. The latter having observed its excellent effects upon the gastrointestinal canal, has now extended its use to spastic conditions of other hollow organs, such as biliary and ureteral colics, and has found the results equally gratifying. He has also observed far-reaching symptomatic improvement in bronchial asthma and angina pectoris. rectal use of the preparation in the form of suppositories is advantageous in spassus of the kidney, ureter, and bladder, in which vomiting is so common as to make oral administration useless. The preparation is promptly reabsorbed into the blood stream through the hemorrhoidal and hypogastric veins, without having first to traverse the The suppositories are also indicated in dysmenorrhea and in the bladder tenesmus of acute pyelitis and cystitis, in which they have a definitely soothing effect.

The Control of Coughing.—The importance of knowing how to prevent attacks of coughing by controlling the function of the larynx is pointed out by Paul Lohfeldt in the Deutsche medizimische Wochenschrift of December 23, 1932. In the act of coughing, as is well known, the larynx is closed airtight and then opened explosively, while the air that has been placed under pressure by the closure suddenly escapes. There

are two ways of hindering this escape: 1st, by preventing the larynx from closing, and 2nd, after it is already closed, by refusing for a time to let it open. When the impulse to cough is not too great, the first end may be gained by the simple device of pronouncing a toneless S, for in every such act the larynx opens or remains open. Another way, if the urge to cough is greater, is to draw a large number of very short breaths in close succession, comparable to the panting of a dog. so that the larynx does not have time to open during the expiration or between inspiration and ex-The coughing reflex is thus offset by piration. the stronger breathing and opening reflex. The cough can also be suppressed by making strong pressure against the airtight closure of the larynx, but this requires strong will power and much practice, the aim being to restrict the cough to the very slight push necessary to expel the muens that has collected below the larynx. There is a tendency to cough much too soon and therefore far too much, before the mucus has loosened its hold, which it will do more quickly and amply if the patient learns to repress the cough until the right moment. Not only do cough sufferers make the mistake of coughing too much, but they also do not cough correctly. The patient must be educated to breathe deeply when the mucus loosens its hold spontaneously and nears the outlet, then to open the larynx suddenly to its maximum and drive the air through it with a long, unbroken pull. It is similarly possible to control clearing of the throat, and thus to avoid unnecessary rasping of the larynx, Improving and strengthening the voice with special reference to the relief of laryngeal tension is to be recommended. Many individuals have, through coughing and clearing the throat, lost the function of correct full closure of the larynx, and this is often connected with disturbances of the voice, the correction of which by proper training may do wonders for the control of fits of coughing.

Necrotizing Arteritis and Subacute Glomerulonephritis in Gonococcic Endoarteritis.—Milton Helpern and Max Trubek, writing in the Archives of Pathology, January, 1933, xv, 1, state that there is a question whether the lesions usually designated as periarteritis nodosa are caused by a specific bacterial agent or virus, or whether they represent a specific vascular reaction to any of the great variety of toxic agents. They report a case which strengthens the conception of the nonspecific toxic origin of these lesions. The patient died from uremia with pericarditis, following a subacute glomerulonephritis of ten weeks' duration. This illness started eight weeks

after a gonococcic urethritis complicated by gono-At necropsy, a right-sided coccic ophthalmia. subacute gonococcic endocarditis of the pulmonic valve and a typical subacute glomerulonephritis were found. In addition, isolated inflammatory lesions of the small arteries were found in two widely separated regions of the body, namely, the choroid coat of the eye and the testis. The histological features of these lesions conform to many of those which are characteristic of periarteritis nodosa. Thus, medial fibrinoid necrosis, disintegration of the elastic interna, subendothelial intimal proliferation resulting in fibroblastic obliteration and canalization of the lumen, vacuolation of the endothelial cells, excentric involvement of the vessel walls, absence of suppuration and the occasional periarteritic nodule were present. The larger arteries of the body were not involved, and the distribution of the lesions was not extensive enough to produce clinical manifestations. The renal lesion represented a severe reaction of a sensitive organ to the toxin produced by the gonococci growing on the pulmonic valve. The vascular lesions, which were anatomically dissociated from the kidney, were also considered a specific reaction of sensitive vessels to this same toxin. The findings in this case, the authors believe, strengthen the conception that these vascular lesions and those of periarteritis nodosa do not represent a specific disease, but rather a specific reaction of the blood vessels to any of a whole group of variable toxins.

Swineherd's Disease.—A report on 15 personal cases of this curious fever, observed within 2 years, is made by Eugène Urech in the Schweizerische medizinische Wochenschrift of January 14, 1933. All the patients were young swineherds, employed as apprentices in dairies. Only one of them had exercised his calling for more than a short period of time, and in no case had they come from farms, although the raising of hogs is a common occupation among the peasantry of the Canton de Vaud. The temperature curve is characteristic: after an afebrile prodromal period of 3 or 4 days the fever rises to 39° or 40° C., where it oscillates for 4 days, dropping by crisis on the 5th day, only to rise again 12-24-48-60 hours later, in an absolutely constant wave lasting 24 to 48 hours, this time rarely exceeding 39°. After a second crisis convalescence ensues of an easy type entirely different from the laborious convalescence from grip. The pulse curve indicates a clear dissociation between pulse and temperature. clinical symptoms are much less characteristic, beginning more or less like those of typhoid or a severe attack of grip, without focal lesions, although certain abdominal symptoms attract the attention at once. Prostration intense headache, and sometimes profuse sudor are frequently conspicuous, attended or not by delirium with bradycardia. Some of the patients exhibited albu-

minuria and hematuria for a few days. Lumbar puncture revealed nothing abnormal. Two patients had an urticarial eruption for 5 days, and somewhat more frequent was a buccal enanthem with hemorrhagic patches, often confluent. The blood count revealed a maximum of 12,400 white cells in the patient most profoundly affected, with a relative polynucleosis of 70 to 80 per cent. Red cells often exceeded 6.000,000. No eosinophils were present. Lasting immunity seems to follow the affection, no recurrence having been observed. Apparently the disease is not contagious from man to man. It is very probable that it is transmitted by hogs or milk (cheese, butter), but the precise cause still eludes discovery, despite extensive laboratory research. The clinical picture recalls those of dengue and pappataci fever, the temperature curve being the same for the three The two latter are transmitted by an intermediate host, and the question arises whether the same is not true of swineherd's disease.

Skeletal Traction with the Steinmann Pin.-Merrill K. Lindsay and Raymond M. McKeown state that fractures of both bones of the leg in its lower two-thirds are observed with greater frequency as traffic accidents increase, while the difficulties involved in their treatment still remain a problem. Up to the present time the pin has been used with reluctance owing to a widespread belief that the procedure is not without considerable danger. During the past five years the authors have treated 52 cases of fracture of both bones of the leg with Steinmann pin skeletal traction. In no case have they had either perceptible necrosis or osteomyelitis of the calcaneus through which the pin was inserted. The alignment has been satisfactory without appreciable shortening, and functional union has likewise been satisfactory. The procedure is not difficult, if a few simple principles are observed. The point of introduction of the Steinmann pin into, and through, the calcaneus is of primary importance. Blood-vessels and tendons must be avoided, and the line of traction must be in the long line of the leg. This is best secured with the foot in neutral position and right-angle dorsiflexion. A point which meets these requirements is found 1 cm. posterior and distal to the trochlear process of the calcaneus. The skin is prepared by the application of benzine, ether, and tincture of iodine, the iodine being removed by sponging with alcohol. Using the landmark indicated above, a skin incision 1 cm. in length is made in the long axis of the limb. Before incision the skin is drawn slightly toward the external malleolus, so that most of the incision will be distal to the point selected for inserting the pin, when the skin is subsequently released. With a hand drill or brace the pin is driven through the calcaneus at a right angle to the long axis of the tibia, until it can be felt beneath the skin on the medial aspect of the calcaneus. A second skin

meision is then made, to permit the pin to pass through The traction calipers are attached to the ends of the pin, and the traction rope temporarily fastened to the ends of a Thomas splint The skin at its points of contact with the pin is protected with alcohol dressings The patient is returned to bed, and traction of from 10 to 20 pounds, as the ease necessitates, is applied with the leg in the Thomas splint in balanced suspension from a Balkan frame. After twenty four hours the position of the fragments is checked by a ray examination By the fourth or fifth week the pin can be removed and a long plaster boot from the mid thigh to the tip of the toes is then applied, with sufficient flexion at the knee to prevent rotation Three or four weeks later a Delbet of the leg splint is substituted and active motion of the knee and ankle is started -Surgery, Gynccology and Obstetries, February, 1933, Ivi, 2

The Meltzer-Lyon Test and Cholecystography in Affections of the Biliary Tract-A systematic comparison was made by Domenico Santorsola and Vincenzo Gandolfi of the findings resulting from cholecystography and from the Meltzer Lyon test in a series of 22 eases In 10 eases both methods showed negative results, that is, there was no visibility of the gall bladder in the radiogram, no flow of B-bile in the duo denal test. In the first 9 of these eases operative results confirmed the presence of such lesions of the gall bladder and of the cystic and common duets as could leave no doubt of their impaired function. In 1 case where operation was impossible owing to the poor condition of the patient, the elimical symptomatology supported the diagnosis of grave cholecystitis. In 10 more eases the two methods were in agreement as to the presence of normality, in 5 of these the results were confirmed at operation, in the other 5, not operated upon, the clinical symptomatology and liter observations made it possible to exclude lesions of the biliary tract. In only 2 of the 22 cases were the results of the two methods at variance. In one of these the presence of an enormous echinococcus exist of the liver was a sufficient justification for an abnormal cholecys tograpluc result In the other ease, in which despite the presence of adhesions, the opaque substruce could be concentrated in the gall-bladder by a residuum of function, and in which the walls showed no considerable lesion in the cholecystogram it is probable that the gall bladder, a prey to inflammatory processes was not in a condition to respond to the stimulation exerted by the sulphate of magnesia The authors are satisfied that both methods should be regarded as dependable tests of gall bladder function, and that their association in practice may reveal, better than either alone functional disturbances which are the index of auttomic lesions of that organ. The cholecystogram does not always reveal with precision those changes which have but slight reper cussion upon the organ's function, and to base a judgment solely upon the intensity, uniformity, and clearness of the sliadow is unsife. On the other land, there are cases in which the Meltzer-Lyon test cannot be mide, owing to the patient's intolerance or to annionic or functional changes of the stomach or diodenum. When, however, the test succeeds, as is usually the case, a comparison of its findings with those of cholecys tography may throw a clear light upon the significance of the results of the latter—Riforma medica, December 10, 1932.

Mumps and Appendicitis -In an article en titled "An Unusual Case of Epidemic Mumps Complicated by Gangrenous Appendicitis," published in the Archives of Pediatrics, Maich, 1932, Sandler and Tinne state that only five examples of this combination of diseases have been described in the literature James Donnelly and James Bagot Oldfinn writing in the British Medical Journal, January 21, 1933, 1, 3759, re port the following ease. On May 25, 1932, a boy, aged 7 years, was seen by one of the authors and found to be suffering from mumps, to which he had been exposed a week previously On May 29th the boy seemed to be convalescing well That evening he complained of pain in the epigastrum, vomited and became restless The tem perature rose to 100° F, the pulse rate was 90 On May 31st the temperature was 100° and the pulse rate had risen to 98 The epigastric pain had diminished, but tenderness and rigidity had increased. The next day these symptoms were more marked, but there was very little pain diagnosis of acute appendicitis was made and an operation was performed. A large quantity of thin, purulent, slightly offensive fluid gushed out of the meision, and it was found that the whole lower abdomen and pelvis were involved in peritonitis The appendix, which was gangrenous and perforated, was removed. Colvalescence was uneventful The details in this case correspond very closely with those of the cases reported in the literature As is well known, orclutis is a very common complication of mumps, and usually occurs about the eight day Less commonly ovaritis, mastitis, pancreatitis, and enlargement of Bartholm's glands are reported. It is generally admitted that these complications are metastatic infections arising from the primary foci in the parotid glands. Is appendicitis another possible complication of inumps of is their association simply a coincidence? In all the cases thus far reported, the onset of the acute appendicitis has occurred a week or thereabouts after the parotitis started

Free Iodine in the Treatment of Vasomotor Rhinitis and the Symptom Complex of Sneezing and Nasal Hydrorrhea—In a preliminary report Morris Levine describes encouraging results in the treatment of vasoniotor rhinitis, the common cold, and hay fever with subcutaneous injections of a 5 per cent iodine solution containing traces of free iodine. He points out that, although of diverse etiology, vasomotor rhinitis, the common cold, and hay fever have one pathological finding in common, namely, a waterlogged condition of the nasal mucosa. Pharmacologically, it has been established that iodine is eliminated in part by the mucous membrane of the upper respiratory tract, upon which it has a definite stimulating action. From the prompt relief afforded in cases of nasal hydrorrhea, whether due to infection or allergy, it would appear that its influence is principally upon the aqueous metabolism to relieve a water-logged condition. date Levine has treated 20 cases of pure vasorhinitis and 50 of a mixed type. Injections were given every two or three days until the symptoms subsided completely. As a rule about six injections were required; in the more obstinate cases as many as ten. Without exception relief was experienced after two or more injections. The preparation used was iodomin, supplied in 1 c.c. ampules, and even children three years old have tolerated a full ampule without harm. In a series of 20 cases of common cold the injections gave early relief from sneezing, nasal stuffiness and watery discharge, but the results were not so gratifying as in vasomotor rhinitis, probably because it is difficult to see patients in the very beginning of a common cold. Laryngitis is a definite contraindication to the use of iodomin, because of the possibility that such patients may develop edema of the larynx on iodine medication.—Laryngoscope, January, 1933, xliii, 1.

The Little Known Eutrophic Action of Hypodermic Oxygen Therapy.—An attempt was made by J. Jarricot to check up a recent statement of Briand (1929) that children injected hypodermically with oxygen during the course of an epidemic of whooping cough had undergone no loss of weight but had, on the contrary, put on extra weight, suggesting that oxygen thus administered exerts a stimulating effect upon the nutrition of the child. The question is also related to Heckel's observation that injections of oxygen have a retarding effect upon obesity. Jarricot's own work in this field has been to assemble, by careful selection, a homogeneous group of 63 hypotrophic infants (15 to 30 per cent under weight) and subject them to a uniform treatment, an identical nutrition, the same surveillance and the same tests (3 weighings a week), then to compare their growth during the first month of observation with that during the second, the only difference between the two months being that in the second month the children received 3 or 4 injections of oxygen per week hypodermically, of 100 to 200 c.c. each. It is to be noted that the injections were not made for experimental purposes, but solely because of therapeutic obligations to children in whom impaired health (anemia, cough, etc.) demanded supplementary treatment. Children with whooping cough were definitely excluded, in order that the issue might not be clouded by the improvement in the general condition that results naturally in the course of the disease when vomiting disappears. It was found that only 17 children exhibited the same rate of growth during the 2 periods (3) or a deficiency of growth in the 2nd month (14); and such deficiency was only relative after all, the average daily growth in these 14 infants having been 29 gm. in the 1st month and 18 gm. in the 2nd. In the other 46 infants the growth was superior during the 2nd month, with a daily average gain of 23.5 gm. against 9 gm. before the injections began. Hence it appears that oxygen administered hypodermically exerts a cutrophic action, at least in young children.—Bulletin de l'Académie de Médecine, December 20, 1932.

Dysentery as a Cause of Sudden Death.— Eileen Harvey, writing in The Lancet, January 28, 1933, ccxxiv, 5709, calls attention to the fact that dysenteric infection may prove so rapidly fatal that there is no time for the development of any symptoms of the disease. She reports five cases, one in a man aged 65 years, one in a male infant, and the others in boys aged three, six, and nine years. The most striking feature on postmortem examination in all the cases was the presence of a ring of lymphoid hyperplasia and edema around the ileocecal valve; this varied in size and extent from case to case. In some it extended for several inches up the ileum and down the cecum. No record of this appearance has been found in descriptions by other workers of postmortem examinations in cases of dysentery. A possible explanation of this discrepancy is that the ilcocecal hyperplasia may be a feature of the most fulminating cases, of which those here reported were examples. Cultures were taken from the mucosa and contents of the bowel at several levels and from the spleen in each case, but 110 microorganisms of any pathological importance were isolated. This may be attributable to the tact that in no case was the post-mortem examination made until the second day, and in some cases not until the third day, after death. dysenteriæ Sonne was isolated from a sister who had been ill at the same time as one of the patients, which makes it likely that in this case the infecting organism was of the Sonne type. Fulminating infection with rapid death due to B. dysenteriæ Sonne does not seem to have been reported before. That death should occur as a result of a dysenteric infection without the appearance of the cardinal symptom of diarrhea, as in two of the cases, does not seem to have been previously noted.



LEGAL



PRIVATE HOSPITALS—CONTROL OVER UNRULY PATIENTS

By LORENZ J BROSNAN, ESQ Counsel Medical Society of the State of New York

An interesting legal situation has arisen in various cases where the question has been brought out as to the manner in which a private hospital may properly restrain its inmates by the use of force There can be no question but that in proper cases the servants of a private institution may be perfectly justified to forcibly suppress the actions of an unruly patient even though the patient is not an adjudged lunatic. Patients who are not in the least insane often suffer from delirium and hallucinations as a result of some non-mental discase and they must be handled with force The opinion of the court in a very recent case recognizes the situation that exists in the handling of patients with nervous disorders. The court in that case said.

"Institutions which receive persons affected with nervous diseases for hire should be supplied with reasonable devices of restraint, such as straps, Jackets, wristlets, anklets, blankets, and other approved apparatus and also sufficient man power to take eare of violent eases, which may develop at the moment, at the least minimum of danger to the patient"

An interesting case recently was taken up to the highest court of one of our Pacific States which well illustrates the type of case where a private liospital may be held accountable in damages for the violent handling of an inmate excitable young Italian, thirty-three years of age, who was robust physically, was preparing to make a trip to Italy His brother became worried about the excited state which he was in and called a doctor to examine the man preparatory to his leaving for the trip The doctor examined him and found him in excellent shape except that he was overexcited and suffering from a minor stomach difficulty The doctor gave him some medicine for the latter condition. He later testified that the patient's case was one of acute neurasthema, but that he was in no way violent The patient's brother watched his nervous state later the same night and called the doctor again requesting that he observe the patient. The doc tor was unable to call at the home of the Italians and requested that the patient be taken to a cer tain hospital where he would again look him The man was taken by the members of his family and left at the hospital He was assigned to a room and a female nurse undertook to assist lum take off his clothes It seems that during his whole life he had been extremely shy and diffident

toward all women except members of his family, and that peenharity combined with his nervous state caused him to become extremely excited. He excitedly and in a loud voice ordered the nurse out of the room. The head nurse of the institution decided that he was a dangerous nervous case, and at her instance the man was taken in a short while to another hospital where he was admitted and assigned to a room. Apparently the whole circumstances of his entry at the said hospital took place under the understanding that he was dangerous, for he was put in a room on a floor set apart for severe mental and alcoholic cases.

Several hours later the man wished to go to the bathroom and called a male nurse who directed the way He had no clothing on but had a single sheet wrapped around him. He suddenly became confronted with a female nurse in the corridor and hecame greatly agitated, shouting, "Don't touch me, if you do, I will kill you" He was thereupon put in a so called "strong room" be hind double-locked doors. In about two hours he suddenly smashed through the panels of the doors, emerging into the coiridor where he demanded some clothes from the first person he saw-a patient A female nurse appeared and he demanded his clothes from her, at which she rang an emergency bell At this the man grabbed the nurse by the arm. In an instant a doctor appeared and the nurse, whom the patient had released, told the doctor that the man should be taken care of The patient apparently became very panic stricken and started hysterically to try to escape The doctor pursued him with an up raised chair and a struggle ensued which lasted a considerable time The doctor was joined by others in an attempt to subdue the patient and finally an improvised tourniquet consisting of a towel was applied to the man's neck and a con siderable amount of ether on a piece of gauze was held over his face As the man's resistance grew weaker someone called the attention of the doctor to the fact that the patient appeared to be exanotic and needed air, but the doctor by that time excited and enraged did not heed the suggestion. When the man's struggle ceased efforts were made to re vive him, which were in vain and he was dis covered to be dead

A suit for damages based upon alleged death by wrongful act was brought against the sanitarium. The defense was that the man's condition justified the use of the methods used to subdue him. The jury, however, found a verdict for the plaintiff and on appeal the court found that the testimony amply supported the verdict. The court expressed itself as of the opinion that the methods of restraint were fraught with too much danger to the patient to be used at any hospital. The case, of course, is an extreme one, but shows that strongarm methods must be used upon unruly patients with great care.

Another case of coercion that came before the courts, presented on the testimony a startling set of facts. A nervous young woman, who had been suffering from malaria and who needed rest, entered a private hospital for a period of recuperation. The day after her admission she was told by nurses that the doctor in charge had ordered her breasts massaged and her hair shampooed. She protested against the treatment, saying that her hair had just been shampooed before entry at the institution and that her condition was too delicate for her to be massaged. The nurses, however, forcibly administered the treatment against her will. She then demanded that she be permitted to leave the place and to see her sister. The doctor in charge refused to grant either request. At that the girl announced that if they continued to refuse she would jump out of a window. Thereupon she was placed in a padded cell behind bars. Adjoining this were raving lunatics continuously shrieking. She was kept in the said place for five days and then removed to another room where she was restrained of her liberty and prevented from communicating with her family. According to her testimony, during this period of confinement she was forcibly subjected to numerous compulsory hypodermic injections and she was roughly treated upon various occasions when she was being taken from place to place about the sanitarium. She was held for over three weeks in all, until she finally managed to send a note to her mother by bribing a servant. Her release was obtained and suit brought against the proprietor and the hospital to recover damages for unlawful detention.

The defense was that she was a nervous case and required restraint and that she could not be set at liberty without danger to herself, and further that she had upon admission subscribed to the rules and regulations of the hospital. The further defense was that all that transpired had

been done in good faith on the part of the sanitarium and those in control, in the belief that she was not mentally capable of caring for herself. The doctor in charge of the place testified for the defense that the patient had suffered from lack of self-control amounting to hysteria. He did not claim that she was insane, but described her condition of hysteria as being "the borderland between sanity and insanity." However, a verdict was found in favor of the patient which was affirmed upon appeal. The appellate court in its opinion discussed the relation between the parties as follows:

"The plaintiff was not committed as insane, and if she had been the defendants do not account for the fact that they accepted her as sane by signing the agreement with her upon her entrance into the institution. If she subsequently became insane, it was the duty of the institution to have at once notified her mother and sister. The testimony of the defendants, however, is that she was not insane. Evidently, the defendant C believed that he had absolute control of the plaintiff and the right to imprison her if she opposed his orders or will, and the right to impose on her whatever treatment he thought best, and that the family need not be consulted any more than the plaintift herself. The effect of being the head of such institution is very often-too often-to render the person in charge callous and autocratic, and in his own opinion irresponsible to anyone.

"In this land the law guarantees liberty to every one, subject to restraint only in the modes provided by the law, and even then there is the right to review the conduct of those in charge of those deprived of their liberty. The plaintiff was not committed to the care of the defendants by any legal proceedings adjudging her insane, and her signing the paper agreeing to be subject to the rules and regulations of the institution was not irrevocable. It did not subject her to the irresponsible power and control of the defendant....

"If the plaintiff did not abide by her agreement to obey the rules and regulations of the institution the remedy of the defendants was to discharge her, or if her condition forbade this, to notify her relatives (neither of which they did), and not to imprison her and to force her to do their will."

While these cases are somewhat extreme as to the facts and situations, they illustrate the abuses that can exist in the handling of nervous cases.

GLAUCOMA FOLLOWING TREATMENT OF EYES

A doctor who was engaged particularly in the treatment of the eye, went away from his office for an extended trip and made arrangements with another eye specialist to occupy his offices during

his absence. The arrangement was merely that the second doctor should be available to treat his own private patients and to treat such patients of the first doctor who might request his services. One of the first doctor's old patients called and decided to see the second doctor with respect to an examination for glasses. The doctor after he had placed a drop of homatropine and eocaine in each eye, examined her and found a far sighted astigmatism. She was told to return in a few days but did not do so. About the fifth day, however, the doctor received a call to her home and found her complaining of headaches and pain in one eye. The doctor prescribed medications and after a few days had elapsed during which time the patient remained under the doctor's care he made a definite diagnosis that a condition of glaucoma existed affecting the right eye. The doctor gave her continued medical treatment but the condition did not improve, so after several weeks the doctor referred her to another eye surgeon who performed an iridectomy upon the eye. The result was a partial improvement only.

Suit was brought against the doctor who treated the patient and also the doctor whose patient she had been on prior occasions. The complaint against the latter was based on a theory of agency,

The charge was that the negligence of the defendants had caused the complete loss of one eye and partial loss of the other. The case came on for trial and the plaintiff tried to make out a case on the elaim that when she had come in for examination she had been suffering from a condition manifested by dull headaches, blurring of vision and faulty vision in that illuminated objects appeared to be surrounded by rainbow-like rings. The testimony was that the doctor was told of said symptoms and that in the face of them he administered to the patient atropine. The doctor denied ever having received any such history, or having administered atropine. The trial proceeded to the point when the plaintiff's testimony had nearly all been introduced and an expert witness put on the stand on behalf of the plaintiff was being crossexamined. The plaintiff's attorney apparently realizing that the case had not progressed favorably for his side, stipulated in open court to discontinue the action and escape the possibility of a judgment for costs, thereby terminating the matter.

ALLEGED NEGLIGENT ADMINISTRATION OF DIATHERMY TREATMENT

An elderly woman consulted a physician who was specializing in orthopedic surgery at a hospital elinic conducted by him, complaining of inability to properly use her left arm and stiffness of the fingers of her left hand. The doctor examined her and diagnosed her condition as synovitis, complicating a chronic adhesive arthritis of the left shoulder joint. The doctor advised diathermy treatments, which were administered to her, and some time later he gave her certain intravenous injections of sodium bicarbonate.

After the patient had continued under the doctor's care for two months, receiving such treatments, and her condition had not greatly improved, he had the patient admitted to the hospital for further treatment. He put her under a general anesthetic and manipulated the arm up and down. He placed it in an upright position supported by two splints. The day after said treatment she was permitted to return to her home. The doctor continued to care for her for about three weeks during which time he removed the splints and called in a masseure to treat her. The last time the doctor saw the patient she was still complaining of pain in the shoulder and inability to properly use the arm, and the doctor advised her to again enter the hospital, but she refused, and he never saw her again.

Suit was thereafter instituted in which the claim was made that the doctor was negligent in treating the patient under the anesthetic. The charge was that he had so negligently manipulated her left shoulder as to over-stretch the arm and cause an injury to the motor and sensory nerves with a resultant stiffness of the fingers of the left hand and inability to use her left arm.

Two physical examinations were made after the suit had been commenced for the purpose of ascertaining the condition of the plaintiff; and the result of said examinations was that in the opinion of the examining doctors the woman suffered from no other ailments than a general arthritic condition which was in no way attributable to anything which the doctor had done.

The case was noticed for trial by the plaintiff's attorney but no steps were ever taken to place the case upon the Calendar for trial. After some time had elapsed an application was made by the defendant's attorney to dismiss the case for failure on the part of the plaintiff to diligently prosecute the same. The plaintiff's attorney rather than contest the motion agreed to discontinue the action, thereby terminating the matter finally in favor of the doctor.



NEWS NOTES



FEATURES OF THE ANNUAL MEETING

The forthcoming Annual Meeting of the Medical Society of the State of New York promises to be an unusual success. In a time in which bankers, public utilities' experts, even the judiciary are under criticism, it is a matter of great satisfaction to feel that the Medical Society of the State of New York is marching forward with increasing vigor and determination.

On Monday, April third, a Clinical Day, with clinics in the hospitals in the five boroughs, is being arranged under the Chairmanship of Dr. Peter Irving, assisted by Dr. Theodor Blum.

The House of Delegates will open at two p.m. in the Grand Ball Room of the Waldorf-Astoria Hotel, and a new feature of the Meeting of the House of Delegates will be an Inaugural Address by the incoming President, Dr. Frederick H. Flaherty, entitled "The Control of Medical Activities by the Medical Profession."

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William P. Howard	Albany
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Harrison Betts, Chairman	Westchester
Walter T. Dannreuther	
William A. KriegerDut	
Albert L. Voltz	
Albert G. Swift	
THE REPORTS OF THE TREASURER AND TI	HE TRUSTEES
Edward R. Cunniffe, Chairman	Bronx
John J. Masterson,	
Franklin Welker	
Horace M. Hicks	

W. Grant CooperSt. Lawrence THE REPORT OF THE LEGAL COUNSEL

Augustus J. Hambrook, ChairmanRei	ıssclaer
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THE REPORT OF THE COMMITTEE ON PUBLIC HEALTH AND MEDICAL EDUCATION

George S. Towne, Chairman	Saratoga
Thomas M. Brennan	Kings
Edgar A. Vander Veer,	Albany
Richard H. Sherwood	. Niagara
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THE REPORT OF THE COMMITTEE ON LEGISLATION Joseph B. HulettOrange Floyd J. AtwellOtsego

THE REPORTS OF THE COMMITTEE ON SCIENTIFIC WORK, AND THE COMMITTEE ON ARRANGEMENTS

George W. Kosmak,	Chairman	 . New	York
David W. Beard		 Sch	oharie
Sylvester C. Clemans		 1	Fulton
Albert E. Payne		 S	uffolk
Morris Maslon,		 ٧	/arren



NOTES NEWS



FEATURES OF THE ANNUAL MEETING

The forthcoming Annual Meeting of the Medical Society of the State of New York promises to be an unusual success. In a time in which bankers, public utilities' experts, even the judiciary are under criticism, it is a matter of great satisfaction to feel that the Medical Society of the State of New York is marching forward with increasing vigor and determination.

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ANDCIL L. VOITA	I Interns
Albert G. Swift	Onondaga

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THE	REPORT	oF	THE	COMMITTEE	ON	MEDICAL
				NOMICS		

James F. Rooney, Chairman	Albany
James M. Flynn	.Monroe
DeWitt StettenNo	ew York
Andrew Sloan	Oneida
Mary I Kazmierczak	

REFERENCE COMMITTEE ON NEW BUSINESS (A)

Aaron Sobel, Chairman	Dutchess- Putnam
Terry M. Townsend	New York
Edgar Bieber	Chautauqua
Allen W. Holmes	Schuyler

REFERENCE COMMITTEE ON NEW BUSINESS (B)
John E. Jennings, ChairmanKings
Adolph G. De Sanctis
George R. CritchlowErie
Charles J. KelleyCortland
George A. LeitnerRockland

Peter J. DiNataleGenesee

LEGISLATIVE BULLETIN NUMBER 8

March 3, 1933.

Hearings—March 14, Assembly Committee on Codes, Assembly Int. No. 63, Vaughan, Assembly Int. No. 181, Bernhardt: Antivivisection bills.

Action on Bills—Assembly Int. No. 772, Doyle, re. bichloride of mercury, has advanced to third reading in the Assembly and is being amended in revision.

Senate Int. No. 993, Twomey (Assembly Int. No. 1314—Streit), payment of fines, fees and penalties collected by Department of Education to be paid into the state treasury, to be postponed until 1935—has advanced to third reading in the Senate.

New Bills Introduced—Assembly Int. No. 1772—Schanzer, adds a new section to the Criminal Code, for proceedings when person arrested for certain crimes appears insane or to be a sex deviate. Referred to the Codes Committee.

* * *

There was a most important hearing yesterday before the joint Labor Committee on bills affecting the Workmen's Compensation Law. Lawrence appeared for the Society against the several occupational disease bills and in favor of the free choice bill. Commissioner Perkins, in her final appearance before a legislative committee, urged the enactment of one of the all-inclusive occupational disease bills. She said she felt the time has come when Industry should protect its employees against every manner of disablement that is incident to the occupation. course, Federated Labor was for the bills and a representative of the League of Women Voters spoke for them. Those opposed were Associated Industries, representatives of insurance companies and self-insurers, a representative of hotel associations, and a number of individual organizations. Dr. Curran, representing the New York Compensation Lawyers' Association, spoke against them, and Dr. Lawrence emphasized particularly the difficulty a physician would have in determining whether certain disabling conditions actually were due to the occupation or to what the employee might have done during the hours that he was not employed. He also pointed out the difficulties physicians would encounter in preventing malingering where there was a definite determination upon the part of the employee to do so, and also emphasized that Industry, to protect itself, would demand a careful physical examination of every employee prior to his being engaged; and the discovery of potential disabilities which might never materialize would, nevertheless, be recorded and might conceivably be the reason for his not being employed. Mr. Daly, General Secretary of Associated Industries, elaborated upon this statement and assured the committee that exactly what had been described by Dr. Lawrence would be followed and it would work a great hardship upon Labor that can and should be avoided.

* * *

The osteopathic bill has appeared in the Senate—Int. No. 1343—sponsored by H. L. O'Brien. File your protest immediately with your Senator and the Senate Committee on Public Education, whose personnel you will find in the "white book"; and also with the Majority and Minority Leaders, Senators Dunnigan and Fearon respectively. Remember that letters from prominent lay persons are usually very influential.

HARRY ARANOW, Chairman.

LEGISLATIVE BULLETIN NUMBER 9

March 10, 1933.

Hearings

March 14—Assembly Committee on Codes
Assembly Int. No. 63—Vaughan
Assembly Int. No. 181—Bernhardt
(Antivivisection bills)
Assembly Int. No. 295—W. F. Smith
Assembly Int. No. 1152—W. F.
Smith
("Ambulance chasing" bills)

Action on Bills

Senate Int. No. 788—Berg, professional boards, was reported out and debated on the Senate floor, then laid aside to be taken up again next week.

Senate Int. No. 711—Byrne, lye bill, was amended and referred to the Senate Committee on Public Education.

Senate Int. No. 487—Esquirol, Health Department rules, was reported out of committee in the Senate and advanced to third reading.

Assembly Int, No. 705—Austin, Health Department rules, was reported out of committee in the Assembly and advanced to third reading.

Senate Int. No. 621—Quinn, employing experts in psychiatry, was reported out of committee in the Senate and advanced to third reading.

New Bills Introduced.

The osteopathy bill has appeared in the Senate, introduced by Mr. H. L. O'Brien by request; Senate Int. No. 1343. Referred to the Education Committee.

Senate Int. No. 1510—Esquirol; Assembly Int. No. 1970—Brownell, amends the Workmen's Compensation Law by placing in excepted employments inmates of, and other recipients of charitable aid from, a religious or charitable institution, who perform work in or for the institution in return for aid conferred. Referred to the Labor Committee.

Assembly Int. No. 1977—Mr. Nathanson has introduced an occupational disease bill which is identical with Assembly Int. No. 72 and Assembly Int. No. 130. Referred to the Labor Committee.

During the last week the Legislature concentrated entirely upon measures relating to the relief of the depression, and so there is very little action to be reported on bills that we have under observation. The chairmen should not, however, lose this opportunity of informing all of the legislators that we have recommended in our previous bulletins, regarding the pernicious bills that are before us.

Enclosed we are sending you a copy of a sheet of instructions which has been sent by the Teurporary Emergency Relief Administration (T. E. R. A.) to the welfare commissioners-county and town-of the state. See page 412. Heyd appointed a special committee with Dr. James N. Vander Veer as chairman, Dr. Hyzer Jones of Utica, Dr. Albert Swift of Syracuse, and Dr. Lawrence as secretary, to confer with Dr. Parray and Dr. Davis representing the T. E. R. A., at their request, to outline a program by which the T. E. R. A. might assist the public welfare officers in providing medical care for indigent persons. The outline enclosed is the result of this committee's work. Of course, this applies only in upstate counties; the five New York counties have a program of their own which is very similar but differs in some details.

We recommend, therefore, that you bring this to the attention of your County Society. It is definitely an extension of the public welfare work and, as you will observe, the commissioner of welfare will be reimbursed by the T. E. R. A. to the extent of 40 per cent of the amount expended in providing medical care. Each county will, naturally, work out a program of its own as to how the work shall be done and bills submitted and paid. This, however, must be clearly borne in mind-that physicians must receive authorization from the public welfare commissioner for all services before rendered, except emergencies. The welfare commissioner will have special forms upon which authorization will be made and physicians, if they intend to submit bills to the welfare officers for their services, must have the authorization endorsed by him and submit it with the bill. Authorization by telephone will not be sufficient, except in an emergency, and then must be supported by written authorization within twentyfour or forty-eight hours.

Dr. Wynkoop, chairman of the Onondaga County Public Relations Committee, is holding a conference this (Friday) afternoon to which Dr. Lawrence has been invited, for the purpose of developing plans for putting this program into operation in that county. It is recommended that every County Society, either at a regular or at a special meeting, or through one of its active committees, take up this outline with the welfare commissioners in order that there may be a complete understanding with regard to the manner in which the work will be done and compensation received. This is an exceedingly important matter. As was mentioned several times before, the administration of the Welfare Law will soon be a problem equally great, if not greater, than the administration of the Workmen's Compensation Law.

The last issue of our Journal carries the program for the next annual meeting of the State society. This promises to be one of the most worth while meetings we have ever had. We

should like particularly to call your attention to the program for the clinical day on Monday, April 3rd.

HARRY ARANOW, Chairman.

TEMPORARY EMERGENCY RELIEF ADMINISTRATION

Rules and Regulations Governing Medical Care to Home Relief Clients

The Temporary Emergency Relief Administration has issued the following rules and regulations governing medical care to home relief clients where medical care is provided on a fee basis:

1. A uniform procedure for authorization of medical care shall be established for each Welfare District. This procedure shall not be in conflict

with the following requirements.

All authorizations for medical care shall be issued in writing on the regular relief order blank, except that telephone authorization shall immediately be followed by such an order. This order shall authorize the doctor to provide medical care for a period not exceeding two weeks. Not more than ten visits, nor an expenditure of more than \$20.00 will be authorized by any such order. Medical care for more than two weeks shall be based only on a written renewal of the original authorization, such renewal not to be issued until after a re-investigation of the case in the home.

Medical care for prolonged illnesses, such as chronic asthma, chronic heart disease, chronic rheumatism, shall be authorized on an individual basis, and in general shall be limited to not more than one visit per week, and for a period not to exceed three months. In instances where more frequent visits seem to be indicated for a short period, additional authorization for such service shall be required.

2. In this emergency there is an increasing need for medical care, and a consequent need for the participation of an increasing number of physicians in medical care to recipients of Public Relief. It is recognized that it would be impossible with the funds available fully to compensate the physician for his professional serv-The Temporary Emergency Relief Administration will reimburse Public Welfare Districts the statutory forty per cent of authorized expenditures for medical care on the basis of not to exceed \$2.00 for a home visit, and \$1.00 for an office visit. The Administration will reimburse the statutory forty per cent of authorized payments for obstetrical services in the home on the basis of a fee of \$25.00, which fee shall include charges for delivery and a minimum of three prenatal office visits and the necessary postnatal care. Details of these services shall be submitted with the bill.

Special services shall be authorized on an individual basis, the general basis being a reduction of thirty-three and one-third per cent from the ordinary County fee schedule. A copy of the minimum County fee schedule shall be filed with the local Commissioner of Public Welfare and with the Director of Medical Care, Temporary Emergency Relief Administration.

- 3. Physicians who are providing medical service for Welfare patients shall submit monthly a separate bill for each patient, to the Commissioner of Public Welfare, and such bills shall be submitted not later than the 10th day of the month following the period of service. Payments made on the basis of retroactive authorizations will not be reimbursed by the Temporary Emergency Relief Administration.
- 4. Each bill shall be chronologically arranged and state the name, age, and address of the patient; the diagnosis, or a general indication of the nature of the illness; the nature of the treatment, i.e., in home, office, or special type of care; the dates on which service was rendered; and the status of the case at the end of the month (cured, sent to the hospital, needs further treatment, dead). Bills for medical care shall be accompanied by the original written authorization for such care.

Drugs

- 1. All prescriptions for necessary drugs and medicines shall be filled from the National Formulary or the United States Pharmacopæa. Proprietary remedies shall not be considered reimbursable by the Temporary Emergency Relief Administration.
- 2. Physicians providing authorized medical care to persons in receipt of public funds shall be encouraged to use a formulary which excludes expensive drugs where less expensive drugs can be used. When expensive medication is considered essential it may be authorized after consultation with the "Welfare" Committee of the local Medical Society.
- 3. Commissioners of Public Welfare should make trade agreements with druggists for uniform or reduced rates for prescriptions (for ex-

ample, the average prescription should not cost more than \$0.50 to \$0.75).

Medical Advice Should Be Available to Cammissianers of Public Welfare

1. The Medical Society of the State of New York has agreed to request each County Medical Society to appoint or designate a Committee to advise, at least monthly, with the local Commissioner of Public Welfare.

Whenever necessary the Commissioner of Public Welfare should consult this Committee concerning problems of medical care, such as:

(a) The reasonableness of any given bill for medical services.

(b) To investigate complaints made with regard to medical care.

(c) Any proposed change in policy with regard to provision of medical care.

(d) Principles to be followed in the allocation of cases to physicians.

2. Commissioners of Public Welfare should consult with this office with regard to any difficulties in the provision of medical care.

March 3, 1933.

TRI-STATE CONFERENCE

The twenty-second meeting of the Tri-State Conference of the officers of the medical societies of New York, New Jersey and Pennsylvania was held on Saturday, February 18, 1933, in the Hotel Pennsylvania, New York City, beginning at ten o'clock and continuing through a social luncheon at noon, and a brief session in the afternoon,

The subject of the medical service supplied to the workers in the Endicott-Johnson Company, manufacturers of shoes in the cities Johnson City and Endicott, a suburb of Binghamton, N. Y., was discussed by Dr. Howard W. Davis of Binghamton, New York, formerly Medical Director for the Company. The service is given to about 15,000 workers and their families, at a cost of about \$750,000 annually, of which \$175,000 are the salaries of about 30 full-time physicians connected with the service. The cost is met by a deduction of five per cent from the pay of each worker. Nearly all forms of medical and surgical service, including hospitalization, are given.

The medical service supplied by the Company

has a peculiar significance in that it may be compared with that given by private practitioners in the nearby city of Binghamton under almost the same conditions. The attitude of the two groups of practitioners toward each other is one of tolerance, with little evidence of jealousy or criticism between them.

Dr. Willard C. Rappleye, Dean of the College of Physicians and Surgeons, and Director of Study of the Commission on Medical Education, described the aims of the Commission and its lines of cooperation with physicians and their societies in preparing physicians to give the forms of medical service which the people require.

Dr. N. B. Van Etten of New York City, a member of the Committee on the Cost of Medical Care, described the progress made by physicians and their societies in meeting the problems which were discussed by the other speakers.

A valuable feature of the conference was the confidential opinions expressed by the speakers regarding recent experiments and demonstrations in medical service given by economic groups or by governmental agencies.

SULLIVAN COUNTY

At a special meeting of the Sullivan County Medical Society held February 15, 1933, at the Lenape Hotel in Liberty, 29 members heard a talk on undulant fever by Dr. M. R. French, of the department of research and laboratory of the State department of health. The paper was one of the best received that the society has listened to, probably due to the fact that Dr. French personally observed many cases of undulant fever in this district.

Following the talk, there was much discussion

of the subject, and Dr. French was beseiged by many questions.

After this there was a four-reel motion picture on the diagnosis and treatment of peptic ulcers. Dr. George F. Herben, president of the society presided at the meeting, which was preceded by a dinner.

The next meeting of the society will be held at the Lenape Hotel on March 1st.

HARRY GOLEMBE, M.D., Chairman af the Publicity Committee.

The last issue of our Journal carries the program for the next annual meeting of the State society. This promises to be one of the most worth while meetings we have ever had. We

should like particularly to call your attention to the program for the clinical day on Monday. April 3rd.

HARRY ARANOW, Chairman.

TEMPORARY EMERGENCY RELIEF ADMINISTRATION

Rules and Regulations Governing Medical Care to Home Relief Clients

The Temporary Emergency Relief Administration has issued the following rules and regulations governing medical care to home relief clients where medical care is provided on a fee basis:

1. A uniform procedure for authorization of medical care shall be established for each Welfare District. This procedure shall not be in conflict

with the following requirements.

All authorizations for medical care shall be issued in writing on the regular relief order blank, except that telephone authorization shall immediately be followed by such an order. This order shall authorize the doctor to provide medical care for a period not exceeding two weeks. Not more than ten visits, nor an expenditure of more than \$20.00 will be authorized by any such order. Medical care for more than two weeks shall be based only on a written renewal of the original authorization, such renewal not to be issued until after a re-investigation of the case in the home.

Medical care for prolonged illnesses, such as chronic asthma, chronic heart disease, chronic rheumatism, shall be authorized on an individual basis, and in general shall be limited to not more than one visit per week, and for a period not to exceed three months. In instances where more frequent visits seem to be indicated for a short period, additional authorization for such service shall be required.

2. In this emergency there is an increasing need for medical care, and a consequent need for the participation of an increasing number of physicians in medical care to recipients of Public Relief. It is recognized that it would be impossible with the funds available fully to compensate the physician for his professional serv-The Temporary Emergency Relief Administration will reimburse Public Welfare Districts the statutory forty per cent of authorized expenditures for medical care on the basis of not to exceed \$2.00 for a home visit, and \$1.00 for an office visit. The Administration will reimburse the statutory forty per cent of authorized payments for obstetrical services in the home on the basis of a fee of \$25.00, which fee shall include charges for delivery and a minimum of three prenatal office visits and the necessary postnatal care.

Details of these services shall be submitted with the bill.

Special services shall be authorized on an individual basis, the general basis being a reduction of thirty-three and one-third per cent from the ordinary County fee schedule. A copy of the minimum County fee schedule shall be filed with the local Commissioner of Public Welfare and with the Director of Medical Care, Temporary Emergency Relief Administration.

- 3. Physicians who are providing medical service for Welfare patients shall submit monthly a separate bill for each patient, to the Commissioner of Public Welfare, and such bills shall be submitted not later than the 10th day of the month following the period of service. Payments made on the basis of retroactive authorizations will not be reimbursed by the Temporary Emergency Relief Administration.
- 4. Each bill shall be chronologically arranged and state the name, age, and address of the patient; the diagnosis, or a general indication of the nature of the illness; the nature of the treatment, i.e., in home, office, or special type of care; the dates on which service was rendered; and the status of the case at the end of the month (cured, sent to the hospital, needs further treatment, dead). Bills for medical care shall be accompanied by the original written authorization for such care.

Drugs

- 1. All prescriptions for necessary drugs and medicines shall be filled from the National Formulary or the United States Pharmacopæa. Proprietary remedies shall not be considered reimbursable by the Temporary Emergency Relief Administration.
- 2. Physicians providing authorized medical care to persons in receipt of public funds shall be encouraged to use a formulary which excludes expensive drugs where less expensive drugs can be used. When expensive medication is considered essential it may be authorized after consultation with the "Welfare" Committee of the local Medical Society.

3. Commissioners of Public Welfare should make trade agreements with druggists for uniform or reduced rates for prescriptions (for ex-

MEDICAL COMMITTEE ON COMPENSATION ABUSES

The daily papers of February 13 carried news items on the appointment by Governor Lehman of a physicians' committee to study medical abuses in connection with the Workmen's Compensation Law, and to report plans for remedial legislation. The New York *Times* of February 13 says:

"The Governor's action is a sequel to one taken by his predecessor, Franklin D. Roosevelt, who referred to the Academy of Medicine a report rendered to him by a special committee, headed by Howard S. Cullman, setting forth the

abuses.

"Dr. Eugene H. Pool of New York City, one of five representatives of the New York Academy of Medicine, has been designated as chairman of the committee by Governor Lehman.

"The others representing the academy are: Drs. Frederick W. Bancroft, George Baehr, Adrian V. S. Lambert and Charles A. McKendree, all of New York City. Dr. Lambert has already been identified with the work as chairman of a subcommittee on medical problems of the Cullman committee.

"The members representing the New York State Medical Society are: Drs. David J. Kaliski of New York, Thomas McGoldrick of Brooklyn, F. M. Miller, Jr., of Utica, Harry R. Trick of Buffalo and Frederick S. Wetherell of Syracuse.

"The report of the Cullman committee to Governor Roosevelt in December was accompanied

by a leter jointly signed by Mr. Cullman and Dr. Lambert in which they informed the Governor that data assembled by the committee and included in the report furnished 'uncontroverted evidence of existing rackets' in workmen's compensation cases and urged that these should be eliminated at the earliest possible moment."

Commenting on this Committee the New York Herald Tribune of February 22, says:

"Governor Lehman's appointment of a distinguished medical committee to recommend specific remedies for abuses of the workmen's compensation law is assurance that a fight well begun is to be carried to a finish. There is always the danger that an inquiry suspended will lose its drive. Governor Lehman has guarded against this hazard by naming his committee of ten physicians representing the New York Academy of Medicine and the Medical Society of the State of New York to follow up conclusively the work thus far aecomplished. This committee, headed by Dr Eugene H. Pool, has as one of its members Dr Adrian V. S. Lambert, who was chairman of the Cullman subcommittee that so thoroughly prepared the ground. It lacks nothing of informed and high-minded purpose. There is reason to expect with Mr. Cullman that, 'by the intelligent application of responsible professional men to the problems involved,' in due course rackets and abuses may be eliminated by necessary legislative action."

MEDICAL ECONOMICS IN BUSINESS

The physician may not he classed as a financier by men of business, but the New York Times believes that business would be helped by the adoption of the economic methods of the physicians. The Times of February 10 says editorially:

"No more discerning suggestion has been made regarding the cause of our troubled state than that of Dr. Francis M. Pottenger, president of

the American College of Physicians:

"Were business concerns to adopt the altruistic spirit of physicians and take less profits or no profits at all from those who are unable to pay for goods, it would soon change the ruthless psychology which dominates modern economic life.

"The physician, obeying his own conscience and following the pledge of his profession, responds to every call within his skill and strength to answer. He does not pause to ask whether there will be even a reasonable profit for him or any compensation at all. It will be said that business cannot be carried on successfully on

any such basis, even if it has been found practicable in the professions, in the simpler life of earlier days and even in smaller communities today. But if the spirit to which Dr. Pottenger refers as characteristic of the medical profession, in its ministry to human ills without greed or even controlling thought of gain, were as pervasive in the field of business as in that of medicine, we might have escaped much of the economic misery we have been undergoing. What a Utopian world it would be!

"The profession has set an example in the family physician which is of value to the State. We say of the physician, as was said by Achilles of Machaon, son of Aesculapius, 'He is worth a host of us.' That is true of him not only in his skill but in his readiness to give to the community without sparing self and without greed of gain. The president of the American College of Physicians in his diagnosis has suggested a 'ruthless psychology' as the root of our economic trouble. But he has also written in his diagnosis the prescription of the remedy."



BOOK REVIEWS



THE CURATIVE VALUE OF LIGHT. By EDGAR MAYER, M.D. 12mo of 175 pages, illustrated. New York, D. Appleton and Company, 1932. Cloth, \$1.50.

Dr. Edgar Mayer in his new book, "The Curative Value of Light," writes as interestingly as he talks. He has full knowledge of his subject, as he so aptly shows.

In the early paragraphs he states it is mainly for the public's perusal. Taking this aspect of the subject he handles his matter remarkably well. He does not express any unfounded claims for this modality nor does he couch his language in too ultra scientific form for the layman.

The book is indeed valuable and instructive, and

should and will be read.

It will not harm the field of Light Therapy, but rather will stimulate interest, both medical and lay, because it so pointedly shows that Light Therapy is a powerful force and should be used by a patient only when directed and advised by a physician.

Hence it behooves every physician to read this book so that he can intelligently answer questions that will undoubtedly be asked concerning this form of therapy.

John J. Hauff.

FUNCTIONAL DISTURBANCES OF THE HEART. By HARLOW BROOKS, M.D. 12mo of 288 pages. Philadelphia, J. B. Lippincott Company, 1932. Fabrikoid, \$5.00. (Everyday Practice Series.)

This has been a most interesting monograph to review. Written "far distant from reference libraries," it perforce represents the personal views of its distinguished

Perhaps the first question to which we seek an answer relates to the basic character of "Functional Disturbances": are they purely reflex disorders of perverted physiologic function or have they an organic basis? Brooks states his belief frankly that in some instances physiology has trespassed over the border into pathology, and that physiologic changes may in some cases be of chemical or electrical type. Researches and more delicate differentiating laboratory staining methods of the past few years have indicated the former, as witness the study of the nuclear network of the cardiac cells in myocardial exhaustion (myocardia-asthenia).

The classification is as follows: 1. Effect of the emotions, 2. Anxiety angina, 3. Gastric distention and flatulence, 4. Cardiac exhaustion, 5. Early hyperthyroid heart, 6. Cardiac neuroses, 7. Paroxysmal tachycardia, and 8. Neurocirculatory asthenia.

The author is at his best in the two last subjects. Particularly is neurocirculatory asthenia handled with great understanding. His references to his military experiences are many, but discussion of this condition without consideration of the valuable observations in base and field hospitals would be impossible. The examination of recruits was in many ways an illuminating experience for most of us, but in no other disease was the lesson borne home as in neurocirculatory asthenia.

The ability of many patients with paroxysmal tachycardia to terminate their attacks by individualistic methods which are in some circumstances apparently absurd and entirely unreasonable is thoroughly discussed in citations of cases. We do not recall so interesting a clinical note as the author's description of the aged woman of 84, who, having had this disease since her sixteenth year, bounded out of bed on the sixth day of a lobar pneumonia to apply (and successfully so) her usual therapeutic measure for an attack which her nurses considered eardiac failure, fighting off both nurses with great vigor and then belligerently demanding their discharge for lack of intelligence.

References to the literature are few except in the last two chapters, and there is no bibliography. This accentuates the personal character of the volume, although we believe the value of a monograph is increased by the inclusion of those references and dates which help us to acquire a knowledge of the sequence of outstanding events in the scientific study of the disease or group of diseases under consideration. To be specific, this volume could have been enriched by giving the referenees to George Draper's physical types, Libman's pain sensitivity tests, Oppenheimer and Rothschild's proposal of the name neurocirculatory asthenia, the white vasomotor reaction of Ryan, and Mabon's discussion of early physical exhaustibility.

The book can be heartily recommended.

FRANK BETHEL CROSS.

THE SPUTUM. Its Examination and Clinical Significance. By RANDALL CLIFFORD, M.D. Oetavo of 167 pages, illustrated. New York, The Macmillan Company, 1932. Cloth, \$4.00.

Examination of sputum is frequently required in the general hospital laboratory and is done by technicians or inexperienced physicians, who are badly in need of guidance as to the technique and interpretation of their findings. Dr. Clifford's book gives a clear, detailed, but not wordy description of the methods which have been found useful in the examinations of sputum and their diagnostic interpretation. The volume is well illustrated and should be welcomed by the laboratory workers.

M. A. Goldzieher.

CLINICAL ENDOCRINOLOGY OF THE FEMALE. By CHARLES MAZER, M.D., and LEOPOLD GOLDSTEIN, M.D. Octavo of 518 pages, illustrated. Philadelphia, W. B. Saundons Company 1932 Civil 2003 ders Company, 1932. Cloth, \$6.00.

The authors of this book have set out to present a clear, concise and instructive work on female endocrinology and have succeeded in a masterly way. Although the female sides are greatly stressed, the volume becomes, nevertheless, a classic in general endocrine studies.

The historical evolution of the two definitely isolated ovarian hormones, cestrian and progestin is vividly portrayed and the value of these hormones is carried through the most recent experimentations and developments. The processes of menstruation, gestation amenorrhea, etc., stand out clearly in their dependence upon these secretions and also upon the interrelated pituitary hormones.

The reader will find a thorough discussion of the acidophilic, basophilic and chromophobe cells of the anterior pituitary gland, the products of each group of cells and in general the role played by the pituitary organ upon sex, growth and metabolism. A similar illuminated study will carry him through the important, recent knowledge of the thyroid, adrenals, parathyroids, etc.

Of great merit are also the chapters on Menstrual Disorders and Their Therapy. In describing the treatment of these conditions x-ray application is properly evaluated. Pregnancy tests are fully described. Chapters on sterility, menopause and obesity complete this scholarly book.

Every practitioner of medicine should study this volume. Its contents will arouse in him interest in endocrinology and will be of great help to him in his daily JOSEPH S. BENDETSON. practièe.

Text-Book of Medicine. By various authors. Second edition, Edited by J. J. Conneare, M.D. Octavo of 1004 pages, illustrated. Baltimore, The Williams & Wilkins Company, (William Wood & Company), 1932. Cloth, \$8.00.

This is a practical, concise and fairly complete text-book of medicine, including a section on the more important diseases of the skin. In this edition there has been a complete revision of many of the subjects by the addition of the more modern advances in diagnosis and treatment. The physiological introductions, the pathology and treatment are well presented and should be of value to the medical student and general practioner of medicine. Henry Joachim.

DIABETES IN CHILDHOOD AND ADDLESCENCE, By PRISCILLA WHITE, M.D. Octavo of 236 pages, illustrated. Philadelphia, Lea & Febiger, 1932. Cloth, \$3.75.

The study and treatment of 750 juvenile diabeties represents an experience which one is rarely privileged to get. Dr. White, who is charged with the care of these young diabeties in Dr. Joslin's clinic, has had a larger experience with this type of case than any other single individual. This book is the result of her large and accumulated experience with the diabetic from birth through adolescence.

The book opens with a good concise historical review of this disease from the earliest Egyptian discoveries to the present time. In her chapter on etiology, she engages in an extensive discourse on the hereditary aspects of diabetes. She quotes a large literature, citing the familial incidence of the disease. She then attempts to apply to it the Mendelian law of inheritance with the role which dominant and recessive traits play in the transmission of hereditary characters. She finds it necessary to make theoretical corrections of her statistical data and draws her conclusions from rather speculative premises.

The chapter on pathogenesis and physiology is rather poor. Her sentences are frequently involved, her statements loose and often difficult of interpretation. To quote from page 74: "Subnormal function of the reservoirs for carbohydrate produce hyperglycemia and glycosuria. The treatment of diabetes will be made more difficult when such accidents occur, and conversely it is logical to believe that the management of the patient suffering from a disease in which the glucose netabolism of the body is interfered with will be improved by stimulations of the functions of these organs." And

so on fairly indefinitely.

The chapter on treatment represents a presentation of principles derived largely from the author's experience. There is little fundamental in it except that it displays a more progressive and freer use of carbohydrates than had previously been advocated by the Joslin clinic. The author follows a rather middle course and does not advocate the liberal diets of Sansum or Porges and Adlersberg. The range of carbohydrate values in her diets is between 100 and 200 grams. From the analysis of the table on page 117 it would appear that most of the diets contain carbohydrates in the lower range. There are no suggestions made to the reader regarding the indications for using any of the variations in this wide range of diets.

Dr. White analyzes the fasting blood sugars in her patients and classifies them on a chronological basis. She observes that since 1922, there is tendency toward a progressively increasing fasting blood sugar. Her speculative analysis of this data would indicate that height of the fasting blood sugar is in direct relation to the duration of the disease in any individual patient. The author engages in a considerable discourse on the clinical and prognostic significance of the fasting blood sugar. The reviewer finds it difficult to accept a number of titese concepts. One must remember that a liver subjected to a quantitatively greater degree of glyco-

genesis on a higher carbohydrate dict than on a more restricted one, will pour out its glycogen at a much greater rate when the patient is without an insulin effect. This condition usually exists in the early morning hours, and easily explains the high fasting blood sugars obtained in well-nourished diabetic children fed with a high carbohydrate diet. Dr. White's progressively increasing figures can be explained on the basis of a better nutritional state which she creates with her increasing liberality in her patients' diets.

The author has written an excellent chapter on the 10-year diabetic, a group of 72 juvenile patients studied since 1922—the time insulin was introduced. One is convinced of the remarkably good outlook which these

patients present.

On the whole this book represents a good contribution to the literature of diabetes, for it is a compilation of a unique mass of material both in quantity and biological variation.

WILLIAM S. COLLENS.

INTERNAL MEDICINE. Its Theory and Practice. Edited by John H. Musser, M.D. Octavo of 1316 pages, illustrated. Philadelphia, Lea & Febiger, 1932. Cloth, \$10.00.

The twenty-seven contributors to this volume are well known in American medicine, holding appointments in various medical schools and furnish a book in the modern trend, each being interested in a particular field. The articles in each group are condensed and usually each chapter begins with a discussion of the general features common to the group.

The standing of the writers insures authoritative statements and the book will be found very useful for reference.

WILLIAM E. MCCOLLOM.

THE SIGN OF BABINSKI, A Study of the Evolution on Cortical Dominance in Primates. By JOHN F, FULTON and ALLEN D. KELLER. Quarto of 165 pages, illustrated. Springfield, Ill., Charles C. Thomas, 1932. Cloth, \$5.00.

In 1898, Babinski fully described the pathological plantar reflex. Since then, case studies have shown that the Babinski sign is indicative when positive, of injury to the overmidal pathways.

the pyramidal pathways.

The aims of the authors in presenting this book are several. First, a comparison of this reaction in the higher primates is made. In the monkey, the plantar reflex is observed following spinal transection, thoracic semisection of the spinal cord and removal of one cerebral hemisphere. In general, only when "the lower lumbar segments are completely freed from all forms of higher control, is the Babinski reflex seen in the monkey." Similar studies are made in the baboon, gibbon and chimpanzee. In these experiments, detailed surgical technique is outlined, for the authors wish to demonstrate the value of using the ligher primates in the study of problems of the C.N.S.

The next consideration is the study of the evolutionary background of the human nervous system. The significance of the difference in the Babinski response in the monkey and chimpanzee is dealt with. It means that in the higher primates only is the Babinski sign associated with Isolated destruction of the pyramidal pathways.

Two clinical implications are made; one with reference to traumatic cerebral diplegia, and secondly to Little's disease. In these the Babinski phenomena is positive.

The authors conclude with the observation, that conclusions from lower animals as applied to man are dangerous, unless "one compares corresponding lesions in a series of animals representing different stages of evolution of the central nervous system, it may then be safe, but only then, to predict the consequences of similar lesions of the human brain."

There is an appendix containing descriptions of anesthetics used and surgical technique. Also an extensive bibliography.

STANLEY S. LAMM.



OUR NEIGHBORS



HOSPITALIZATION INSURANCE IN NEW JERSEY

The Journal of the Medical Society of New Jersey for February contains the following account of a plan of insurance to secure hospital care in Newark:

"An important project affecting the doctors and hospitals of Essex County is under way. It is called the 'Hospital Service Plan' organized and advanced by the Hospital Council of Essex County. (Physicians and hospital managers are represented on the Council.)

"To increase the revenues and help support the hospitals a plan has been devised to insure wage earners against hospital charges for a 21-day period of illness in each year, at a cost of 85 cents per month. The Hospital Council, to effect the plan, has created a subsidiary body called the Associated Hospitals of Essex County, Inc.

"In consideration of \$10 a year, payable annually, semi-annually, or quarterly, or \$.85 per month, through voluntary pay-roll deductions, each payable in advance, the subscriber is entitled to participate in the benefits of the Hospital Service Plan of Associated Hospitals of Essex County, Inc., on the terms set forth below.

- "(1) The benefits hereinafter set forth are available to the subscriber immediately in the case of accident or emergency illness, and after fifteen days from date of this contract in other cases.
- "(2) Any hospital with which Associated Hospitals of Essex County, Inc., has a contract for such services in force at the time hospital service is applied for hereunder may be selected by the subscriber.
- "(3) The subscriber shall receive hospital care in semi-private accommodations, i.e., the patient shall occupy a bed in a room designed to serve

two or more private patients. If the subscriber prefers a single room, a credit of \$4 per day will be given on the price of the room selected.

- "(4) Hospital care includes bed and board, general nursing care, routine laboratory examinations, emergency and non-ambulatory x-rays, operating room, routine medications and dressings, general anesthesia when such service is supplied by the hospital, and all other customary routine treatment which may be prescribed by the physician during the period of hospitalization.
- "(5) Such hospital care and service will be furnished up to and including 21 days in any contract year, on one or more admissions.
- "(6) The benefits hereunder do not include services of the subscriber's attending physicians, surgeons, special nurses or their board.
- "(7) Service will be rendered only upon authorization and request by the subscriber's personal physician, who must be a member of a County Medical Society in New Jersey and/or acceptable to the hospital selected by the subscriber. During the period of hospitalization the subscriber must be under the treatment and care of such physician in accordance with his staff privileges at the hospital selected by the subscriber.

"The benefits included hereunder cover only the treatment and care of illness and injuries regularly accepted for treatment by the hospital selected by the subscriber, and do not in any event include obstetric cases, those provided for by Workmen's Compensation, quarantinable diseases, mental and nervous disorders, or illnesses usually treated at other than general hospitals of Essex County."

CERTIFICATION OF SPECIALISTS IN NEW JERSEY

The February number of the Journal of the Medical Society of New Jersey contains a tenpage account of the conference of county secretaries held in Trenton on November 2, 1932. The first subject discussed was the plan for the certification of specialists.

New Jersey has considered this subject more deeply than any other State, and a definite plan was adopted by the House of Delegates on June 15, 1932, as was described in this Journal of October 15, 1932, page 1216. The plan was described to the Secretaries' Conference by Presi-

dent John F. Hagerty, who then answered questions as follows:

"Have the various specialties been classified for this plan?"

Ans.: "Not yet, but that may have to be done

"In our Society, some of the younger men have taken objection to the classification of obstetricians thinking that might result in their losing patronage."

Ans.: "If one does exceptionally good obstetric

🥄 (Continued on page 420—adv. xii)

In Cases of Boils

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- (1) Boils.
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- (4) Styes.
- (5) Pustular acne.
- (6) Suppurating wounds (due to staphylococcus).
- (7) Chronic osteomyelitis (of staphylococcic origin).
- (8) Mixed infection of tuberculosis.
- (9) Abscess of breast (due to staphylococcus).

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Saratoga Geyser, because of its natural carbonation and alkaline content, has been found extremely beneficial in many grades of mild acidosis, in aiding digestion, in various gastric neuroses and in the relief of hyperacidity. It is bottled just as it comes from the ground, under careful State supervision.

Upon written request, we will gladly send a complete analysis and a complimentary carton of Saratoga mineral waters for clinical tests, including 2 bottles of Geyser and 1 bottle each of Hathorn and Coesa.





(Continued from page 418) -

work and becomes a specialist, it is right after all that he should profit by his experience and knowledge."

"Do you not think it is rather important to have a classification of specialists? It seems to me that now-a-days there is a little feeling against making more specialties. It might not be a bad plan to limit the number in the beginning and then enlarge upon them."

Ans.: "There has been the objection raised in Essex County that we are really putting a premium upon specialism, and will in the end increase the number of specialists. I do not think that is a very valid objection."

"There are already in existence three classifications, any one of which could be used with satisfaction, I think: (1) that used by the A. M. A., in its provision for Section meetings; (2) that by the Congress of American Physicians and Surgeons, for a similar reason; and (3), that used by the American College of Surgeons. I think that in each instance the list includes 14 kinds of specialists."

"Is there an intention to recognize men who are established as specialists today? Of course, this plan is mainly to control specialism in the future, but in every community there are men today who are recognized as specialists though they may not have taken an examination or received any certificate."

Ans.: "That is the purpose of parts I read in reference to periods of service in hospitals, etc."

A special article by Dr. Hagerty also appears in the February Journal of the New Jersey State Society defending the plan. The Doctor says:

"The advocates of the plan were not given an opportunity to answer the arguments advanced by the opposition; many of them not justified by anything contained in the plan. I am, therefore, asking permission to publish the reasons for advocacy of this measure by the State Society, as read at the above-mentioned meetings, with comments on some of the statements made by its opponents.

"There is no law in any of our states designed to prevent anybody from put(ing himself forward as a specialist. You know also that the right to practice a specialty in these United States may be assumed by any one who has secured the degree of Doctor of Medicine (M.D.) and a state's license to practice general medicine—a term that is all-inclusive. Those statements are true, but, it is also perfectly well known to all of you that these rights and privileges have been abused, and that such abusive actions have resulted in criticism of the profession by the public, and in lessening that high regard for the profession which the public formerly held.

"Any licensed physician may hold himself out

(Continued on page 421-adv. xiii)

(Continued from page 420-adv. xii)

as a specialist, and in any particular line; and to add that he can and may, while practicing a specialty continue in general practice-and no organization has any right or power to interfere in the slightest degree with his lawful pursuit of either or both general practice and special practice. I have emphasized this because some persons have found fault with the "Plan" because it does not restrict specialists and hold them to their chosen, special class of work; while, at the same time others were finding fault because of their belief that an attempt was being made to prevent specialization. I might say here, too, that the choice of the word-control-was an unfortunate one, having, to some, a sinister meaning. It follows, from what I have explained, as to rights and privileges, that such things could not be done; and I assure you that there was no such wish on the part of the State Society, nor of anybody associated with development of the plan."

ENFORCING THE MEDICAL PRACTICE LAW IN NEW JERSEY

The February issue of the Journal of the Medical Society of New Jersey contains a list of 16 convictions obtained by the State Board of Medical Examiners for violations of the Medical Practice Laws. The list includes:

Druggists	4
Chiropractors	2
Osteopaths	2
Optomotrists	1
"Medicine Man"	1
Priest Physician	
Plain Quack	4
Midwife	I

Concerning one healer the Journal says:

"His method of practice consisted in taking a lock of hair from the head of the patient for the purpose of studying the vibrations of the bodygazing into a crystal-and telling patients that they were surrounded by evil influences which could only be warded off by wearing a shield which he would make, and by giving them medicine made from herbs, etc. In summing up the case, the Judge told the defendant that the days of witchcraft were passed and that there was no place in Cumberland County for a person who practiced the methods of treatment followed by the defendant. As the defendant could not pay the penalty, he was committed to jail for 100 days, the maximum penalty allowed by the statute.'

MEDICAL ECONOMICS IN NEBRASKA

The March number of the Nebraska State Medical Journal contains the following item which shows one reason that there has been a

(Continued on tage 422-adv. viv)



Psyllium seed as a bowel corrective has come into such general therapeutic use as a result of the pioneer work with Battle Creek Psylla, that the market is now flooded with a number of "cheap" brands which are contaminated with impurities that should never be allowed to enter the human stomach.

Before Psylla is pronounced flt for human use, the original seeds are subjected to a number of cleansing processes which include screening, sifting, sterilizing and fanning. In this way the dead, shriveled up seed is removed, as well as half-a-dozen kinds of waste material.



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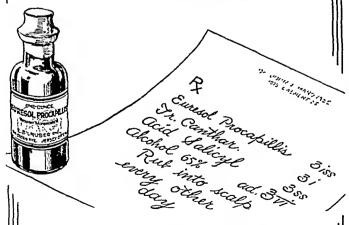
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(Continued from page 421-adv. xiii)

decrease of ten per cent in the membership of the State Medical Association during the past year:

"An esteemed correspondent writes that on receiving notice that his dues would be delinquent if not paid by February first, asked a farmer for ten dollars so he could pay his obligation to the medical association, whereupon the farmer produced the following amazing figures:

300	pound hog at 1½ cts	.\$4.50
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"The dues remained unpaid."

THE JOURNAL IN NEBRASKA

The annual report of Dr. F. A. Long, Editor of the Nebraska State Medical Association, contained in the Journal of March, comments on the Journal as follows:

"During the year 1932 the Nebraska State Medical Journal published a total of 548 reading pages—the equivalent of about one additional number of the Journal. Ordinarily we attempt to hold the number of pages each month to forty. Unusual conditions sometimes arise to compel the addition of four or eight pages to a few numbers, such as when the index, title page and list of membership are published in the December number.

"An unusual quantity of material the past year prompted the addition of more pages. This seemed the easier because our contract calls for a Journal of 64 inside pages and four cover pages and since the advertising dropped to about sixteen pages we felt freer to add more reading pages.

"If all contract space is not used we get a short rate credit, which in my eagerness to publish, I overlooked for some months.

"The report of the secretary-treasurer indicates that our advertising for 1932 amounted to \$1,278 less than it did for 1931 (25 per cent reduction). The report further shows a membership 99 less than for 1931, which gave the Journal Fund \$148.50 less membership subscription money. These two items of loss to the Fund amount to a total of \$1,426.50.

"The membership as reported to me by Secretary Adams a short time ago for 1932 was 1,083. It had dropped from 1,182 the year before. We may then reasonably expect a further drop for 1932 or, say 83, leaving us around 1,000 members for the current year. Our budget must be predicated on that basis.

"We have agreed on some economies for the immediate future in order to keep within a reason-

(Continued on page 423-adv. xv)

Please mention the JOURNAL when writing to advertisers

(Continued from page 422-adv 21v)

able budget and at the same time keep the Journal to the same high standard we like to see

"By keeping the rending matter in the Journal down to the minimum during the year we feel that we can save the equivalent of approximately \$299 for the year

"We furnish three cuts to any article in the Journal free of charge. A copper halftone 2/2/33/2, costs about \$4.10. We have been using copper halftones in the Journal, but find that zinc cuts will probably serve the purpose almost as well and have decided to use zinc cuts for this year. Zinc cuts are about half the price of the copper ones and we will in this way save about \$112.

"The past year we withdrew \$606.86 from in vestments and propose to continue the withdrawals from the Building and Lorn Associations during the coming year

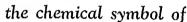
"Mr Gene Huse of the Huse Publishing Covoluntarily offers to reduce the 1933 expense of publication of the Journal by seven and one-half per cent for one year which will amount to approximately \$305 64 for the year

"Dr R B Adams has agreed and requested that the amount paid him as business manager and out of which he hires his office asistant, be reduced to just the amount to be paid the office assistant, which will save another \$400

"If granted \$1.50 per member as previously we will be able to balance accounts and run without much loss to the Journal Fund"

The financial statement of the Journal is reported as follows

1932	1931
\$3,766 48	\$5,044 63
14 50	25 00
223 38	380 66
139 67	135 74
\$4 144 03	\$5,586 03
\$2,500 00	\$2,500 00
3,909 64	4,519 72
373 73	181 89
42 00	42 00
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CHILD HEALTH IN NEBRASKA

The February number of the Nebraska State Medical Journal contains the following editorial on Child Health work in Nebraska:

"Nebraska has lagged behind most of the states in cooperating with the White House Conference on Child Welfare and Protection. This is so not because of any lack of desire on the part of the medical profession. It is the policy of the national organization to place at the head of the various state organizations the governor and the state officials who head the agencies that are directly concerned with child health and welfare. It has not been possible to secure such co-

operation in Nebraska with the result that the state lags behind most states of the union in following up the work as outlined by the national organization.

"The Woman's Voters League of Nebraska has sponsored the work and an organization has been effected that will start functioning in the near future. Doctors and nurses are particularly interested in that phase of the program which has to do with public health, the handicapped child and with medical service. An immense amount of valuable data was assembled by the national or-

(Continued on page 425-adv. xvii)



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(Continued from page 424-adv. xvi)

ganization but there remains for the Nebraska section the task of assembling data that concerns our own state. We want to know what is being done for the health and welfare of the children of Nebraska and to ascertain these facts the committee will look to the secretaries of the county medical societies. With this information in hand an educational campaign will be inaugurated that will be directed not alone to the lay public but to the doctors and nurses as well. It will be an educational venture free from the ballyhoo that too often accompanies such enterprises. If the committee has its way there will be no baby clinics, no 'one come all and help yourself' program offered to the public at the expense of the doctors and nurse.

"While the task is the direct responsibility of the pediatricians and obstetricians of the state there will be need for the cooperation of the medical and nursing profession as a whole if the largest good is to be derived and it is the earnest wish of the committee to have such cooperation."

An editorial in the March issue of the Nebraska State Medical Journal comments on Child Health as follows:

"Within the next year Nebraska expects to hold a conference which will discuss the results of state wide surveys on child needs in this state.

"The needs of the child will be discussed from various viewpoints, medical, educational and sociological.

"The pediatric section has now been partially organized and is proceeding with surveys. It is the desire of this section that every medical man in the community be enlisted in this work.

"The first problem to be solved is to make a complete survey of the needs of the child in various communities.

"Questionnaires will be sent out and it is hoped that each physician receiving one will take the time and interest to answer the questions as accurately as possible.

"The value of the survey depends entirely upon the cooperation of the medical profession. After the survey has been made and the needs of the children definitely determined, plans will be discussed for meeting these needs in a way most beneficial to the children, the medical profession and the community at large.

"With the present trend among various lay organizations to try out all sorts of bizarre experiments in the medical field it is necessary for the medical profession to endeavor to have a controlling hand in the development of these plans.

"We as physicians want every child in the state to be assured of the benefits of the best in medical practice. To do this we must know what is needed and make our plans accordingly."

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ANTISEPTICS

Few classes of products have been exploited more than antiseptic agents. Many of these agents are capable of inhibiting bacterial growth and of destroying bacteria even in high dilution, but, in the final analysis, the physician's choice is likely to be based on more inflammation of the metatarsophalangeal hour to hour. See page xxiii.-Ao

than that. He thinks in terms of the safety of the product in daily use, the effectiveness of antibacterial action without harmful effect to the tissues, and its ability to stimulate cell regeneration and processes of repair. It is quite logical that he should.

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(1) WIENER KLINISCHE WOCHENSCHRIFT

Priv. Dos. Oskar Stracker, "Zehende-formitäten" (Deformities of the toes). Dr. Stracker discusses the different forms of toe-deformities, their etiology and their treatment. In eases of ehronie

joint of the great toe, the author ca attention to the possibility of this co dition being easily mistaken for arth For its treatment he recommen massage and diathermy, and internaureeidin. In acute onset, local an phlogistic treatment with Antiphlog tine proved of great value. To less the pain when walking, it is recon mended that two strips of wood, plac at right angles, be attached to the so of the shoe in the area of the half.

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LEAD ENCEPHALOPATHY

A Clinico-Pathological Study

By N. W. WINKELMAN, M.D., PHILADELPHIA, AND JOHN L. ECKEL, M.D., BUFFALO

From the Wards and Laboratory of Neuropathology of the Philadelphia General Hospital and Temple University Medical School. Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

Introduction

INTOXICATION with lead produces a group of cerebral symptoms known collectively under the term of lead encephalopathy. Because of the clinical importance and the increasing prevalence of the condition, and the fact that the mechanism of its action on the central nervous system is not well understood (Staemmler¹, Freifeld³, Aub, Fairhall, Minot and Roznikoff³), it was felt that a review of several cases might help towards elucidating it.

Among the nervous symptoms which occur in this condition, two, in particular, are important in throwing light on the mechanism of brain physiology. These are (1) convulsions and (2) mental symptoms.

The cause of convulsions in general has thus far eluded explanation (Lehman, Spatz and Wisbaum-Neubürger4). It is a rather interesting fact that, in convulsive states that are due to toxic causes, such as in uremia, eclampsia, and poisonings by heavy metals, the most constant change found in the brain is an endarteritis of the small vessels, with resultant areas of partial necrosis (verödungsherde). It is also significant that similar focal areas of loss of normal structure are to be found in true epilepsy (Spielmeyer,5 Uchimuras), even though the patient dies at a time when the endarteritic manifestations have completely disappeared, because in the chronic stages of this condition, the swollen lining cells shrink to below normal.

The second symptom which merits attention is the mental phenomena, as the result of poisoning with lead. The following symptoms are of great significance: headache, insomnia, tremors, dizziness, poor memory, lethargy, mild psychotic manifestations, advancing even to mania. The basic process in the determination of these symptoms is the action on the ganglion cells (Környey, Hassin*). Whether that action is directly on the cells themselves, or secondarily, through the small

blood vessels, or both, will be discussed in the interpretation of the pathologic findings in our cases. It is possible that analysis of similar processes will eventually give us a clew as to the mechanism of production of a mental picture. We know that acute and chronic alcoholism can produce mental symptoms, and we know that certain cortical changes occur in them. It is possible that in poisoning by different substances we will find the original points of attack, and it will be the means of furthering our knowledge of cortical physiology.

REPORT OF CASES

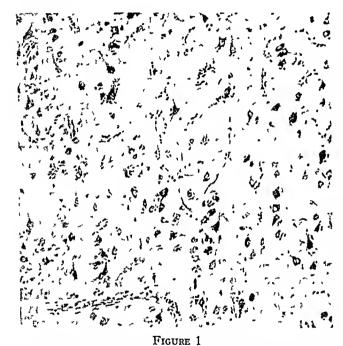
Case 1. 30-202. Summary: A colored male, of 31, a lead worker for several years, complained of gastric pains and occasional vomiting for one month before admission. He was admitted in a semiconscious condition. There were no palsies or muscle atrophies. There was a marked blue line about the gums. His blood showed secondary anemia, anisocytosis, poikilocytosis and numerous stippled red cells. He had two severe convulsions, and died within six hours after admission.

C. deS., a colored male, aged 31, was admitted to the Philadelphia General Hospital, service of Dr. David Riesman, August 21, 1930. and died the same day. He was admitted with the complaint of severe headache and showed disturbance of consciousness. The history stated that he had been working in lead in a metal foundry for a long time. About one month previous to admission, he laid off for one week because of gastric pain and vomitting. He then returned to work but did not feel well. The day of admission he was found in a semiconscious state in his room and was immediately removed to the hospital.

Examination on odmission revealed a partially conscious patient. He was fairly well nourished. The pupils were contracted and gave but slight reaction to light and in accommodation. The gums showed a marked blue line. The lungs were clear. The heart action was moderately irregu-

lar in rhythm with an occasional dropped beat, and a systolic murmur at the apex. Blood pressure was 130/60; pulse rate 40 to 60 per minute. The abdomen revealed general soreness, but no definite point of tenderness. The tendon reflexes were all hyperactive, but equal. There was an occasional abortive ankle clonus, with the suggestion of a Babinski on the right. There were no sensory or motor disturbances.

Laboratory Examination: Hemoglobin 10.7 gms.; red cell count 4,320,000; white cells 20,050, of which 87% were polynuclear cells. Stained smear revealed anisocytosis, poikilocytosis, achromia, stippled cells, normoblasts and megaloblasts. The urine was normal. The temperature varied from 98.8 to 99; the pulse from 40 to 60; respirations 22.



Case 1. Cortex, Toluidine blue stain—showing focal loss of ganglion cells with islands of comparatively normal cells between. Prominence of the small vessels is evident.

Course: One hour after admission he had a severe convulsion, with clonic and tonic contractures of both arms and legs, and frothing at the mouth. He then lapsed into unconsciousness, followed by another convulsive seizure, in three hours, in every way similar to the first. From this he did not regain consciousness, and died within six hours after admission.

Pathology: The heart weighed 340 gms. There was cloudy swelling and chronic fibroid myocarditis; the lungs revealed edema and pigmentary infiltration. All the bodily organs revealed congestion and marked pigmentary infiltration.

Gross Examination of the brain showed a small (1260 G.) anemic specimen, whose pia-arachnoid was only slightly thickened and edematous. The

basal vessels were small, thin walled, bluish and collapsed. There was a very moderate ventricular dilatation. There were no gross lesions in the cortex or subcortex.

Microscopic Examination: The meninges were very mildly fibrotic and slightly edematous, and contained an occasional group of cells of the pliagocytic type, that at times contained debris.

The Cortex: A general architectural disturbance could be seen at first glance. This was the result of three things: (1) There was a general decrease in the number of ganglion cells, and many that were left were only shadow cells (schattenzellen. Fig. 1). (2) While there was a general loss of ganglion elements, there were in addition small areas of incomplete softening (verödungsherde), where there was an almost complete loss of the neuronic elements and with but very feeble effort at gliosis or vascularization. These foci were usually very small, involved mainly the third cortical layer, were mainly around blood vessels and in vascular distributions, and gave the cortex a moth-eaten appearance. At times these acellular foci were so dense that they were confluent. (3) There was a definite increase in the glia, especially of the macroglia type. This was not a uniform process throughout the entire cortex, but varied from area to area. It was more marked in the marginal layer than elsewhere, and formed the so-called marginal gliosis. In places glia collections were to be found, especially in relation to the acellular foci. Cajal preparations brought out vividly, not only the general increase in glia, but also the focal increases, and particularly the marginal gliosis.

There was seen, in addition, a prominence of the small vessels, which was unusual (Fig. 2). Even the tiniest capillaries were brought out, and the larger capillaries also had swollen lining cells, with little lateral buddings as evidence of the new vessel formation.

There was not a uniform affection of the ganglion cells throughout the cortex, but one was impressed by the fact that even adjacent to areas of intense involvement of the ganglion cells, there were small foci where they were absolutely normal. This was a different condition than prevails, e.g., in pneumonia, where the ganglion cells are uniformly cloudy and swollen.

There was no uniform type of ganglion cell change; there appeared, in general, to be a slow liquefactive change, and a gradual disappearance. At only one place was there found a glia rosette, such as has been described in the literature as of frequent occurrence.

Stains for fat showed a moderate increase of lipoid in nearly all the ganglion cells, and particularly around the blood vessels, but not to the excessive degree that is seen in other conditions.

Edema was not a feature of the cortex. The large vessels were unaffected to any great extent



FIGURE 2

Case 1 Small focal area of cell destruction (Schallenzellen) without reactive gliosis, surrounded by comparatively normal ganglion cells

Case 2. 24-212. Summory: A young man, aged 25, who worked as an acetylene operator, melting lead in the hold of his ship, developed weakness, loss of weight, colicky pains in the abdomen, plus marked anemia, all rather acutely, three weeks prior to admission to the hospital Two weeks later he developed convulsions and died He showed secondary anemia, stippling of

red cells and blue line on the gums

L S, a white male, aged 25, was admitted to the Philadelphia General Hospital, service of Dr. Ross Patterson, November 18, 1924, and died November 19, 1924. He was an acetylene torch operator, and was engaged in melting lead in the hold of a vessel for a little less than a year. Three weeks before admission he complained of colicky pains around the umbilious, associated with headache, blurred vision, weakness of his hands and feet. For this he laid off for a week or so, and drank quite heavily. Two days before admission he became confused and weak. went to bed with his clothes on. He then became lethargic and could not talk coherently There was a history of epileptiform seizures during a period of several months

Examination on admission revealed a well nourished young man who was comatose, without the odor of alcohol on his breath. He had frequent convulsive seizures, beginning with twitching of the right lower extremity, which spread over the entire body. The pupils were round, equal and reacted normally. The eye movements were normal; the eyecrounds showed no choking and no hemorrhages. There was a bline line about the gums.

the upper and lower extremities were present, equal and active. There was no Babinski and no clonus. He became increasingly comatose, his convulsions became more frequent, and he died

Laboratory Examination: Hemoglobin 70%, red blood cells 2,900,000; white count 17,000, of which 82% were polynuclear eells. The spinal fluid was clear and gave a negative Wassermann Urea nitrogen 62 mgm; uric acid 2.8 mgm., sugar 125 mgm. The red cells showed marked stippling.

Pathology: A cloudy swelling of all the internal organs was present with pigmentary infiltra-

tion.

Gross Examination of the brain revealed notli-

Microscopic Examination: The meninges showed a very definite thickening as the result of edema and fibrosis. There was present, within the meshes of the pia occasional abnormal elements. These were of two types. The most frequent consisted of phagocytic cells that contained greenish and bluish pigment. These were large cells with abundant cytoplasm and a comparatively small eccentric nucleus. The other type of cell present was the lymphocyte. These were by far in the great minority, and it was only occasionally that this type of cell could be definitely established.

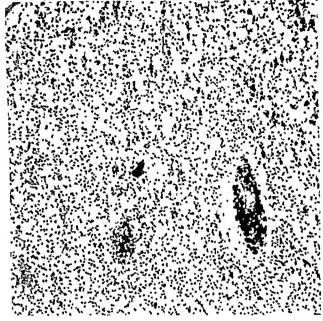
The Cortex: The outstanding feature of the cortex was the prominence of the small blood vessels Practically every capillary stood out as the result of the swelling of their lining cells New blood vessel formation was the rule throughout the entire cortex. Vessels that were slightly larger showed a thickening and hyalinization of the walls, which eaused them also to stand out in marked relief. Around some of the blood vessels in the eortex, but particularly in the subcortex, one met very frequently with adventitial collections of phagocytic cells that were over-filled with a dark green pigment (Fig. 3). These pigment granules were for the most part engulfed in phagocytic elements but occasionally were free in the adventitial space. Usually around the vessels of this sort there was a very definite space of His, in which one could at times see a very grannlar material, evidence of the edema that was pres-In the subcortex in this case, the blood vessels showed to a greater degree the swelling that was also found in the cortex.

The ganglion cells within the cortex showed much less degenerative changes than in Case I. As a rule the cortical architectural picture was well maintained even though glia was increased Many ganglion cells showed a pallor; very many showed a tendency towards ischemic change, and very many were comparatively normal. Here also one got the distinct impression that the change in the ganglion cells occurred in foci, and, while there were no actual areas of

ischemia with complete loss of ganglion cells, still numerous foci were present where the ganglion cells were much more involved than in neighbor-

ing areas.

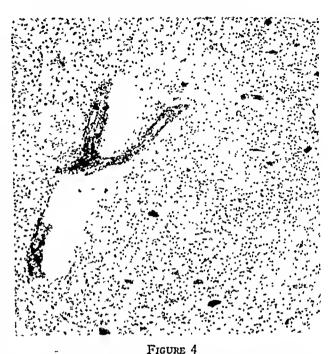
There was a very evident increase of glia that could be visualized even with the cell stain, and here again the involvement was more marked in certain focal areas than in others. There was no uniform rule as to the areas involved. It might be stated, as a general principle, that the third cortical layer appeared to suffer most damage, but this also was a variable condition. One occasionally saw Gëfasspaketten.



Case 2. Cortico-subcortical area showing perivascular collections of pigment-laden phagocytic cells. Intense general gliosis evident. (Toluidine blue stain.)

The Cerebellum: The meninges over the cerebellum showed the same general characteristics as over the cerebrum. There was a much more marked involvement of the cerebellar tissue than in any other part of the intracranial structures. There was a uniform pallor of the Purkinje cells. but no actual destruction. The molecular layer showed a great increase of the small blood vessels, all of which stood out rather prominently as the result of the swelling of their lining cells. The outstanding feature of the cerebellum was the change in the dentate nucleus (Fig. 4). Not only were there severe degenerative manifestations in the cells of the dentatum, but there was a considerable destruction in and around this nucleus, which resembled to a remarkable degree a patch of multiple sclerosis. The tissue was completely overrun by small glial nuclei. New vessel formation was a feature. Perivascular collections of round cells were present in and around these patches. In some of the adventitial spaces the number of round cells was so great

that at first glance it resembled an acute inflammatory process, but on careful study one found in the adventitial spaces a great deal of yellowish and greenish pigment as evidence of the destructive process that was going on.



Case 2. Dentate nucleus of cerebellum—Toluidine blue stain. Ganglion cell destruction, gliosis, and perivascular collaring of vessel seen.

Case 3. 23-52. Summary: A male, aged 55, a lead worker for six years, frequently was obliged to stop work because of colicky pains in the abdomen, general weakness, pallor and constipation. The condition gradually grew worse, and in this state he developed pneumonia, after exposure, and died. The blood picture showed marked secondary anemia, stippling of red cells, and the pathology at autopsy revealed lobar pneumonia, and cloudy swelling of the body organs.

J. W. S., a white male, aged 55, was admitted to the Philadelphia General Hospital, February 24, 1923, service of Dr. S. S. Cohen, and died February 27, 1923. The admission complaint was general weakness. He had worked in a factory wherein lead was used considerably, for a period of six years, and it is reported that he was obliged frequently to lay off for varying periods of time, because of general weakness, abdominal pains, pallor, and constipation. The past history stated that he had had typhoid fever at nine years of age, and influenza in 1918. Three weeks before admission to the hospital, he was exposed to cold and wet, following which he developed a cough and pneumonia, for which he was admitted to the hospital.

Examination on Admission: He was quite emaciated. There was a distinct blue line along the gums. The pupils were small, but reacted

slightly to light and in accommodation. The vessels were thickened, there was general abdominal tenderices and evidences of lobar pneumonia. The tendon reflexes were present and equal, but diminished.

Labaratary Examination The urine was smoky, and was chemically negative for lead The hemoglobin was 60%, red cell count 2,154,000, white count 13,000, of which 82% were polynuclear cells There was marked stippling of the red cells Blood Wassermann was negative

Caurse He grew rapidly worse and died within three days after admission to the hospital

Pathalagy Examination revealed terminal pneumonia chronic myocarditis, chronic interstitial nephritis, splenitis, and cloudy swelling of the liver

Grass evamination of the brain showed a moderate enlargement, with pallor of the entire brain substance. The pia-arachinoid was slightly thickened and opaque. The basal vessels were thin and fibrous, and contained no plaques

Microscopic Examination The meninges were definitely fibrous and mildly edematous and contained within their meshes large phagocytic elements in groups of considerable numbers

The Cartex showed no disturbance of its general architecture, but there were noticeable areas of varying sizes in which the ganglion cells showed degenerations of all kinds, mainly however, tending to liquefaction

The outstanding feature of the cortex was the prominence of the small blood vessels. While not an absolutely uniform process, nearly the entire cortex showed that the cells lining the small capillaries were unusually prominent as the result of swelling, and new vessel formation was a feature

Glia was moderately increased Fat stains showed a mild increase particularly in the gan-

The cerebellum showed a mild degeneration in the Purkinje cells, as well as an increase in Bergmann's gha layer. The vessels in the mole cular layer showed the same endarteritic changes as were present in the cerebral cortex.

Case 4 31 158 Summary A white male, aged 70, a painter most of his life, was taken ill with colicky pains in the abdomen, and later emaciation, secondary anemia, weakness and dyspnea developed. He presented a blue line along the gums, and a retracted abdomen. There was marked muscle weakness, stippling of the red blood cells, marked secondary anemia, no response to treatment, and death

C S, a white male, aged 70, was admitted to the Philadelphia General Hospital, service of Dr J W McConnell, June 6, 1931, and died June 8, 1931 The Instory given stated he had been a painter most of his adult life For three years he had felt weak and had lost weight He had colle like pains in abdomen for one year He

stopped work six days before admission, because of a fall

Liaminatian on admissian revealed a very emaciated man, having marked dyspuca answers were almost maudible gasps, but always iclevant He was very weak. There were no abnormalities of the scalp or skull showed a gray pallor, the pupils were equal, round, and reacted to light and in accommoda tions, the extra ocular movements were slow, but full, the teeth were few and carious, and a blue line was seen on the gums, the tongue was brown and coated The lungs revealed rales at both bases and respirations were rapid and feeble heart was rapid, but there were no murmurs blood pressure was 108/54 Radial vessels were The abdomen was relaxed was no rigidity of ncck and no tenderness general he was dehydrated

Neurolagical evanination the second day revealed him to be semi-conscious. All the cranial nerves were apparently normal. There were no palsies, but he was very weak. There was general wasting of all muscles, but this was nutritional rather than atrophy. There was bilateral wrist drop. There was no tremor of the muscles and no sensory disturbance, and all the tendon reflexes were active and equal. There was no clonus and no Babinski.

Laboratory Examinations Urine showed a specific gravity of 1012, a heavy trace of albumin and a few epithelial cells. The hemoglobin was 70%, red cell count 4,260,000, white count 11,000, of which 85% were polynuclear cells. There were many red cells showing stippling Blood Wassermann was negative.

Caurse Two days after admission he became suddenly weak and died that day The temperature during these few days in the hospital ranged from 97 in the morning to 99 in the evening, pulse from 60 to 90, respirations from 25 to 46

Patholagy Post mortem revealed general arteriosclerosis, myocardial degeneration, brown atrophy of the heart muscle, congestion of all bodily organs, plus pigmentary infiltration of bowels, kidneys and liver

Microscapic Examination Meninges The meninges showed a variable picture For the most part there was a very marked fibrosis and edema with occasional groups of cells of the phagocytic type, but without inflainmatory elements

The Blaad Vessels The large vessels were remarkably well preserved, especially for a patient who had been working with lead practically all his adult hie There was little or no atheroma The muscle was, however, fibrotic and took a metachromatic tint

The Small Vessels Throughout the entire cortex the outstanding feature was the prominence of the smallest blood vessels For the most part the lining cells were swollen and at times

projected into the lumen. New blood vessel for-

mation was a universal finding.

The Cortex itself showed a most profound change. One could see, first of all, the prominence of the small blood vessels and new blood vessel formation. There was also an edema of the tissue to such a degree that the perivascular spaces were greatly distended. The ganglion cells showed definite degeneration, but the involvement was not a uniform one. Entire areas of the cortex showed normal ganglion cell pictures. Here and there were noted comparatively sharply circumscribed areas in which the ganglion cells were reduced to shadows. In places these areas had become confluent, so that they formed relatively large patches. The glia was markedly increased and this was more marked in areas of ganglion cell loss. The glia was mainly of the The Hortega stains for the astrocytic type. the microglia showed practically no increase.

The Subcortex likewise showed profound changes. Not only was there a definite widening of the perivascular spaces of His, but most of them showed the presence of granular debris as well as greenish pigment granules, some of which were still contained within phagocytic elements. The small blood vessels showed even more intensely than the cortex the swelling of their lining cells. There was a very definite macroglial proliferation in the subcortex at the expense of the oligodendroglia. One could not make out a focal distribution for these changes as was present in the cortex, because the subcortex appeared to be fairly uniformly involved.

COMMENT

We have herein described four cases of lead intoxication in which definite changes in the brain have been shown. These changes can be discussed under two headings: (1) Changes in the blood vessels, and (2) Changes in the ganglion cells.

vessels, and (2) Changes in the ganglion cells.
(1) Changes in the Blood Vessels: It has been our finding, and the findings of all who have investigated this subject, (Hassin (8), Bonfiglio (9),) experimentally or otherwise, that the vascular changes must be considered from two standpoints: (a) the large blood vessels and (b) the small blood vessels. It is recognized that lead hastens arteriosclerotic changes, but there is no specific or characteristic change in the larger vessels due to this poison. In the small vessels we have excellent demonstrations of the effect of lead in our cases. In all, the small vessels appeared to bear the brunt of the attack. The cells lining the small vessels were noticeably more prominent, they were swollen and pyknotic, and lateral budding resulting in new vessel formation took place.

(2) Changes in the Ganglion Cells: It is possible, on the same basis, to account for the changes in the ganglion cells, and also for the secondary glia change which is prominent and mentioned by all who have had occasion to dis-

cuss this subject. (Tuthill (10), Staemmuer (1), Mott (11), Ferraro and Hernandez (12).) Ischemic ganglion cell change should be the characteristic finding in this condition, but this is not always the case. We find simple chromatolysis (cloudy swelling) that is similar in all respects to the change in the body organs. Ischemia, however, is present and even completely acellular areas (verödungsherde). These were evidences of focal anoxemia. Lipoid accumulation, while not a prominent feature, was present and has been described. It is possible to account for most of these changes on the basis of a direct toxic action, but it is singular that the cerebral cortex is more susceptible than is the brain stem. This susceptibility of the cortex occurs also in syphilis, where the small vessels of the cortex are practically alone attacked.

From results of the cerebral studies one is impressed by the fact that, just as in any toxic or infectious process (Winkelman & Eckel (13)), the brunt of the attack is primarily on the small vessels, with minor direct action on the ganglion cells.

From the results of our microscopic studies on the brains of four patients who showed severe cerebral symptoms as the result of lead poisoning, we were impressed by the fact that, while the cortex at first glance appeared to be uniformly involved, yet on careful analysis we could very easily determine that the cortex was involved in an irregular manner. For the most part one could note a moth-eaten appearance to the cortex as the result of a variable number of foci of degeneration. These, at times, were so numerous that they became confluent, and it was then that the cortex appeared uniformly involved. It was only in the older areas, or in cases that were not so extensively involved, that the focal nature of the condition was recognized. Throughout most of the cortex one could see areas of practically normal ganglion cells in the midst of foci of very severe destruction. It has been recognized for a long time that the acute swelling and the other degeneration of the ganglion cells that result from a generalized toxic process occur throughout the entire cortex (Hassin, Winkelman & Eckel). All who have written on the subject of acute swelling of the ganglion cells have stressed this particular In our cases, the ganglion cells were not uniformly or universally involved, and as can be seen from the several photomicrographs which have been presented, the involvement in lead poisoning, as far as the cortex is concerned, is not a uniform condition. This factor is stressed because it, alone, helps to explain the mechanism of the process. We know that in endarteritis of the small vessels not every vessel or area is involved by the process, but that it tends to be patchy and involves some areas more than others. This is exactly the condition that we see in endarteritis syphilitica, in endarteritis due to any other

toxin, and the same condition prevails with regard to lead poisoning. That this is plausible can be gleaned from the fact that lead does have an affinity for blood vessels, and produces earlier arteriosclerotic changes than would ordinarily occur in the patient. This same affinity for the blood vessels can be very easily noted in the vessels of the brain and we feel that we are able to explain the mechanism of the action of lead no this general basis.

The importance of the mechanism of action of lead on the brain will, of course, point the way to the method of therapeusis. An effort must be made, if the brain is to be protected against the ravages of poisoning by lead, to so after the chemical composition of the blood, that the lead does not have the opportunity of acting on the

blood vessel walls.

first as after the colic that results from lead intoxication, so also the cerebral manifestations may be relieved for a while, and they may completely disappear if the ingestion of lead is stopped. The question may come up as how the patient is able to make a recovery if the changes in the brain are such as we have described. This is very easily explained when it is realized that even in severe arteriosclerosis, where numerous small areas of softening are present throughout the entire brain substance, the patient may show no focal symptoms that can be diagnosed clinically. So it is with cases of lead poisoning. It would not mean that the patient has not suffered damage to the brain, but it is to be explained by the fact that the damage to the brain is not sufficient to produce gross clinical manifestations. When, however, the changes in the brain arc so marked and the focal areas so numerous, then there is no compensation on the part of the brain tissue, and the patient exhibits clinical manifestations as the result of damage to many areas of the cortex.

The question of the convulsions, which has already been discussed briefly, merits further discussion in view of our findings. It is true that we have found the same changes here, in our case of lead poisoning, as in cases of a severe convulsive state. It is impossible to tell whether or not changes in the brain, which are found in convulsive states, are primary or secondary, and for that reason the explanation of the mechanism of the convulsions which occur in lead poisoning will aid materially in furthering the solution of the problem of the convulsive states. In none of our cases was there an involvement of Sommer's sector, as occurs frequently in the convulsive state (Spielmeyer (4)), but Sommer's sector is not involved in every case of convulsions. Its vulnerability probably accounts for its involvement in so many different conditions. We have had occasions to see this area involved in arteriosclerosis, even in the absence of convulsions. and the reverse also holds true.

One must realize that the swelling of the lining cells, which occurs in lead poisoning, can occur quickly and disappear quickly, under appropriate conditions. The mere reduction in the amount of oxygen to a part of the brain will be effective in producing this change, and this can occur in the course of minutes. The mere giving of oxygen to that part can cause the swelling to disappear almost as quickly as it had appeared.

We have thus to deal, in lead poisoning, as far as the brain is concerned, with a fairly generalized, although not uniformly so, involvement of the small blood vessels. There is, as in any other toxic and infectious condition, a prominence of the small blood vessels, which is, at times, out of proportion to the rest of the cerebral picture. There is also a definite new formation of blood vessels, so that even in the ordinary toluidine blue preparations the number of small blood vessels in each field is increased to an enormous degree. Eventually, as the case progresses, there is found besides this new formation of capillaries, an increase in the tortuosity of the medium sized blood vessels, so that there results a picture that is known as Gefässpaketten, where we see three or even more lumina of blood vessels, which are seen in the chronic stages of all infectious and toxic processes. It is believed that there necurs an accumulation of fluid between the muscle bundles in the media with the consequent coagulation, and at times, actual destruction of the muscle fibers. This great change in blood vessels, while easily visible in the ordinary cell preparations, are brought out vividly in the silver fibril stain of Klarfeld, and are even visible in the Cajal preparations.

The spotty character of the change is brought home to us again by the occurrence of minute areas of degeneration in various stages up to the formation of completely acellular foci and lessening in intensity to mild degenerative changes in ganglion cells in one focal area. It is a rather striking thing, as shown in the photographs, that the ganglion cells, within one small focus, might show severe changes with small shadow cell formation, while the ganglinn cells immediately surrounding this area are practically within normal . That this is not the usual picture of a process wherein the ganglion cells are involved primarily, needs only to be mentioned to be appreciated. In acute swelling of the ganglion cells, which occurs as the result of a generalized direct involvement of the ganglion cells themselves, the process is universal and everyone who has studied this condition has stressed this one particular factor. In lead poisoning this has not been our finding in any of the cases, but rather a disturbance of the ganglion cells in foci.

It must be stressed also, that there is no uniform involvement of the brain substance as far as these areas are concerned. At times one finds field after field of the cortex perfectly normal,

and then two or three areas where abnormalities occur. This is to be stressed because if one depends on one small section for his idea of the cortical change, he will be led to believe that the cortex has suffered no damage. That this is not true can be seen from a study of numerous areas of the cortex.

Occasionally one sees, within the brain substance, blood vessels which contain numerous phagocytic cells within the perivascular spaces. Many times pigment within the gitter cells, brownish black in color, such as one sees not infrequently in the neighborhood of hemorrhage, is observed. In no cases were hemorrhages found in the brain. An effort was made, therefore, to determine the nature of this pigment. Special stains for lead were devised, but no result could be postulated because the same type of reaction could be obtained in the neighborhood of hemorrhages. It is, therefore, going to be necessary to examine chemically, fresh brain material for its lead content, rather than to depend on the stain-This was not done because no ing reaction. fresh material was available at this time.

It must be stressed that the cortex itself was not the only part of the central nervous system that was involved. The photomicrograph from

the dentate nucleus (Fig. 4), shows a rather intense degeneration of the dentatum (from Case 2). Here we see a rather diffuse involvement f the dentate, with a marked gliosis and a collection of cells in the neighboring vessel, which at first glance, bears a striking resemblance to the round cell infiltration of the lymphocytic type. That these cells are not lymphocytes can be easily determined by fat stains, which show many of the lipoid granules.

SUMMARY AND CONCLUSIONS

- 1. Lead poisoning affects the brain and produces a clinical picture known under the term of encephalopathy.
- 2. While ganglion cell degeneration occurs and has been described, it is our finding that this is not a uniform process, but occurs secondarily as result of changes in the small vessels which produces greater or less anoxemia of small focal
- Our conception of the action of lead on the brain is that it occurs through blood vessel changes.
- 4. The glial changes in lead poisoning are secondary to the vascular disturbance.

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THE MECHANISM AND MANAGEMENT OF HEMORRHAGIC DISTURBANCES IN INFANCY AND IN CHILDHOOD*

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THE management of a hemorrhagic disturbance depends upon the nature of the systemic disease with which it is associated. Few bleeding problems are primary clinical entities, and few indeed are typical text-book pic-

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Between the two or three well defined hereditary diseases and the limited number of clear-cut hemorrhagic syndromes are the great majority of transitional hemorrhagic disturbances encountered in infancy and in childhood. We have differentiated them first in terms of either blood clotting or vascular dysfunction; and subsequently in terms of the determining factor controlling

the hemorrhagic picture.

The hemorrhagic status of a patient is best evaluated clinically in terms of degree of function of the vascular endothelium and of the blood. Although chemical changes are present in both blood and vascular systems in most hemorrhagic disturbances, the one or the other necessarily dominates the picture. It is only in truly hereditary hemorrhagic disease that absolute deficiency in the vascular system or in one of the clotting components is characteristically individual in its pathogenesis. But the number and variety of acquired hemorrhagic diseases are legion. They are necessarily characterized by varying degrees of functional change in the blood channels as well as in the blood clotting components expressed by the equilibrium relationship:

Reticulo-endothelial System

Blood

Vascular System

Typical hemorrhagic problems are therefore limited, while the majority reveal varied transitional changes in vascular phenomena and clotting components. But one or the other of these factors will constitute the controlling factor, and its determination is indispensable amongst the criteria essential for final diagnosis. Clinical symptoms alone never suffice for arriving at the exact nature of the underlying condition productive of the hemorrhagic disease. Besides the family history, the past hemorrhagic status, the constitutional susceptibilities, the nutritional regimen, the physical examination, the current therapy, and the blood picture, several simple tests are made for the determination of blood clotting and vascular function.

DETERMINATION OF VASCULAR AND BLOOD CLOTTING FUNCTION

(1) Blood Count. The blood picture reveals the degree and character of an anemia. While the severest acute or chronic anemias, even to the extent of one million red cells and ten per cent hemoglobin, are never productive of active hemorrhagic diseases, the differential count must nevertheless be carefully studied to rule out the presence of reticulo-endothelial disease. A case in point is that of a girl of eleven years who was admitted with the diagnosis of thrombocytopenic purpura because of a severe anemia, some purpura, a white count of 2,000, and platelets of 100,000. The child's condition was diagnosed by other clinical signs of leukemia, corroborated by findings of pathological myeloblasts.

(2) Platelets. Blood platelet deficiency is the commonest cause of pathological hemorrhage. Platelets are indispensable for thrombus formation and clot retraction involved in bringing about closure of bleeding vessels and cessation of hemorrhage. They vary not only in quantity but also in quality. Therefore they are counted from the plasma not only after the red cells settle, but

also at the end of an hour in a paraffin tube to determine the number remaining after agglutination. Normally half clump within the hour; but in thrombocytopenic purpura, the rate of agglutination is diminished and in hemophilia clumping hardly occurs at the end of an hour as a result of their marked stability.

The resistance of platelets may also be determined by the fragility test. Blood is centrifuged slowly to precipitate the red cells above which platelets are formed. A drop of the platelet suspension is added to each tube of a series of saline solutions of concentrations varying from 0.25% to 0.5%. Normal platelets begin to autolyze at about 0.38%, while hemophilic platelets remain resistant to hypo- and hypertonic salt solution. The morphology of blood platelets studied in smears reveals in addition changes in their quality.

smears reveals in addition changes in their quality.

(3) Clotting Components. The concentrations of the substances involved in the clotting process are collectively indicative of the blood clotting function. The ratio of the concentrations of the clotting substances,—fibringen, prothrombin and effective plaletets,—over antithrombin has been defined by us as the index of blood clotting function. This involves the additional determination of these substances which are invaluable in arriving at the diagnosis of difficult latent or active hemorrhagic problems. Drs. Bancroft and Stanley-Brown have found the determination of the index of blood clotting function a valuable preoperative guide to potential thrombosis, uncommon, of course, in children.

(4) Coagulation Time. Blood elotting time is no criterion of the hemorrhagic status of a patient. It may be normal though spontaneous bleeding be present as in purpura or jaundice; and be delayed though there be no hemorrhagic disease. The determination of the clotting time of blood passing through skin is certainly no indication of what might be expected in the operative field of other tissues. All injured tissues as well as shed blood dissociate into coagulating substances. The tissue factor may frequently be eliminated by determining the clotting time by veniouncture.

(5) Clot Retraction. Blood platelets definitely cause retraction of a clot with the expression of blood serum. It is exceptional to find a clot to retract in thrombocytopenic purpura. The blood used for the clotting time determination is observed at intervals for retraction, preferably in a watch-glass. Normally it begins within 30 min-

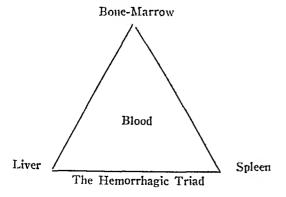
utes and ends within 4 hours.

(6) Bleeding Time. This empiric test done upon the ear lobe repeatedly is characteristic of thrombocytopenic purpura when prolonged. It does not parallel the number of platelets, although it is prolonged in diminished or absent clot retraction. The bleeding time is normal in hemoplilia because an injury precipitates sufficient platelets to plug the capillaries.

(7) Capillary Resistance. The tourniquet test determines the condition of the capillaries. Within a few minutes after the removal of the tourniquet the test is considered positive when a profuse crop of petechiæ appear at the site of the arm compressed by the tube. The rubber tourniquet is more valuable than the sphygmomanometer in making this test in hemorrhagic diseases.

Diagnosis and Treatment of Hemorrhagic Diseases

Disturbance in Blood Clotting Function. The hematic group constitutes the essential hemorrhagic diseases—hemorrhagic disease of the newborn, hereditary hemophilia, thrombocytopenic purpura, and the diseases of the bone-marrow, spleen, and liver. Each is characterized by a functional deficiency in one of the clotting components as the controlling factor in the pathogenesis of the hemorrhage. Each clotting factor congenitally deficient is indicative of a specific hereditary hemorrhagic disease. Each disease is amenable of control to the extent that the deficient factor is replaced or regenerated. Bleeding in these cases tends to be prolonged and continuous once the vascular integrity is disturbed. But until the provoking condition precipitates bleeding, many of these and associated conditions constitute potential hemorrhagic disease which determined not by symptomatology but by accidental study of blood clotting function.



Potential Hemorrhagic Disturbances. Bleeding is not an infrequent symptom of apparently well and active children. To be sure trauma, infection, drugs, and even insect bites induce all forms of benign hemorrhagic manifestations apart from hemorrhagic disease. But there is a group of well children in whom nose bleeds, black and blue spots, and other hemorrhagic manifestations are either indicative of potential hemorrhagic disease, or more generally of diminished blood clotting function, since the vascular endothelium suffers no disturbance in nutrition in severest anemia or hydremia. The physical examination may be negative, and the clotting time prolonged or normal, but yet the clotting components may

be diminished in prothrombin, fibrinogen, or platelets. We have observed in the last five years that these clotting components may be altered by dietary regimen.

Protein and fat tend to increase the concentration of the blood-clotting components, while carbohydrates and minerals tend to decrease them. We have therefore devised a "clotting diet" high in protein and fat, acid forming, low in vegetables and carbohydrates; and a "bleeding diet" high in vegetables, carbohydrates and water, base forming and, of course, minimal in protein and fat. The effect of these diets upon the clotting function has been demonstrated in animals to shift in the direction of an increase in either bleeding or clotting of the blood after a week of such a regimen. Similar results attain in children whose tendency towards bleeding is discovered accidently or preoperatively. Our surgical staff has been particularly concerned about the application of these dietaries preliminary to operations in order to prevent postoperative bleeding in some and thrombosis in others as predetermined by the index of blood clotting function.

Hemorrhagic Disease of the Newborn. Melena is a self-limited symptom-complex distinct from other hemorrhagic disturbances in the newborn. It is a transient though severe reaction of the newborn to chemical injury of the reticulo-endo-Its manifestation of bleeding thelial system. from the mucous membranes may simulate veritable diseases—syphilis and sepsis during the first days and purpura, hemoglobinuria and visceral anomalies during the first weeks of life. But the mechanism of melena is less deep-scated, and is self-compensating and even preventable. Potential hemorrhagic disease may be recognized the first day of life by means of the prolonged clotting time. This reveals injury in the formation of the blood clotting substances—prothrombin or fibrinogen. Their diminution is brought about by anesthetic drugs administered during labor, and by post-natal hemolysis of red cells, as well as by prenatal protein and fat deprivation on the part of the mother.

Though a multiplicity of factors may be operative in the development of melena neonatorum, the injection of 30 c.c. of human blood intramuscularly from the first day of life arrests oozing within 24 hours. But we have observed in the course of our studies of the nutrition of the newborn that the oral administration of gelatine from birth is preventive of hemorrhagic disease of the newborn. The feeding of 6% gelatine solution at 2-hour intervals has reduced the average clotting time of newborns from 9 minutes to 2 minutes in about 200 babies. We have not observed a single case of hemorrhagic disease of the newborn throughout the year during the administration of this modified solution primarily devised for the purpose of preventing loss of weight in the newborn. But several cases of active hemor-

rliagic disease of the newborn with low prothrombin or fibrinogen content of the blood observed in other hospitals have responded favorably to

gelatine feeding.

Prenatal prevention of potential hemorrhagic disease in the newborn is another approach. We have been privileged to observe cases of recurrent melena neonatorum in babies born of the same mother, T. N., under the obstetrical care of Dr. Tritsch at the Fifth Avenue Hospital. The first four pregnancies terminated in death from hemorrhagic disease as substantiated by postmortem examination. It was during the fifth pregnancy that a prenatal attempt was made to prevent the anticipated severe melena. mother's blood showed a concentration of clotting components characteristic of hemorrhagic disease in the newborn. She was put on a very high protein dietary in contrast with her usual low protein intake which had been limited during previous pregnancies because of hypertension. Her blood clotting picture became adequate and a normal infant was delivered at term. baby has been under my observation for four years and has been perfectly well since birth. Encouraged by her favorable fifth pregnancy she proceeded to a sixth but refused to be under rigid nutritional supervision and was delivered of an infant with melena proven by the postmortem examination in the same institution.

Essential thrombocytopenic purpura is a benign disease of the reticulo-endothelial system. Its site is primarily in the spleen where platelets are destroyed; and secondarily in the bone-marrow where lesions interfere with normal platelet formation. The marked reduction in the number of blood platelets and their alteration in size and structure bear no definite relationship to the severity of the bleeding, the bleeding time, the impaired clot retraction, and the diminished capillary resistance. But this blood picture appearing suddenly in an apparently well child without discoverable cause for the hemorrhagic state and the presence of post-hemorrhagic anemia and leucocytosis, determines the diagnosis. These eriteria characterize the disease in all grades of severity-in the acute fulminating type, in the transient attack, and in the chronic latent course, whether the bleeding be limited to a single source or be widespread.

Effective control of bleeding in acute cases, or prevention of bleeding in the chronic problems, depends upon procedures for increasing the concentration of blood platelets. All other methods are wasteful and without effect. In emergencies, the intramuscular injection of 50 c.e. of whole blood requiring no typing, increases the platelets and arrests hemorrhage. But large transfusions from a suitable donor not only supply platelets, but actually stimulate platelet generation. They must be repeated every fourth day paralleling the average life of infused platelets, High fat feed-

ing rich in vitamin D, and ultra-violet irradiation, particularly after anointing the body with wool fat, produce transient rises in platelets and help tiding over an acute problem.

Persistent bleeding in 70% of chronic cases is permanently relieved by spenectomy. It is unfavorable in acute conditions where the mortality is 80% in comparison with 8% in the chronic cases. The operation must be properly timed for obtaining favorable post-operative prognosis. Preliminary roentgen irradiation of the spleen produces a leucopenia which is an unfavorable prognostic omen. Splenic enlargement is no necessary criterion for operation, although the removal of massive spleens has saved lives from uncontrollable hemorrhage. Following splenectomy the platelets may rise to a million and then return to normal levels in patients in which platelet destruction has been the mechanism. But in those in whom platelet formation has been retarded, the post-operative rise in platelets is less marked and the subsequent level attained is necessarily low.

Symptomatic thrombocytopenic purpura. Purpura is a hemorrhagie symptom widespread amongst many diseases. Besides the essential type it may be a manifestation of clinical syndromes associated with diminution in blood platelets in diseases of the bone marrow, spleen, and reticulo-endothelial system as a result of infeetion or intoxication; or it may be a symptomatic expression of mere capillary injury in the course of systemic infection, chemical intoxication, allergic offense, and a variety of other capillarytoxic conditions. In one group of conditions the blood picture is a revelation of blood cell injury; whereas in the other group the blood picture is usually normal. Purpura therefore becomes primarily a problem for careful clinical differentiation between the varied types of diseases characterized by either clotting or vascular dysfunc-That diagnostic differentiation makes all the difference between benign and malignant diseases, effective and fancied therapy, favorable and fatal prognosis.

Treatment of symptomatic thrombocytopenic purpura necessarily depends upon the primary diseases. Splenectomy is indicated in Gaucher's disease and in constitutional hemolytic anemia because the purpuric mechanism is similar to that of essential thrombocytopenic purpura. But the great variety of other conditions are the result of destruction of blood-forming organs by intoxication, infection, or infiltration resulting in malignant thrombocytopenia. Some infectious diseases injure specifically the megakareocyte mechanism. Primary blood diseases in addition affect the formation of other blood cells. Certain drugs likewise reduce myeloid elements of the blood. These myelotoxic conditions are malignant, resisting all forms of therapy. But the associated vascular injury and infiltration may be influenced to arrest

bleeding. Stryphnon is an effective local hemostatic in that it is a stable intermediate product preceding epinephrine formation with more striking vasoconstrictive properties. Slow intravenous injection of 10% calcium gluconate or chloride daily in 20 c.c. amounts, supplemented by oral administration of calcium salts, are transient therapeutic measures alternated with transfusions. But splenectomy is contraindicated.

Purpuric problems Comment. rarely patterned text-book pictures. Only purpuric children illustrate how strikingly borderline diagnostic criteria may be. Dr. L. Marton's eight-year boy developed a characteristic thrombocytopenic purpura with remissions until splenectomy became imminent. Then he came under my observation only to find that he had been quantitatively deprived of protein and fat because of a chronic eczema. As a last resort a high protein and fat dietary brought the platelets from 20,000 to 400,000 with the disappearance of purpura since 1927. Obviously I am not advocating dietary specificity in thrombocytopenic purpura.

S. T. was admitted as a thrombocytopenic purpura with severe bleeding from the gums for five months, but without other hemorrhagic symptoms. Hemoglobin was 28%, red blood cells 1,200,000, white cell and differential count normal. Platelets 40,000, tourniquet test positive. Systemic treatment of a severe Vincent's infection, and transfusions, cleared the problem for which splenectomy was, of course, no indication.

N. K., a five-year boy developed hemorrhagic otitis media epistaxis and hematuria following tonsillectomy at 3 years of age when clotting and bleeding time determinations were normal. Purpuric symptoms recurred for two years until admission to the hospital. Clotting and bleeding time were normal; tourniquet test negative; platelets 35.000; white cell and differential count normal; spleen not palpable. On a clotting dietary the platelets rose to 240,000 but fell again with remission of symptoms. Splenectomy brought the platelets to 415,000 with recovery.

M. S.. a girl of eleven years, was admitted with repeated and severe epistaxis for a week. Epistaxis and excessive bruising appeared periodically for two years requiring medical care. Clotting and bleeding times were normal. Tourniquet test negative. Platelets 110,000. Spleen not palpable. Blood picture normal. Consensus of opinion was against splenectomy; but that was performed as an emergency procedure in another hospital under unfavorable conditions of uncontrollable hemorrhage four months later with subsequent recovery.

Hemorrhagic Diseases of the Liver. Hemorrhagic manifestations are frequent concomitants of many of the diseases of the liver. Congenital obstruction of the bile ducts, infectious destruc-

tion of the liver parenchyma, and chemical poisoning, frequently result in hemorrhagic symptoms. They are the result of both fibropenia and vascular injury. Fibrinogen deficiency is the common blood-clotting factor controlling the hemorrhagic picture in disturbances of liver function. Bile acids have been associated with the cause of the bleeding; but their concentration rarely reaches a sufficient level to dissolve the formed clot, nor does the intensity of the jaundice parallel the severity of the hemorrhages. Frequently hemorrhagic symptoms are present in liver disease without jaundice as an associated condition.

Hemorrhagic symptoms have also been associated with a deficiency in the available calcium in the course of jaundice because of a hypothetical combination of calcium with bile acids. The blood calcium is normal in liver diseases and plays no determining role in the hemorrhagic symptomatology. To be sure calcium therapy diminishes bleeding, but that effect is upon the vascular system and not upon its blood content. Both hemorrhagic symptoms and cholemia are simultaneous expressions of disturbed liver function induced by the same toxic factor; and one symptom is not necessarily related to the other, but rather to the common cause of the liver disease.

Fibrinopenia is a hemorrhagic syndrome associated with diseases of the liver. It is characterized by markedly prolonged clotting and bleeding times, markedly diminished fibrinogen content, and a normal platelet count. Even in extreme degrees of the failure of the blood to clot there is no evidence of vascular injury in the noninfectious types of liver disturbances. obstructive jaundice the bleeding disturbance is the result of alimentary toxic substances accumulating in the liver, and producing capillary injury. Hemorrhagic manifestations are never observed in catarrhal jaundice or in gall stone formation; but are present in 40% of the cases of acute yellow atrophy, and in 90% of the cases of cirrhosis of the liver, and in all cases of chloroform and phosphorus poisoning. These are rarities in children in this country.

HEREDITARY HEMORRHAGIC DISEASES OF BLOOD CLOTTING DYSFUNCTION

Hereditary hemophilia is a clinical chimera for many a bleeding problem. It is too rare a condition to cover so many hemorrhagic disturbances, and is too well-defined an entity to become a haphazard label of hemorrhagic confusion. Bulloch and Fildes have been able to authenticate only 44 hemophilic families out of 273 reported in a century of literature since its classical description by Otto in 1803. The disease occurs exclusively in the male with a typical familial bleeding pattern, and must not be confused with other familial hereditary hemorrhagic diseases

afflicting females. It is transmitted through the female, although the mothers of our hemophilic boys showed normal blood-clotting function. It is characterized by prolonged duration of bleeding even though the clotting time often be only slightly prolonged. It paradoxically shows a normal bleeding time, because the skin-clotting function is greater than that of mucous and scrous membranes. Hemophilic blood shows the lowest index of blood clotting function with normal, or increased number of platelets physiologically defective, because of their strikingly great resistance.

Case Comment. Diagnostic criteria are not always clear-cut in transitional hemorrhagic problems

C. M., a 2-year boy, showed no bleeding tendency until many bruises appeared following trauma incident to walking at eleven months of age. No family history in 3 preceding generations. Clotting time 6 minutes but clotting index 0.009, when the blood picture otherwise was normal.

D. B., a 6-year boy with hemophilic joints, clotting time 11 minutes, bleeding time 18 minutes, normal platelets, positive tourniquet test, normal clot retraction. Father allergic. A hemophilic with athrombopenie purpura.

G. M., a ten-year boy, required repeated blood transfusion following slight traumata since birth. He was under my observation for a hemophilic arthritis 2 years ago. But recently he developed broncho-pneumonia with otitis media precipitating spontaneous bleedings from nose and gums. Clotting time, 10 minutes. Bleeding time 13 minutes, platelets 60,000, spleen enlarged, tourniquet test negative. A transient purpuric picture in a hemophilic.

B. S., a 9-year boy, was admitted as a "hemophilic" after three hospitals refused tonsillectomy because of prolonged clotting time. Hemorrhage first occurred after myringotomy in infancy. Slight bruising followed slight trauma. No family history of hemophilia. Clotting index 0.2, increased to normal by a "clotting" dietary. Tonsillectomy was performed without post-operative bleeding.

Hemophilic bleeding can be controlled but not cured. Mild bleeding may be stopped locally by applications of fresh raw meat, fresh blood, or cephalin, after the removal of useless clots, since pressure alone is contraindicated. All other hemostatics locally applied are ineffective. Severe bleeding may be checked for four days by the transfusion of whole blood from a suitable donor. Even an ounce of injected blood arrests hemorrhage; but the degree of subsequent improvement depends upon the blood given. Stored serum is ineffective in inhibiting clotting, but an ounce of fresh serum arrests bleeding within a day.

But protein sensitization is beneficial in diminishing bleeding from superficial injuries as well as in abating recurrences. The child is sensitized to horse serum by subcutaneous injection of 3 c.c. of seruin. We have seen no difference between the use of diphtheria and antivenim serum. At the end of a week the child is given 2 minims injected intradernially which shows successful sensitization by the wheal formation. Intradermal injection should be repeated monthly for the maintenance of sensitivity, an effect primarily upon the capillary system. The treatment is helpful in hemophilie arthritis for which autogenous blood has also been given intramuscularly. Obviously the sensitization mechanism is the same. It increases the recession of the hemorrhagic joint which must be immobilized in a neutral position by means of plaster casts when necessary.

The prevention of hemophilia is a problem for cugenics. The course of the disease can be altered. Nature spares hemophilic newborns from the effects of birth trauma by the transmission of an abundance of female sex hormone into the infant's circulation. Thus it is that the disease does not become manifest until late in infancy unless surgical intervention precipitates bleeding. The disease tends to ameliorate with growth, particularly after the endocrine adjustment of puberty. The absence of the female sex hormone in hemophilics has made its isolated preparation a therapeutic indication. We have found that the injection of female sex hormone preparation. alone or reinforced by anterior pituitary extracts, produces no change in the concentration of the clotting substances from the levels characteristic of hemophilics. But we have observed that 500 mouse units of the hormone are necessary to increase the capillary resistance sufficient for it to reveal a negative test within two days in hemorrhagic diseases affecting vascular integrity rather than the blood clotting content.

Our hemophilic boys with joint manifestations have benefited most during the year in that the periodic effusions were diminished. The hormone therapy has not diminished the tendency to bruising, but has decreased the tendency to bleeding following natural trauma. The avoidance of trauma by limitation of activity requires compensatory physio-therapy measures for improving muscle tone. The maintenance of bodily warmth and vacationing in warm climate appear in addition to alter favorably the course of the disease. Our clotting dietary has produced no appreciable effect upon the hemorrhagic status of hemophilia. Infection has been found to precipitate bleeding particularly into the skin and joints. Operative emergencies are safely carried out after preliminary transfusion.

Hereditary thrombosthenic purpura. Typical manifestations of thrombocytopenic purpura may be simulated by an hereditary purpura involving strikingly abnormal and functionally inactive platelets. It is a familial defect transmitted from generation to generation to both males and females. It is readily differentiated from hemophilia in this respect as well as in the blood picture. The number of platelets fluctuate in different members of these families from relatively low normals to high values. But abnormalities in their size, shape, staining qualities and failure of agglutinization is a characteristic common to all. As a consequence the bleeding time is prolonged, the clotting time is normal, the clot retraction retarded, the tourniquet test positive, the spleen rarely enlarged and purpuric bleeding is a common sympom.

Case Comment. Such was the case of a tenyear girl who continued to bleed excessively despite splenectomy performed on the basis of a supposed chronic thrombocytopenic purpura. She had recurrent epistaxis and purpura since the first year of life. The mother, a mild bleeder, died The son is not a bleeder. during childbirth. Child admitted to a N. J. hospital in emergency. Pre-operative blood picture—hemoglobin 60%, red blood cells 3,200,000, white blood count 17,000, polys 80%, lymphocytes 8%, monocytes 6%, platelets 350,000, lysis 12%, tourniquet test negative, clotting time 10 minutes, bleeding time 15 minutes, clot retraction absent. Transfusion effective. Vascular therapy without avail.

B. Disturbances in Vascular Function. bleeding problems of the vascular group are, strictly speaking, non-hemorrhagic diseases. The blood of each disease shows no abnormality in clotting function but the disease is a dysfunction of the capillaries. The vascular changes are produced in one of several ways—softening of cement substances binding endothelial cells, injury of the living cells, destruction of elastic fibers, disturbance in innervation for normal contractility of vessel walls. The bleeding disturbances are spontaneous, and single or multiple, but with little tendency towards continued bleeding. The bleeding in each of these diseases is better tolerated than in those of abnormal blood con-The transient injury to the capillaries becomes manifest in extravasations of blood as in scurvy, and Schoelein's and Henoch's diseases on the one hand, and by blood combined with inflammatory exudations as in severe infectious diseases and in chemical poisoning, on the other. Effective treatment of the heterogenous group depends upon the administration of substances to decrease capillary permeability immediately while the controlling factors are being corrected.

Avitaminosis. Vitamin deficiency results in degeneration of the capillary endothelium. Scurvy is the classical example of the specific relation of vitamin C deficiency to the extravasation of blood under the periosteum and in the deep muscles, into the skin, mucous membranes and around

hair follicles. Infection accentuates vascular injury. Aschoff demonstrated separation of cement substances binding vascular endothelial cells. The blood-clotting function is normal excepting for the positive tourniquet test which is indicative of capillary injury. In severe cases there are changes in the bone marrow with interference in the myeloid activity causing a diminished platelet formation. But the initial vascular phenomena control the clinical picture of scurvy in children.

Vitamin B¹ (or F) deficiency has likewise been demonstrated to injure the vascular endothelium to the extent of producing hemorrhagic manifestations. There is evidence that deficiency of this vitamin in the diet of the pregnant woman is one of the factors responsible for hemorrhagic disturbances in the newborn involving vascular injury. Hemorrhagic manifestations definitely associated with avitaminosis have been observed in the course of marasmus and Herter's infantalism. The nutrition of the vascular endothelium evidently depends in part upon vitamin adequacy, and the minutiæ of nutrients; while blood content in clotting substance depends upon the gross nutrients, protein, and fat.

Allergic purpura. Recurring symptom-complexes of the skin, joints or intestines reveal purpuric spots. Cutaneous eruptions with erythema, urticaria, agnionemotic edema as well as purpura constitute erythema multiforme. Mild arthritis with pain, tenderness and swelling of the joints of the lower extremities clustered with purpuric spots constitute Schoelein's purpura. Attacks of colic with abdominal pain, tenderness and rigidity, purpuric spots over the skin, blood in the vomitus, urine and stool constitute Henoch's purpura. The blood clotting function is normal but for the positive capillary resistance test. heterogenous group of syndromes has a common allergic basis in that increased capillary permeability is suddenly produced by certain foods or bacterial toxins in allergic children.

Treatment involves clearing of the infection and simultaneous elimination of the allergic offense. Intestinal disinfectants, colonic irrigations, belladonna suppositories, protein desensitization, ephedrin administration, salicylate medication, intravenous saline, and calcium therapy are the effective procedures. Injection of foreign protein results in violent reactions, transfusions are unnecessary and splenectomy of course out of order.

E. M., five years of age, the daughter of a physician, was presented with purpuric spots over the lower extremities. There was great anxiety about threatened splenectomy. A year ago the child had a severe tonsillitis with associated pain in the abdomen, knees, and legs. After subsidence of the fever a tonsillectomy was performed on the basis of supposed rheumatic fever. But after the operation purpuric extravasations and petechiæ appeared over the legs. No such mani-

festations appeared until this winter when a similar syndrome recurred with each upper respiratory infection. Attacks of urticaria and ecchymoses alternated or appeared simultaneously. The child was admitted to the hospital for study as a case of allergic purpura. Platelets 385,000, tourniquet test positive, clotting and bleeding time normal. Father and patient allergie. Bacterial desensitizations in progress.

A. W., a girl of twelve, with similar symptomatology was seen in consultation during an attack which simulated gastric ulcer. Hematemesis, abdominal pain, epigastric tenderness clouded the clinical picture. Blood picture and gastro-intestinal series were negative. During convalescence deep intramuscular hemorrhages prolonged the pain and tenderness of the lower extremities.

Hemorrhagic Infectious Diseases. Hemorrhagic symptoms predominate in infectious invasion. Vascular injury usually exceeds the disturbances in myeloid function but the relative changes in each depend upon the severity of the infection. We have observed petechiæ containing the organisms in meningicoccemia, embolic abscesses with visceral hemorrhages in pneumococcemia, nose bleeds; and even hemorrhagic sputum in epidemic influenza, thrombotic petechiæ consisting of tuberculosis, punctate hemorrhages in scarlet fever, mucous membrane bleeding in diplutheria, hemorrhages from the mucous membranes in congenital syphilis and purpura associated with the presence of endothelial cells in circulating blood of subacute bacterial endocarditis confirms vascular injury.

Capillary hemorrhages are not infrequent as consequences of vascular congestion in the course of chronic infections. Rheumatic heart disease induces epistaxis or congestion hemorrhages in the lower edematous extremities. Pertussis prediction in the conjunctive, eyetimester in the lower edematous extremities. Pertussis prediction in the conjunctive, eyetimester in the conjunctive, eyetimester in the conjunctive, eyetimester in the conjunctive in the conjunctive in the conjunctive in the morrhagic symptoms in uremia parallel the severity of capillary damage from infection and not the degree of nitrogenous retention. Increased venous pressure in normal circulatory systems is not a determining factor in these bleeding manifestations.

Arrest of bleeding in the course of infectious invasion may be brought about by therapeutic measure for decreasing capillary permeability. Eltimination of infection is of course the primary concern, but the self-limited nature of infectious disease necessarily requires vascular medicaments. Clinically, calcium salts have been used in most hemorrhagic diseases for centuries with favorable effect, but based upon erroneous interpretations. The calcium required in the clotting mechanism is rarely found wanting in amounts necessary for this process. Even the striking clinical entities

involving hypocalcemia never reveal bleeding symptoms.

Calcium therapy is indicated in abnormal bleeding resulting from vascular dysfunction. Its effect is specific in decreasing capillary permeability. The calcium salts administered have no bearing whatever upon elevating the well buffered calcium content of the blood. Calcium therapy is best administered intravenously in a 10 per cent solution of calcium gluconate, or calcium cultoride, from 10 to 25 c.c. injected very slowly. Oral administration is, of course, slower in its effect but may well be supplemented in 5 to 10-grain doses offered between feedings to prevent its precipitation in the intestinal tract and subsequent loss in the stool.

Gelatine administration arrests bleeding by condensing platelets upon the vascular bed. It may be injected intravenously in 10 per cent solution from 20 to 40 c.c. or fed in 10 per cent solution either directly, sweetened and flavored with vanilla or mixed with milk or as a jeily which

may be kept on ice for two days.

Pituitary extracts of the postcrior lobe are effective vasoconstrictors in arresting bleeding. This mechanism is operative in vascular beds other than those of the female genital organs. The injection of 0.5 c.c. of pituitrin frequently suffices to arrest capillary oozing when due to vascular injury. The action is more prolonged than that of adrenalin. It is the vasopressor fraction of the postcrior lobe which affects the vascular endothelium in the direction of increased blood coagulation.

Diet affects the hemorrhagic status of patients even in the course of severe infection. It tends to increase the blood-clotting components to the extent of producing a thrombotic picture. And yet bleeding from mucous membranes may be present because of embolic phenomena associated with the vascular injury. Therefore the dietary indicated is for reduction of the increased coagulability of blood. This is attained by fruits, vegetables and carbohydrates with the exclusion of proteins and fats.

Clinical Comment. H. R., a four-year boy, was admitted to the hospital with a history of convulsions associated with a severe upper respiratory infection. Hemorrhage appeared in the orbit and marked purpuric extravasations over trunk and upper extremities. Facial weakness and complete right hemiplegia followed. Spinal fluid negative. Clotting and bleeding time normal, tourniquet test positive, platelets 310,000, platelet lysis 35%, blood clotting function normal. Encephalitis infection causative of purpura.

N. C., a five-year boy, developed recurrent severe epistaxis in the course of osteomyelitis with septicæmia. The blood clotting function was five times normal with platelets ranging around 1,300,000 per e.e. and yet vascular injury as a re-

TABLE I

BLOOD STUDIES ON TEN CASES OF HEMORRHAGIC DISEASE OF THE NEWBORN

Name	Day Onset	Duration Bleeding	CT	BT	CR	TT	Pro- thrombin	Fib- rinogen	Anti- thrombin	Plate- lets	Lysis	Index
C. W.	3d	1 d.	5	2	+	_	1.0	0.2	1.25	300,000	43	0.3
D. B.	3d	2 d.	10	4	+	_	0.6	0.2	1.5	165,000	30	0.05
A. S.	1d	0	20	. 2	+	_	0.3	0.5	2.0			
W. H.	3d	'3 d.	31	2	+	_	0.3	0.5	2.0	165,000	40	0.05
C. M.	1d	1 d.	40	3	+	_	0.2	0.4	3.0			
J. B.	2d	3 d.	45	3	+		0.2	0.5	4.3	280,000	40	0.04
Н. В.	1d	0	50	2	+		0.1	0.6	2.5	175,000	35	0.01
E. D.	1d	0	60	3	+		0.4	0.8	2.5	220,000	45	0.1
B. L.	2d	5 d.	90	15	.+	-	0.3	1.1	5.0	200,000	35	0.05
A. G.	2d	2 d.	120	5	+		0.1	0.4	5.0	180,000	40	0.01

CT = Clotting Time: BT = Bleeding Time; TT = Tourniquet Test.

sult of the infection was not compensated by the thrombotic blood picture. On the other hand, we have seen no hemorrhagic symptoms nor angina in B. S., a boy of eight, with lymphatic leukemia and a platelet count as low as 40,000. It is folly indeed to ever relate the hemorrhagic status to one factor alone.

Hemorrhagic Chemical Intoxications. Chemical poisons destroy the capillary endothelium producing hemorrhagic symptoms. The toxic effect is not only upon the vascular system, but also upon bone-marrow function. All poisons, organic or inorganic, accidental or therapeutic,

cause marked degeneration of vessel walls. Effective therapy depends upon the diagnosis and climination of the chronically ingested drugs, accidental or therapeutic. Salicylates or atophan displace some of the toxic drugs. Continuous injection of intravenous saline solution slowly eliminates the circulatory content in chemical poisons. Calcium therapy arrests bleeding by its effect on capillary permeability. Repeated transfusions accelerate clotting function and improve the anemia. The prognosis is not favorable because of the irreversibility of chemical destruction of bone-marrow and vascular bed.

TABLE II
BLOOD COMPOSITION ON SUCCESSIVE BLEEDING AND CLOTTING DIETS

Dog	Diet	Prothrombin Normal =1	Fibrinogen Normal =05	Antithrombin Normal = 1	Platelets Normal =250,000	Index Normal =0.5
1	Normal	1.11 1.11 1.45	0.64 0.64 1.12	1.16 1.16 0.96	200,000 200,000 250,000	0.6 0.6 1.7
2	Normal	1.00	0.54	1.00	400,000	0.5
	Carbohydrate and vegetable	0.74	0.54	1.00	220,000	0.3
	Protein and fat.	1.00	0.64	1.00	300,000	0.7
3	Normal	1.11	0.64	1.16	220,000	0.6
	Carbohydrate and vegetable	1.11	0.28	1.00	135,000	0.3
	Protein and fat.	1.26	0.69	1.00	210,000	0.9
4	Normal	1.00	0.40	1.16	200,000	0.3
	Carbohydrate and vegetable	1.00	0.40	1.16	325,000	0.3
	Protein and fat	1.11	0.64	0.95	330,000	0.7

Normal diets yield a clotting index of about 0.5. Base-forming diets consisting of fruits, vegetables and carbohydrates reduce the cletting index while protein and fat diets increase the index

Prothrombin x Fibrinogen x Platelets

Antithrombin

TABLE III POTENTIAL HEMORRHAGIC DISTURBANCES INCREASE IN BLOOD CLOTTING FUNCTION ON A HIGH PROTEIN DIETARY (One Month Interval)

Case	Prothrombin	Fibrinogen	Antithrombin	Platelets	Lysis	Index
A J	0.6	0 36 0 64	1 4 1 0	210,000 350,000	33 40	0 1 0 5
3 8	0 6 1 0	0 37 0 64	2 2 1 0	260,000 325,000	19 38	0 1 0 6
A 9	0 01 0 9	0 56 0 75	10 5 1 0	260,000 275,000	10 34	0 01 0 7
H R	0 6	0 6 0 6	1 5 1 0	150,000 200,000	37 37	0 1 0 4
JT	0 8	0 32 0 37	1 1 1 0	350,000 350,000	30 30	0 2 0 3
M M	0 6 0 8	0 3 0 5	1 3 1 0	130,000 230,000	27 30	0 2 0 4
АН	0.6	0 6 0 6	1 5 1 0	175 000 190,000	37 31	0 2 0 5
мо	0 8 0 8	0 28 0 6	1 0 1 0	340 000 345,000	50 48	0 2 0 4
F M	0 6 0 8	0 3 0 5	1 2 1 0	150,000 230,000	27 30	0 2 0 5

These Patients with hemorrhagic symptoms were alleviated by a high protein and fat dietary and thus were taken out of the category of "pseudohemophilia."

TABLE IV BLOOD STUDIES OF THROUSOCYTOPENIC PURPURA

					,	Prin	ARY						
Туре	Name	Hgb	RBC	CT	ВТ	cn	тт	Pro- thrombin	Fib- rinogen	Antı- thrombin	Plate- lets	Lysis of Platelets in per cent	Index
Acute	S A	30	2 2	10	40	0	+	1 2	0.6	0.9	2,000	30	0 00
Chronic	MS	80	4 6	8	12	±	+	0.6	07	15	30 000	30	0 00
	NK	75	4 4	7	15	±	+	0.8	0.6	10	40,000	20	0 04
	r a	28	1 2	3	12	+	+	0.8	0.5	11	30,000	35	0 1
Aplastic anemia	нг	50	2 6	20	12	0	+	1 2	0 7	10	30,000	35	01
	T -		1		1	Sympy	OMATIC	1		1		1	
Myeloid leukemia	F P.	60	3 0	10	15	0	+	0 6	0.8	13	60,000	29	0 08
	L G	70	3 8	5	3	0	+	10	0 4	10	30 000	20	0 06
Lymphatic leukemia	A S	28	1 3	4	6	±	+	10	0 5	10	100,000	40	0 3
	H G	80	4 3	10	3	±	+	1 2	05	11	55,000	40	0 2
Subacute bacterial endocarditis	C S	44	2 5	7	5	_	+	1 2	0 6	10	90,000	40	03
Banti's disease	A S	45	2 6	8	6	0	+	1 4	0 6	0 9	20,000	50	0 08
Tuberculosis	MU	90	4 6	3	2	+	+	10	07	10	75 000	31	0 3

CT - Clotting Time, BT - Bleeding Time, CR - Clot Retraction, TT - Tourniquet Test

TABLE V

BLOOD STUDIES OF THE CONCENTRATION OF CLOTTING COMPONENTS AND THE INDEX OF BLOOD CLOTTING FUNCTION IN HEREDITARY HEMOPHILIA (Hemophilic blood gives the lowest index of clotting function with the normal number of platelets.)

Case	Age (years)	Date	Prothrombin	Fibrin ogen	Antithrombin	Platelets	Platelet disintegration	Index
C. M.	2	11/11/30	0.12	0.46	5.7	305,000	30%	0.00
С. В.	4	3/ 5/28	0.33	0.64	4.1	370,000	32%	0.05
D. B.	6	3/ 5/28	0.13	0.56	6.8	300,000	10%	0.00
P. G.	5	5/ 4/30	0.22	0.64	3.6	360,000	34%	0.03
D. A.	7	4/19/29	0.22	0.64	. 5.0	300,000		0.02
C. M.	10	8/ 8/30	0.11	1.04	6.5	700,000	37%	0.01
J. R.	20	2/13/31	0.11	0.54	6.2	200,000	30%	0.01
E./S.	30	9/12/29	0.21	0.54	6.2	230,000	12%	0.02
Normal	†		1.0	0.5	1.0	250,000	50%	0,5

TABLE VI—BLOOD CONTENT IN CLOTTING COMPONENTS BLOOD STUDIES IN CASES OF HEMORRHAGIC DISEASES IN INFANCY AND CHILDHOOD RESULTING PRIMARILY FROM VASCULAR DYSFUNCTION

		I. NUTH	ITIONAL			<u>,</u>		, -
Case	Diagnosis	Pro- thrombin	Fibrin- ogen	Anti- thrombin	Platelets	Lysis	TT	Index
A. L. A. M. R. N. B. L.	Scurvy. Scurvy. Marasmus. Herter's Infantalism.	1.0 1.0 1.0 0.9	0.64 0.74 0.48 0.2	1.0 1.0 1.07 1.07	250,000 300,000 180,000 250,000	38 33 37 40	++++	0.6 0.7 0.45 0.2
		II. Al	LERGIC					
A. F. E. M. A. L.	Erythema Ultiformo	0.6 1.0 1.0	0.64 0.74 0.44	1.25 1.0 1.0	180,000 385,000 270,000	30 35 25	++++	0.35 0.7 1.4
	•	III. Inf	ectious					
D. S. A. R. J. M. M. M. L. M. A. J. M. L. S. L. G. B. H. E. M. U. R. G. L. G. A. S. B. C. D. V. F. G.	Endocarditis Cardio-vascular Cardio-vascular Cardio-vascular Cardio-vascular Cardio-vascular Diphtheria Pneumonia Pneumonia Pneumonia Encephalitis Tuberculosis Syphilis Syphilis Syphilis Syphilis Syphilis Syphilis Septicaemia Septicaemia Uremia	1.0 1.0 0.9 1.0 1.1 1.2 1.0 1.1 1.0 1.0 1.0 1.0 1.0 1.0 1.0	1.3 0.64 0.9 0.64 1.64 1.96 1.54 0.94 0.94 0.94 0.94 0.94 1.00	1.0 1.0 1.0 1.0 0.96 0.96 1.0 0.96 1.0 1.0 1.0 1.0 1.0	315,000 225,000 140,000 310,000 250,000 300,000 215,000 310,000 175,000 215,000 215,000 110,000 1,300,000 225,000 280,000	39 33 28 29 28 39 40 41 41 35 31 29 30 46 28 38 - 33 33	+++++++++++++++	1.3 0.65 0.7 0.8 0.6 0.7 2.0 1.9 1.8 0.9 0.7 0.9 0.7 0.9 0.7 0.9 0.7 0.9
Е. Н.	1	IV. T	OXIC	1		40	+	1.1

TABLE VII THE BLOOD CLOTTING FACTORS OF THE N FAMILY MOTHER'S BLOOD

Dato	Clotting Time	Bleeding Time	Pro- thromhin	Fibrino- gen	Antı thrombin	Plate- lets	Lysis %	Índex
Dec '27 Mar' 28 May '28	6'15' - 5'15' 230 - 1'45"	4 45 ' 1 30'	0 32 0 35 1 12	0 38 0 75 0 79	1 5 1 4 0 75	154 000 175 000 265 000	37 68	0 071 0 2 1 3
			r	ATHER'S BLOOD				
May '28	3'30 - 1'30"	2 00"	0 98	0 45	10	265 000	70	0 4
			l'iri	H BART'S BLOO	D			
Aug '28	2 15 - 1'30'	1'30'	10	0 47	10	380,000	60	0 5

Mother's blood showed a deficiency in prothrombin and fibrinogen early during her filth pregnancy. Normal haby at term following maternal clotting dietary. Sixth newborn without prenatal supervision resulted in fatal hemorrhagic disease similar to first four newborns

Hereditary Telangicciasis Puberty first precipitates bleeding varicosities in this congenital developmental defect. It is characterized by an inherited deficiency in venous channels in the buccal and masal inucous membranes, facc, cheeks, cars lips, tongue, although other parts of the body may be involved. The telangicciases vary in size from a pinpoint to a pea and may be flat or raised. Bleeding from these dilated vessels is often severe and may even be fatal. The condition is unnecessarily confused with purpura and hemophilia for the blood is normal.

SUMMARY

1 Hemorrhagic disturbances are syndromes associated with many disease and produced by varied causes

TABLE VIII
THERAPEUTIC MEASURES FOR THE ARREST OF BLEEDING

ļ	CHAR	ACTER OF THE DE	SEASE	
Procedure	Platelet Deficiency	Fibrinogen Prothrombin Diminution	Vascular Disturbance	
Local	Coagulen Ultraviolet Irradiation	Thromboplastin Meat Juice	Stryphnon Styptysate	
Oral	Viosterol	Cephalin Fibrinogen	Calcinm Salts	
Nutritional	Dietary Fat (Unsaturated Lipids)	Dietary Protein (Gelatine Viscera)	Base- forming Foods	
Intramuscular	Foreign Protein	Blood Serum	Pituitrin Parathormone	
Intravenous	Transfusion	Transfusion	10% Calcium Salts 10% Gelatine	

- 2 Clinical examination must be correlated with the blood picture in arriving at a diagnosis of hemographic disease
- 3 Methods are presented for the determination of the hemorrhagic status of a patient in terms of degree of function of the vascular endothelium and its blood content
- 4 Hemorrhagic problems are rarely patterned text book pictures although a clotting component or a vascular alteration determines the control ling factor diagnostic of the disease
- 5 Potential hemorrhagic disturbances reveal a low index of blood clotting function improved by a dietary high in protein and fat
- 6 Potential hemorrhagic disease of the newborn may be prevented by the oral administration of gelatine solution and prenatally by a "clotting dietary"
- 7 Diagnostic differentiation with appropriate therapy is given critically for problems of throm-bocytopenic purpura
- 8 Bleeding associated with diseases of the liver is interpreted on the basis of disturbed liver function
- 9 Hemophilia, a clinical chimera for abnormal bleeding problems, can be definitely diagnosed and controlled therapeutically
- 10 Abnormal bleeding resulting from vascular injury constitutes non-hemorrhagic disease characterized by normal function of the blood clotting mechanism
- 11 Avitaminosis results in degeneration of vascular endothelium observed in scurvy, maras mus and Herter's infantalism
- 12 Allergic purpura is a symptom complex in volving the skin, joints and intestines previously designated as erythema multiforme, Schoelein's purpura and Henoch's purpura respectively

TABLE IX

CLASSIFICATION OF HEMORRHAGIC DISEASES IN INFANCY AND CHILDHOOD RESULTING PRIMARILY FROM BLOOD CLOTTING DYSFUNCTION

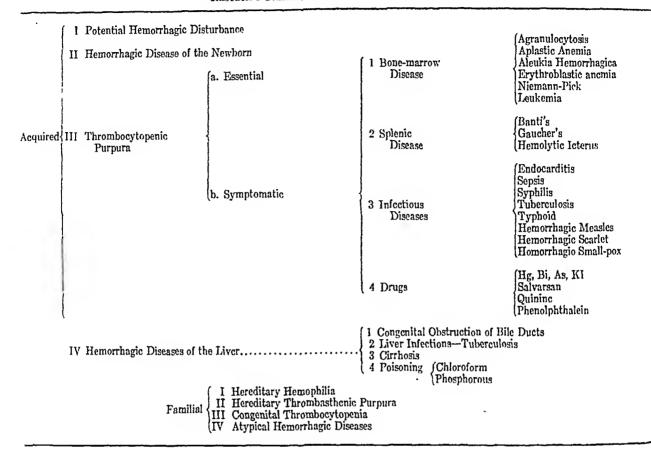
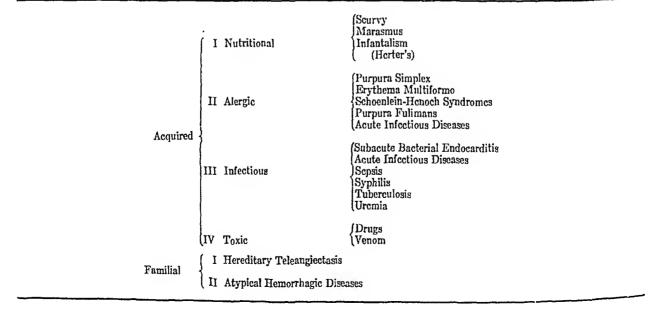


TABLE X

CLASSIFICATION OF HEMORRHAGIC DISEASES IN INFANCY AND CHILDHOOD

RESULTING PRIMABILY FROM VASCULAR DYSFUNCTION



13 Severe infections and chemical poisons are primarily capillary toxic requiring vascular medicaments for arrest of bleeding

14 Atypical hereditary hemorrhagic diseases involving deficiency in "clotting components" or

in vascular endotlichum still prevail without diagnostic characterizations

15 A clinical classification of liemorrhagic diseases is offered based upon alteration in vascular endothelium or its blood content

THE SIGNIFICANCE AND TREATMENT OF PYURIA IN CHILDREN By JAMES R WILSON, M D, SYRACUSE, N Y.

From the Department of Pediatrics, College of Medicine, Syracuse University, and University Hospital, Aided by the Hendricks Fund Read at the Annual Meeting of the Medical Society of the State of New York at Buffalo, N Y, May 25 1932

URING the past eleven years it has been my privilege to observe several hundred infants and children showing pus in the urine, and in more than 70 subjects, to study the changes occurring in the urinary tract at postmorten

In this paper I shall briefly present data on the pathology of so called pyelitis, certain new data relative to so called "recurrent pyelitis," and new data relating to the controverted point of the etiology of urcteral strictures. These and other observations illustrate the importance or the significance of pyinta and suggest the need of prompt recognition, adequate treatment, and in other cases, preventive measures.

These and other data suggest new values in the appraisal of the significance of pyuria and at the same time suggest principles underlying treatment

treatmen

Historical A brief historical review seems es sential to show the development of our concepts

The frequency with which the less severe forms of pyuria occurred was not generally recognized until the earlier part of Holt's generation. In 1887 and 1892 Holt called attention to the frequency with which pus occurred in the urine of infants. He reported several cases which he says were "published for the purpose of drawing more attention to the importance of the examination of the urine at this time of life something which heretofore has been overlooked almost entirely, except in cases of diphtheria and scarlet fever."

Interest in urine examinations was greatly in tensified following this period Excellent chin cal descriptions of the symptomatology were presented of what was then called "pyclitis" Be cause most of the children who suffered from pyuria recovered, opportunities for post-mortem study were few and the anatomic lesion was not established. For various reasons, however, the condition came to be looked on as an inflammation of the pelvis of the kidney. This erroneous view is perhaps one of the factors which has hampered the study of therapeutic procedures.

As time went on, the frequency with which

pyehtis was diagnosed clinically, however, presented a striking contrast to its extreme rarity it post-mortem. Many therefore, began to doubt the dependency of pyuria in the young on inflam mation of the pelvis of the kidney, but sought its origin in some other part of the urinary tract Among these were Themich, Bugbee, Chown, Schloss and Wilson

Thus it came about that the pathology associated with the condition ordinarily diagnosed

'acute pyehtis" was re investigated

Pathology of Acute Upper Urmary Tract Infections By such processes as have been briefly alluded to, a conception of the nature of so-called "acute pyelitis" came about During recent years, however, these older conceptions have been altered Our knowledge of the pathology of so called "acute pyelitis" in infancy is based principally on a study of material from three large Eastern pediatric clinics reported by Chown, Schloss and Wilson The nature of the pathologic processes involved in the majority of cases of so-called "acute pyelitis" in infancy may be briefly summarized in the following manner

The anatomic lesion is in the interstitial tissue of the kidney and is essentially pyogenic in character. In its earliest stages, the lesion is represented by minute foci of round cells and polymorphonuclear lcukocytes. These areas vary in number and are widely scattered and may involve some areas of the kidney to a greater degree than others. In more advanced cases the lesions are of larger size and may show necrosis

with definite formation of abscesses
In no case have we observed pyelitis as an iso-

an no case nave we observed pyelitis as an isolated lesion. Two of our post-mortem examinations disclosed inflammation of the kidney pelves, but in these inflammation of the interstitial tissue of the kidney was present and of more marked degree. The anatomic basis of so called "pyelitis" of infants is probably suppurative nephritis

It is not our opinion that pyuna in infants is always due to a suppurative interstitial nephritis. On the contrary, there are a number of other conditions to which it may be due, but in our

experience these are relatively rare. Cystitis occasionally occurs in infants. Renal calculi, although rare, may provoke pyelitis in early life. True pyelitis as an isolated entity is extremely rare, the only reported case being that of Cabot and Crabtree.

Such we believe is the underlying pathology of so-called "acute pyelitis" in infancy. In older children the pathology of the condition has not been definitely established as yet. This is due to the paucity of correlated clinical and pathological observations. The very meager data now available suggests, however, that fundamentally the

processes are similar.

Chronic Pyuria: We shall now turn to chronic pyuria. Why does so-called "acute pyelitis" become chronic? What are the factors which make a chronic case out of an acute one? It is generally recognized that when pyuria does not respond in the usual length of time and after the usual therapeutic measures have been vigorously prosecuted, that other factors are present besides those which produce a simple acute pyuria. Obstruction to the outflow of urine is believed by many observers to be the most common of these factors.

Hunner was among the first to point out the relationship between chronic pyuria and urinary stasis. Since his first report many others have

appeared.

Obstruction to the outflow of urine may occur at any point in the urinary tract. The most common site, however, appears to be in the urefers. Some enthusiastic workers have stated that ureteral strictures are responsible for 95 per cent of the cases of chronic pyuria in infancy and childhood. While we are not convinced that this degree of enthusiasm is warranted, we do feel that ureteral obstruction is very often of primary importance.

This brings us to the controverted point in which we are interested and on which we have additional data to present. What is the nature of ureteral obstruction in the young? In other words, what is the etiology of these ureteral

strictures?

There are two principal views. Certain observers believe that most of them are acquired—that they are the result of inflammatory processes. By others they are thought to be largely congenital. The fact that there is still room for controversy led me to investigate.

Ureteral Strictures: It was felt that a study of the urinary tracts in a series of very young individuals would throw some light on the subject.

This was done.

The urinary tracts in a series of 100 consecutive necropsies were subjected to particular study—the object being to study the nature and incidence of ureteral strictures.

Outstanding points in the data are as follows: Fifty-seven of the 100 subjects were under 1 month. Thirty-six were between 1 month and 1 year, and 7 were between 1 and 3 years old. Congenital urinary tract anomalies were observed in 13 of the 100 subjects. Narrowing of the lumen of the ureter and kinking were observed in 9 per cent. Urethral obstruction was observed once.

Ureters which on examination and dissection failed to permit the passage of a probe 1 mm. in diameter were classified as showing actual or potential evidence of obstruction. Dilatation of the ureter and pelvis above the lesion were considered still further evidence of obstruction. A considerable post-mortem experience among children, before and after the present study, has led to the belief that a normal ureter will permit the ready passage of a millimeter probe throughout the entire length—even at the physiologically narrowed sites.

Ureteral strictures were observed in 7 subjects. In 6 instances the narrowing of the lumen appeared to be an accentuation of the physiological narrow sites and in one instance, the obstruction was due to a twist in the ureter with the production of a valve. In 4 of these 7 cases the lesions were unilateral and in 3, bilateral. The ureter and pelvis above the lesion was dilated in 5 of the 7 subjects.

Ureteral kinks, which were firmly held in place by fibrous bands were observed in 2 additional cases but were unassociated with narrowing of

the lumen.

Ureteral strictures, or kinks of inflammatory

origin were not observed in this series.

It is our opinion, based on evidence set forth, that congenital defects are the most common cause of the strictures of the ureter in early life. The relatively large number of individuals showing definite or potential sources of obstruction make it unnecessary to assume, we believe, that inflammatory strictures are of frequent occurrence in childhood.

The work of Bigler, Schreiber, and others lends added support.

The finding of 7 per cent of strictures in our subjects is of great practical importance, particularly if generally true as we are inclined to believe it is. Pyuria, unaffected by the usual medical methods in a reasonable length of time and which does not respond to the removal of extrarenal inflammatory foci, should be subjected to a thorough investigation of the urinary tract. The repair of strictures and the return of a normal flow of urine goes a long way toward making it possible for nature to heal the inflammatory process above the site of obstruction.

Recurrent Upper Urinary Tract Infections: You are all familiar with subjects in which pyuria recurs at periodic intervals. What makes pyuria

recur periodically in certain subjects? Why is an individual more susceptible after once having suffered from an attack? Cases of the type about to be mentioned contain suggestive data.

A girl of 11 years entered the hospital with acute cervical lymph noditis, fever, and pyuria. On previous occasions she had suffered from recurrent attacks of pyuria with fever of the type ordinarily diagnosed "acute pyelitis." Between attacks of pyuria, her doctor stated that she was afebrile and the urine free from pus.

What was the inciting cause of this attack of pyuria? Of course, we cannot be sure, yet we feel that it was due to her upper respiratory infection and cervical lymph noditis. In any event, co-incidentally with the clearing up of her eervical lymph node infection the pyuria cleared.

The only treatment used in this case was rest in bed and fluids. The results were very satisfactory. Further study of this case revealed evidence of impaired kidney function, which after recovery returned to normal.

Visualization of the urinary tract revealed no

evidence of obstruction.

This case of recurrent pyuria, uncomplicated by urinary obstruction, is the type of case in

which we are immediately interested.

An opportunity has presented itself for the study at autopsy of 2 cases similar to the one just described. In both instances death was due to extra-urinary tract lesions. Thus it came about that we were able to study the urinary tracts in two individuals who had suffered from repeated attacks of pyuria and who would be still living had not intercurrent infection carried

In both subjects the kidneys revealed an irregular scarring. We interpreted these scars as being due to previous acute suppurative renal lesions which undoubtedly gave rise to pyuria. The remainder of the urinary tract in both instances

revealed no gross pathologic changes.

Histologic studies revealed similar changes in the kidneys of both subjects. Replacement of parenchymal tissue with scar tissue was observed. In these scarred areas glomeruli were found in varying stages of destruction. A few appeared normal, others revealed slight replacement with connective tissue, others more extensive replacement, and still others were completely replaced with connective tissue.

Kidney tubules in scarred tissues revealed evidences of partial or complete destruction. Some of them were small, distorted, and filled with

foreign material,

In addition to these findings, the scarred portions of the kidney also revealed areas which were infiltrated with lymphoid cells, plasma cells, and large mononucleated cells. This type of cellular reaction is usually interpreted by pathologists as a chronic inflammatory process.

These, then, are the data-the facts in the case. The question is—what can we infer from these data?

In this connection, is it not reasonable to assume that such damaged glomeruli and tubules as have just been described would be more likely to suffer an insult than would normal kidney tissue? In other words, might not normal kidney tissue withstand the onslaught of an infective agent better than such damaged tissue as we have demonstrated? Again what may we infer from the accumulations of lymphoid cells, plasma cells, and large mononucleated cells-reactions which are usually interpreted as evidence of ehronic inflammation by the pathologist. In this eonnection, we can merely speculate, for there is no conclusive proof at present available. Is it not possible to assume that there may be still lurking in such a focus an infective agent which, under suitable circumstances, might light up and give rise to an acute inflammatory process—an acute pyuria. With more assurance could it not be assumed that such a process as the one described might represent a damaged area of kidney which under suitable conditions of lowered resistance might be fanned into a new flame and result in a recurrence of pyuria.

Comment: In conclusion, it would seem that there is sufficient evidence to warrant the attachment of a greater significance to pyuria as it occurs in infancy and probably also in later childhood. For many years it was assumed that inflammation of the pelvis of the kidney was responsible for pyuria in most of the cases diagnosed "acute pyelitis." But this was an unproven assumption. From data now available it is apparent that the pyuria of the type ordinarily so diagnosed is due, in the majority of cases, to suppurative interstitial lesions of the kidney tissue itself. Hence, a new significance is attached to the ease of so-called "acute pyelitis."

The treatment of so-called "acute pyelitis" has

been directed chiefly toward the urine and the urinary tract below the kidney. This fact perhaps accounts for many of the discouraging therapeutic results. With the establishment of the pathology underlying the condition it is possible that more effective therapeutic procedures

may be developed.

Rest and quiet and fluids apparently still remain the most important factors in the treatment of so-called "acute pyelitis." In those subjects who do not respond to treatment after a reasonable length of time, the urinary tract should be investigated for possible obstructions, and if such are found it is often possible for a skilled urologist to relieve the condition.

In those subjects who suffer from recurrences of pyuria, but in which obstruction to the outflow of urine cannot be demonstrated, the evidence suggests that treatment should be prolonged in order to induce complete healing. Prolonged rest and quiet seem to be of special importance here. In this manner the foci of chronic inflammation which persist in the kidney substance may go on to complete healing, thus rendering recurrences less_probable.

PROBLEMS OF LABOR*

By E. EVERETT BUNZEL, M.D., NEW YORK, N. Y.

divided into three phases, each one of which frequently taxes the trained obstetrician to the utmost, for the difficulties and abnormalities which may arise in the ante-partum, intra-partum and post-partum periods are many. However, when a patient places herself in a physician's hands for such care, she thinks primarily of her approaching labor and therefore, during the prenatal period, she cooperates and follows instructions to the best of her ability so that she will be in the finest physical condition when that long anticipated day arrives.

Fortunately for the patient, she is unaware of the problems which may confront her doctor during the hours of her labor, her one concern at this time being to have it over with safely, and as painlessly and as quickly as possible. Obstetrical patients today are delivered in hospitals whenever possible as it adds not only to the safety of the patient but also to the ease and to the peace of mind of the attending physician. Therefore, when labor is definitely established the patient is instructed to go to the hospital where, after being admited, she is prepared and is given an enema. The later is used chiefly for two reasons—in the first place to empty the lower bowel and secondly, because of its heat to stimulate and increase uterine contractions. case is relatively normal, labor will proceed without interruption and our first problem therefore. comes near the end of the first or the beginning of the second stage at which time the patient asks for something to relieve her pain.

OBSTETRICAL ANALGESICS

The choice of analgesic to be employed cannot definitely be determined before the patient is seen in labor. Many women ask their obstetricians for a certain analgesic of which they have heard or about which they have read in some newspaper or magazine article. They assume that because it has been used advantageously with some patients, it will therefore be successful in their own cases. I am fully convinced that the best way to handle this situation is to make no promises and to say that relief and help will be given as soon as possible, but that the choice of analgesic must be determined by the character of the individual labor.

The inhalation of nitrous oxide with each uterine contraction may be instituted moderately early in the first stage—that is when the pains have a frequency of five or six minutes—and it may be continued throughout the rest of the labor. However, for the actual delivery ether is most satisfactory. Nitrous oxide offers the patient great relief and, if given properly, will not interfere with the expulsive forces of the second stage. The administration of gas requires the constant presence of an anæsthetist and does not give relief to the almost ever-present backache which persists between pains. In spite of this, it is a safe anæsthetic for both the mother and the child; it may be given when the membranes are either intact or ruptured, and there is the distinct advantage of being able to discontinue its use if and whenever necessary.

Twilight sleep as originally described has been abandoned in most institutions because of its danger to the child. Too many babies were born asphyxiated and blue, and although many of them responded to various means of resuscitation, nevertheless some failed to react. However, a modification of this method, using small doses of morphine with scopalomine, may be employed in the first stage of labor or when delivery is not anticipated for at least two hours. The type of case best suited for morphine and scopalomine is the one in which the first stage is long and drawn out, and in which the cervix is slow to dilate. In such a case there is usually little advance of the presenting part and the uterine contractions fail to increase in frequency or dura-Such a patient becomes mentally as well as physically exhausted and requires rest. It is not an uncommon observation that after giving this type of patient morphine gr. 1/6 or 1/4, and scopalomine gr. 1/200 or 1/150, she will sleep or rest comfortably for an hour or two and then proceed with a much more active labor. Sometimes a second hypodermic is indicated but it should be kept in mind that the scopalomine may be repeated but not the morphine. Following this, labor may continue normally and for delivery it is quite permissible to use gas and ether.

The Gwathmey method of rectal analgesia in the past few years has been used extensively and in some institutions it has become almost a routine. Its technique of administration is well known to you, but a good many obstetricians have modified the method by eliminating one or

^{*}Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

two of the hypodermic medications or by giving the rectal anasthetic alone However used, the best results are obtained when the treatment is instituted after the labor is well advanced. The interine contractions should have a frequency of three to four minutes, and the cervix should be dilated at least two and one half to three fingers After starting the treatment, many patients will sleep and the labor will continue without inter-Usually only a small amount of mhalation an esthesia is required at the time of deliv-The cluef disadvantages of rectal analgesia (1) the length of time consumed in producing the desired result after the decision has been made to use it, (2) the difficulty sometimes encountered in a patient who is unable to retain the rectal medication, and (3) the occasional baby who is born anæsthetized

More recently, pernocton has been used as an obstetrical hypnotic or analgesic and in our hands at Sloane Hospital it has proven itself a very valuable drug reclinically it is a 10 per cent aqueous solution of the sodium salt of the -econdary buty1 - β - bromally1 barbituric acid and is administered intravenously It has many ad vantages over other types of analgesics because its dosage may be regulated, it may be used in any well advanced first stage or even in the sec and stage of labor, in cases of vertex or breech presentations, whether the membranes are rup fured or intact, it does not increase the incidence of forceps delivery, nor does it increase bleeding We have noted no increase in post partum asphyxia of the newborn nor any ill effects on the mother. It is best given when the cervix is three or more fingers dilated and when the interval between uterine contractions is four nunutes The average initial dose of pernocton 18 44 to 5 cc, the dose increasing up to 6 ce in proportion to the weight of the patient is most important to inject this drug slowly into the vein, at the rate of not more than 1 e.e. per As a rule the patient is asleep before the injection is completed. It is my belief that not only labor continues normally but that labor Soon after giving the is actually shortened medication there is a slight fall in the patient's blood pressure but not to such an extent as to cause any alarm Patients to whom pernocton has been given should not be left imattended as they may be slightly aroused by and restless with each uterine contraction. With two of my own cases there was such a degree of excitement that the patients attempted to get out of bed and had But even in these to be forcefully restrained cases the results were none the less excellent, for neither of the patients remembered anything about their labors. Should the effect of the drug begin to wear off before the end of labor, a seeond smaller dose may be used intravenously or Not infrequently it has been intramiiscularly our experience to find the imminimed sac of

membranes or the caput itself presenting at the vulva with the patient uncomplaining or asleep for pernocton does not interfere with the involutary expulsive forces of the second stage. For delivery, nitrous oxide or ether may be used after pernocton with perfect safety to the mother and child

With introus oxide, morphine and scopalo nime, rectal ancesthesia, and pernocton the obstetrician of today has many methods to alleviate and relieve the pains of labor. Other methods, such as spinial amesthesia have been reported to afford good results also

FORCEPS

The use of obstetrical forceps has become so wide-spread that only the so called "plunging multip' or the rapidly advancing primigravida In the hands of the are delivered normally skilled obstetrician this may be justifiable, but in a teaching institution it is a good policy to in struct the students not to interfere with the normal mechanism of labor unless there is a definite indication Therefore, in principle, we should not turn to operative obstetrics unless there is evidence of insufficient expulsive forces or unless the safety of either the mother or the child is compromised Careful observation of the patient's condition as manifested by her pulse rate and blood pressure will serve to indicate any necessity for hastening the delivery Likewise frequent auscultation of the fetal heart will deteet any marked change in its rate or rhythm, both of which usually occur when an umbilical cord complication exists or as an evidence of any other cause for fetal distress. With these indications, a forceps delivery should be done if it may be accomplished by either a low or medium forceps operation Should a prolapsed pulsating cord be found on examination, and if it may not be replaced easily, an internal podalic version with subsequent breech extraction is the method of This is true also in cases in which the vertex is floating or only loosely engaged in the pelvic brim Most obstetricians today are in accord that a high forceps delivery is one of the most difficult obstetrical operations and should be avoided if possible Cases such as these which require immediate delivery and in which there is no contra-indication should be delivered by version and breech extraction

On the other hand, having decided that a for ceps operation is indicated the obstetrician's next problem is the selection of instrument to be used. For the usual low forceps operation, the choice is between an instrument with a solid blade such as the Tucker McLane type or of a fenestrated blade, such as the Simpson. The selection of type of forceps to be used is largely a matter of individual preference and training, not only for a low forceps but for any forceps delivery, and I am certain that there is still a place in obstet.

rics for the solid blade instrument in cases where the vertex is low and in which rotation of the vertex is unnecessary. I believe this, not only because of the much greater ease of application and removal of the blades, but also because they are less likely to produce vaginal and perineal lacerations and, if properly applied to the vertex, they are no more apt to do trauma to the baby. If, however, there is dystocia due to the bony pelvis, if rotation is necessary, or if the solid blades should slip, then a fenestrated instrument The more difficult types of delivis indicated. ery with the vertex high in mid pelvis are facilitated by the use of the Haig-Ferguson forceps with traction rods, or the Barton forceps with its hinged anterior blade, especially when the vertex is in transverse position. There are many other types of instruments described and used, but every obstetrician must select the type he prefers in each individual case.

Associated with forceps deliveries is the use of episiotomy. As I decry the routine use of forceps as advocated by some in all deliveries, so do I deplore the routine use of incising the perineal tissues. There are some cases which can be delivered without any laceration and a great many more in which only a small tear of the fourchette may occur. It is argued by some that without episiotomy a resultant gaping vulva, a relaxed floor, or a mild to moderate degree of cystocele and rectocele will exist. In my opinion episiotomy should be done only on such cases in which lacerations appear inevitable, in which haste is an important factor, and in cases of breech extraction when difficulty is anticipated with the extraction of the after-coming head. I am opposed to routine episiotomy for it is not always necessary, because many times the episiotomy wound is deeper and more extensive than a natural tear would be, and because of the possibility of infection and therefore faulty healing in a case which might have been delivered without laceration.

TRIAL LABOR

During the ante-partum period, the obstetrician has ample opportunity to familiarize himself with the character of the pelvis of each patient so that at full term he has decided in most instances on a definite course to follow. Nevertheless, there are some cases in which even the most experienced cannot determine whether a pelvis slightly contracted will make delivery per vaginam impos-It is the pelvis slightly contracted at the inlet which confronts us with this problem, because even with the most accurate mensuration possible, with x-ray of the pelvis, and estimation of the size of the fœtal head, we are unable to prognosticate the ultimate result of labor. Consultation in such instances is always advisable but even then it may be necessary to resort to trial labor.

There is no definite time limit to a trial labor nor can we accurately define it, for many factors are involved, the most important being the character of the labor pains as estimated by their frequency, duration and intensity. Three or four hours of weak, irregular contractions cannot be considered a trial labor, for moulding of the vertex, and softening and retraction of the cervix occur only after real hard, firm and frequent contractions have persisted over a period of several hours. During this time no vaginal examinations should be made because abdominal palpation should reveal all the preliminary information required. We may use analgesics during the trial labor if we find the patient fatigued, but we must keep in mind that a trial labor to be convincing must be sufficiently long and the contractions forceful enough to cause descent of the vertex through the pelvic brim. If this takes place, vaginal delivery is indicated, assisted when necesary by forceps or if the pelvis is of the male type, by doing a version and breech extraction should the cervix offer no obstruction. But when moulding and descent of the vertex through the inlet do not occur, and the cervix has not become dilated and retracted, then Cæsarean section should be done.

Sometimes in a case considered to warrant a trial labor, the membranes may rupture at term prior to the onset of labor pains or very soon after. If the head is still floating or only loosely engaged, a vaginal examination should be doneoften under an anæsthetic-with complete vulval and vaginal preparation, to determine not only the consistency, length and dilatation of the cervix, but also to make an attempt with pressure from above to fit the vertex into the brim, to correct a parietal presentation should it exist, and at the same time to further flex the head if nec-It is well recognized that such a case with membranes ruptured is less likely to deliver vaginally and therefore it is important to make this examination early so that if Cæsarean is chosen as the method of delivery, it may be done without further delay.

The choice of method of performing an abdominal Cæsarean section is often quite a problem in itself. The low, mid-line abdominal and uterine incision is usually preferred in the purely elective case, but if a trial labor has been given and the membranes are ruptured, and if several vaginal examinations have been made, then a low flap or extra-peritoneal operation should be done, resorting to a Latzko, with its greater difficulty and attendant traumatic accidents, only if the case is febrile, or after instrumental attempts from below have failed. The low flap or transverse cervical Cæsarean operation may be done with only a relatively small amount of cervical dilatation, but the Latzko operation should not be attempted until the cervix is dilated considerably further.

Dystocia

When labor does not progress normally, we must ascertain the cause. This may be found in either the fetus or the patient. The size of the fetus, its presentation, or its position may interfere with the advance of labor. On the other hand, the maternal hony pelvis, uterine inertia, or failure of the soft parts to dilate often pro-Occasionally combinations of duce dystocia. these factors exist, and the importance of recognition of the factors involved must be emphasized. Too much stress cannot be laid on diagnosis in these cases, because the line of procedure to be followed depends entirely on the actual cause of the dystocia in each instance. In few other problems of labor does practical experience count for so much. The sizing up of the case at hand cannot be learned out of but only from similar clinical experience.

Face presentations, though rare are occasionally encountered, but the trained accouchere must be able to deal with this type of case as with any of the other less rare abnormal presentations. The face presentation with chin anterior seldom produces great difficulty unless there is considerable disproportion between the passage and passenger and, if labor is allowed to continue, the mechanism will be practically normal. But if the chin rotates posteriorly, dystocia is almost inevitable. When this condition is diagnosed some type of conversion is essential. In practically all instances an attempt should be made to convert the face into a true vertex by displacing the presenting part above the brim of the pelvis, and then with the operator's hand through the cervix, to flex the head. If this is accomplished the labor will continue normally. Failing in this attempt, one may do podalie version.

With occipito-posterior positions, we again meet with the possibility of dystocia. Here, too, as with the face presentation, a great deal may be done prior to the onset of labor if the diagnosis has been made. However, if not recognized until the patient is seen in active labor, the size of the fetus and pelvis, as well as the actual advance made during labor must be considered in judging the proper procedure to follow. Not infrequently an unrecognized persistent occiput posterior will deliver as such, or when low in the pelvis may be manually rotated. But if high in the pelvis and labor does not advance the vertex, then it becomes necessary to interfere. Forceps, such as those devised by Barton, may be used to produce both descent and later rotation of the vertex or, as with face presentations with chin posterior, we may displace the vertex out of the pelvis and then guide the occiput anteriorly, or once again we may do an internal podalic version.

Uterine inertia not infrequently occurs in cases in which the presentation and position, as

well as the size of the fetus and pelvis, are normal. But more often inertia is encountered in the short, thick-set type of individual whose pelvis is somewhat of the male type and in whom there is usually some evidence of endocrine dyserasia. Change in the position of the patient on the delivery table in order to improve the inclination of the pelvis together with small doses of pitnitrin may radically help to overcome the result of uterine inertia and then forceps delivery may be effected. On the other hand, associated with uterine inertia we may find a cervix which fails to dilate completely. The problem of treating this type of cervix is a perplexing one. If the eervix is well retracted, fairly well dilated and thin, we may manually produce dilatation; or if the cervix is soft, moderately thick and edematous, but almost completely dilated we may introduce the forceps blades within the cervix and then with gentle steady traction we may be able to work the cervix over the vertex. However, there are certain cervices which fail to dilate satisfactorily and which are best treated by incision. This type of cervix is the one in which both dilation and retraction are incomplete and which remains firm and unyielding. A single anterior incision is often all that is necessary to permit advance of the vertex and delivery, but many obstetricians will hesitate to do this because of inexperience, as well as because of the more troublesome repair when the labor is finished. A caution should be interjected here because to ineise the cervix it is essential to have both proper exposure and adequate assistance.

Hemorrhage

As a complication of labor, there is no condition which causes the obstetrician more worry than hemorrhage. Even with the most careful prenatal supervision, bleeding may arise in any case in the ante- or intra-partum periods. Hemorrhage may result from premature separation of the placenta, be it either due to placenta prævia or accidental hemorrhage; it may result from lacerations of the cervix, or from relaxation of the uterus immediately post-partum.

The hemorrhage occurring in cases of placenta prævia is more often sudden in onset and profuse, but it has been stated that the first hemorrhage is never fatal. This permits the patient time to report her condition, and time to get to a hospital. The hemorrhage however, resulting from the separation of a normally implanted placenta—i.e., accidental hemorrhage—is less acute and sometimes is even concealed. The problems to be solved in these types of cases are to determine the cause of the bleeding, the extent of the hemorrhage as estimated by the patient's general condition and blood count, and to decide upon the method of treatment. At the Sloane Hospital we have a rule which prohibits a vaginal examination being made on a case with a history of hleed-

ing until the patient is prepared and the operating room is set up for the use of bags. This has been found expedient because if the case is one of placenta prævia, a brisk hemorrhage may follow the examination, due to further separation of the placenta by the examining fingers.

The method of treatment in both types of cases is more or less entirely dependent upon the condition of the cervix and the presence or absence of the fetal heart. More and more Cæsareans are being done in the interest of both the mother and the child. This is especially true if we are dealing with a placenta prævia centralis or in any case in which the cervix is long, rigid and only slightly dilated. If, on the other hand, the cervix is soft and somewhat dilated, and if the patient's and baby's condition will permit several hours of labor, we will choose the vaginal route and the use of the elastic hydrostatic bag. In such instances, a bag will induce labor, dilate the cervix and, in cases of placenta prævia, will also control the bleeding. During this period, transfusion is frequently used and then, when the bag has come through the cervix, delivery may be hastened if necessary by rupturing the membranes, applying forceps, or by performing an internal podalic version followed by breech extraction.

One cannot pass by the question of Cæsarean section for cases of accidental hemorrhage without referring to the occasional case in which the operation should be completed by supravaginal hysterectomy. This becomes necessary when the uterus on opening the abdomen, is seen to be extensively discolored in several large areas as a result of hemorrhage and thrombosis in the uterine musculature. Such a uterus if not removed does not contract well, and bleeding may continue after the operation, and in addition will greatly increase the morbidity during the post-operative period.

Post-partum hemorrhage which occurs immediately after delivery of the baby may be produced by relaxation of the uterus or by cervical lacerations which may extend and involve the lower uterine segment. If a uterus at this time is firmly contracted, and bleeding is profuse and continuous, vaginal examination should be made to ascertain the exact source of the bleeding.

This should be done digitally first, because of the possibility of lateral vaginal tears which can be felt better than seen, and secondly, the cervix should be exposed and carefully inspected. If the bleeding is from a badly lacerated cervix, I prefer manually to remove the placenta from the uterus and then to pack the uterus down to the cervix. Then by grasping both the anterior and the posterior lips of the cervix with sponge sticks, the bilateral lacerations may be exposed. This exposure may be greatly facilitated by an assistant or nurse making downward pressure on the fundus. Through and through interrupted catgut sutures placed in the lacerated edges of the cervix will control the bleeding at once and then the uterine packing may be continued into the vagina, especially into the lateral fornices. Once again I must emphasize the absolute necessity for obtaining the best possible exposure.

In cases of post-partum bleeding without cervical lacerations, due to placenta prævia, or to such causes as over-distention of the uterus produced by multiple pregnancy or hydramnios, or due to atony of the uterus from a prolonged labor or an excessive amount of anæsthetic having been used, I am convinced that if the uterus does not respond quickly to pituitrin, the placenta should be manually removed and a thorough tamponade of the uterus and vagina should be done. I believe in doing this promptly because less blood will be lost and therefore, in spite of an additional intra-uterine manipulation, there will be less shock to the patient. The tamponade may be done under nitrous oxide or ether.

In cases of marked hemorrhage we may use an immediate 5% or 10% glucose infusion, but a transfusion should be given just so soon as a donor may be obtained, using 700 to 1000 c.c., depending upon the estimated blood loss. This large transfusion serves two purposes: in the first place it may save the life of the patient at that time, and secondly, it gives the patient a great boost at the beginning of her puerperium.

With the onset of the puerperium the problems of labor are over, but the patient's convalescence during the post-partum period and her ultimate recovery are entirely dependent upon both the management of the prenatal period and the manner in which the labor has been conducted.

ATRESIA OF THE VAGINA

By ARTHUR M. DICKINSON, M.D., ALBANY, N. Y.

ATRESIA of the vagina is met with so seldom by the average physician that it deserves some comment. Vaginal atresia may be either congenital or acquired. In the congenital type there is most commonly an imperforate hymen or a hymen with only a small opening in it. Occasionally transverse septa of the vagina do occur. The acquired type of atresia may follow severe vulvovaginal infection; it may result from the injuries of childbirth or follow repair of these. The congenital type of atresia is usually discovered in the carly days of adolescence but occasionally patients with this type go on to adult years and marriage without discovery.

Sometimes there is seen in the new born female an imperforate hymen, bulging outward due to a collection of secretions within the vagina. This secretory activity probably results from stimulation derived from the placenta. Treatment of this condition consists of incision and drainage.

However, the presence of an imperforate hymen is rarely noted until some time after the onset of puberty. Before this time, examination of the vulva is not made unless there is some occasion for it. After puberty this is also too often true, especially in those girls who do not menstruate. These young girls with an imperforate hymen come up to puberty; they have the usual secondary changes which occur at this period, such as enlargement of the breasts, growth of pubie hair, etc.; periodically they have the subjective symptoms usually associated with menstruation but apparently do not menstruate. If the only anomaly is the imperforate hymen and the internal organs of generation are normal, this is what occurs. With each menstrual period the blood accumulates in the vagina behind the imperforate hymen. At each period the accumulation is increased until the vagina becomes quite distended, which condition is spoken of as hematocolpos. More blood accumulates and the uterns becomes markedly dilated by increasing amounts, which condition we call hematometra. Next the increasing pressure causes the Fallopian tubes to be dilated and filled with blood and finally blood may be extruded into the peritoneal cavity as occurred in a case recently seen. This termination is unusual, however, for commonly the ends of the tubes seal off preventing the escape of blood into the peritoneal cavity. At any stage of this process, infection may take place in the retained blood, and so abscess formation may result in the vagina or in the distended uterus or tubes the latter occurs, a clinical picture not unlike pelvic inflammatory disease is seen If the hematoma remains uninfected, an abdominal tumor may be the first real symptom causing the patient to complain. In other instances pressure on

the urinary tract by the dilating vagina may produce symptoms suggesting some disease of the urethra or bladder. Recently there was reported such a ease in which urinary retention in a young girl was caused by a hematocolpos.

I would like to cite two cases which illustrate some of the points mentioned above. The first case is that of a girl, age 15, who entered hospital with a diagnosis of an acute pelvic inflammatory disease on a venereal basis. She was badly dehydrated due to vomiting of several days' duration and appeared quite ill. Her temperature was 103 degrees and pulse 140. The lower half of the abdomen was rigid and painful and somewhat dis tended. There was some purulent discharge from the vulva. Under the usual conservative treatment for acute pelvie inflamntatory disease, the condition of the patient improved rapidly. Then a more eareful examination was made of the patient. The only finding of importance was that of a thick hymen, intact except for a small opening and a suspicion of a semifluctuating mass in the vagina noted by rectal examination. Subsequently the hymen was incised, releasing a large amount of foul pus and broken down blood, After this procedure, the improvement of the patient was rapid. Previous to discharge from the hospital, a careful bimanual examination was made under gas; this disclosed no other anomalies of the genital tract and gave assurance that the vaginal opening was not being constricted by scar formation. The second case was another girl of 15 years. She was admitted to the hospital complaining of a moderately painful pelvic tumor. She had never menstruated. Six months before, slie had been operated upon through the abdonien for a similar tumor. The physician who operated was called and he stated that at operation he had found a large uterus, greatly swollen tubes and some free blood in the pelvis. One tube and ovary were removed. Recovery was apparently uneventful. At the time I examined the patient the secondary sex characteristics were quite evident. The breasts were large and of the puberty type; hair was noted on the pubes. There was a smooth, hard globular tumor in the pelvis, the size of a grapefruit. It seemed quite fixed. Recto-abdominal examination revealed little except to confirm the above. Attention was then focussed upon the vulva and the liymen was found to be blue and bulging and apparently imperforate. With excision of the hymen and escape of the retained menstrual blood, the abdominal tumor disappeared. Subsequent observation of the patient through the next few months showed normal menstruation and no contracture of the vaginal orifice. These two cases illustrate the value of definite details of the menstrual history in . young girls and the need for careful examination of the external genitals, if the patient appears to have the secondary sex changes but has not menstruated.

Among embryologists there is still marked disagreement as to the etiology of the imperforate hymen. One group of investigators insist that an imperforate hymen is due to a failure of absorption of a normal diaphragm; the other group is equally positive that an imperforate hymen is the result of the growth of an abnormal diaphragm. As this point is of academic interest and of little practical value, we will cite no arguments for either group.

Imperforate hymen in the adolescent is treated by partial or complete excision under aseptic precautions. Simple crucial incision rarely suffices for the edges have a noteworthy tendency to re-unite thereby defeating the purpose of the operation. Excision of the membrane with suture of the raw edges is the safest procedure. In the presence of hematocolpos or hematometra one must be careful to avoid infection which may result seriously. After operation the vagina may be drained with a soft rubber tube well wrapped with vaseline gauze.

In the adult, imperforate hymen is not so com-If the internal organs of generation are normal, the regular menstrual discharges accumulating in the vagina will have caused symptoms resulting in proper treatment before maturity is reached. On the other hand if the menstrual function is not established due to rudimentary or absent internal genitalia, persons may go on to adult life without the discovery being made. In some instances marriage has taken place and the hymen being sufficiently elastic, no complaint is Recently I had the privilege of seeing such a patient operated upon. She entered hospital complaining of a pelvic tumor with slight pain. She was forty-two years old and had been married for ten years. She was very obese and showed some of the male sex characteristics. She had never menstruated. The pelvic tumor was the size of a grapefruit; it was moderately firm and seemed fixed in the pelvis almost in the mid line. On attempting to do a vaginal examination, what appeared to be an imperforate hymen was found. Rectal examination gave no additional information. A crucial incision of the hymen was made at operation, but behind the membrane no existing vagina could be found after a long and careful search. Abdominal exploration revealed a tense ovarian cyst and a very small infantile uterus located high in the pelvis. As stated before, this finding is commonly associated with congenital absence of the vagina. It is a development defect for which no cause can be assigned. Treatment of the imperforate hymen

in the adult, or what appears to be this, should healed and the final result was satisfactory.

be entered upon with a guarded prognosis. One should not be too rash in his promises about results. Before any operative procedure is commenced, there should be a very painstaking pelvic examination by combined abdominal and rectal routes. If it is found that the internal genitals are very small, there may well be no vagina behind what appears to be an imperforate hymen. This being the case, one must be prepared to construct a vagina if the patient insists. If the internal organs appear normal, then we are much more likely to find a vagina of sorts behind the hymen.

The acquired type of vaginal atresia in adults commonly results from childbirth or from surgical repair of these. Occasionally atresia is seen as the result of prolonged infection such as syphilis, tuberculosis or as the result of malignant or premalignant changes. It does seem that the occurrence of complete vaginal atresia after childbirth is to a large extent preventable by careful repairs. I would like to cite two cases which illustrate the acquired type of atresia, the first following childbirth and the second following a perineal repair. The first, Mrs. W., aged 24, came to my office complaining of inability to have intercourse. This dated from the time of a forceps delivery, followed by an immediate repair of a torn perineum, some 15 months before. Since then she had menstruated regularly, but somewhat scantily. Examination showed what appeared to be a hymen with only a pin point perforation. At operation, however, it was found that what appeared to be hymen, really consisted of the two lateral vaginal walls which had apparently been sutured together to a depth of about one inch. These were separated by blunt and sharp dissection and a plastic operation was done to cover all raw surfaces. This resulted in the restoration of a satisfactory vagina.

The other case was that of a widow, age 42, who complained of an abdominal tumor which her physician considered to be a myoma of the uterus. Five years previously, she had had an operation for prolapse of the uterus, the nature of which she did not know. She did recall that she had had an abdominal and vaginal operation however. Since the operation she had not menstruated. Careful examination disclosed that the vaginal repair had been done so well, that the anterior part of the vaginal cavity had been completely obliterated. Combined rectal and abdominal examination showed that the tumor was apparently uterine in origin. At operation the vaginal walls were separated by dissection and a great amount of old blood was released from the vagina and uterus. This caused the uterine tumor to disappear. The vaginal walls were kept apart with vaseline gauze until the raw surfaces were

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For list of officers of County Medical Societies, see this issue, advertising page xxvi.
Annual Meeting, April 3-5, in the Waldorf-Astoria. New York City.

ASPECTS OF THE ANNUAL MEETING

The Annual Meeting of the Medical Society of the State of New York will exemplify at least five aspects of the practice of medicine:

- 1. As a science;
- 2. As an art;

- 3. As a business;
- 4. As a social service;
- 5. As a philosophy,

Modern medicine is a science developed by research into the nature of the living actions of the body and mind. The doctor who has an outstanding knowledge in any corner of medicine is a specialist who is admired by his fellows. There will be abundant opportunity to see and hear and talk with the hundred or more specialists who will appear on the scientific program, and will explain the diseases and abnormal conditions of man as an impersonal organism.

But to most physicians the practice of medicine is an art as it was during the ages when men and women comforted and nursed one another long before science was born in the human brain. The first concern of the family doctor is for the safety and comfort of the sick person rather than the exact nature and extent of the disease which afflicts the patient. The art of dealing with patients in distinction of diseases will be told in the lectures before the scientific sessions of the Annual Meeting; but the art will also be exemplified during the whole morning and afternoon of Clinic Day,—the first day of the Annual Meeting,—in thirty of the leading hospitals in New York City.

The practice of medicine is also a business, for the doctor must support himself and family while he brings relief to others. He also must be a salesman who inspires officeholders and voters to supply the service which the community owes to the sick. The physician is also a business promoter and demonstrator, and a manager in all matters leading to hospitals, health departments, and welfare workers. All these and other economic problems and activities will be discussed in the House of Delegates.

To heal the sick is a social service which has been recognized through all ages. Its more modern ideal is to bring the benefits of all forms of scientific medicine within the reach of every person. The extent and ramifications of this field of work have been surveyed and evaluated by endowed committees operating throughout the nation; and their findings constitute a challenge to physicians to devise the means of supplying the medical needs of those unable or unwilling to provide the service for themselves. The problems of social service will receive special attention in the House of Delegates and in the general sessions of the meeting.

Every physician has a philosophy regarding the practice of medicine, which he is ready to express under certain conditions, especially to his confreres whom he meets informally and casually. The scientific investigator who wishes to ascertain the philosophy or creed of the medical profession in any subject may obtain the necessary data from friendly conversations with doctors in their moments of leisure in the lounging rooms.

The standard of the modern practice of medicine requires that a physician shall be not only a family doctor, but also a scientific investigator, a business man, a sociologist, and a philosopher. Knowledge and experience along all these five lines of thought and action may be gained pleasantly and efficiently at the Annual Meeting.

LOOKING BACKWARD

This Journal Twenty-Five Years Ago

Influenza Epidemic: This Journal of April, 1908, contains a report of a symposium on Grip held by the Medical Society of the County of New York, on January 31, 1908, in which Dr. J. A. Lichty described an epidemic of grip in Pittsburgh, as follows:

"The epidemic of influenza which prevailed in the city of Pittsburgh, Pennsylvania, began at the end of the second week of December, and slowly subsided during January and February of this year. The epidemic was as widespread, though probably not quite so severe, as in the noted pandemic of 1889 and 1890. Whole families, including servants and all associated with the household, were afflicted in rapid succession. The onset was sudden and severe, the usual symptoms of 'pain all over' being most The temperature did not go unpronounced. usually high, nor did it seem to be in accord with the severity of the symptoms when the patient took to his bed.

"In typical cases, where proper treatment was established promptly, the attack was unusually short, lasting from two to three or four days. When treatment was neglected the symptoms dragged through one or two weeks. With proper care very few cases had any complications, and most of them were up in a few days with the usual languor and stiffness. Peculiar to this epidemic seemed to be the general complaint of sore throat. Another peculiarity which seemed to mark this epidemic was the frequency of involvement of that portion of the nasal cavity which is immediately betwen the eyes. The pain here was usually intense, and it seemed that many of the complications were due to the inflammation of this portion of the nasal mucous

"For a time, and early in the epidemic those physicians who were frequently exposed to the disease fell victims. Every evidence was present to show that the disease is highly contagious."



MEDICAL PROGRESS



Functional Bundle-Branch Block (Partial) Paradoxically Relieved by Vagal Stimulation. -Louis H. Sigler says that to explain bundlebranch block, not due to anatomic changes in one of the bundle branches, one must assume the presence of certain functional disturbances interfering with the free passage of the impulse along one of the branches. The possible factors that may cause such disturbances without leaving any permanent damage discoverable on postmortem examination are bundle-branch fatigue, toxic states, local interference with the blood supply, and nervous inhibition. Although toxic states and local interference with the blood supply as causes of bundle-branch block have not been fully established, fatigue of the conducting apparatus in the ventricles and vagal inhibition causing such block are fairly well proved. Sigler cites instances which prove conclusively that bundlebranch block may occur as a result of excessive vagal activity. It would therefore appear irrational and paradoxical to expect the removal of such block by vagal stimulation. In a case which is here reported in detail left vagal stimulation apparently removed rather than caused such block. The patient, 41 years of age, complained of sharp attacks of pain, which appeared spontaneously about every three days and lasted only two or three seconds. A moderate sinus bradycardia and slight arrhythmia suggested the possibility that vagal influence was the underlying cause of the interventricular conduction disturbance. The electrocardiogram in this case corresponded to the so-called "arborization block" of Oppenheimer and Rothschild. The Q-R-S complexes were prolonged beyond 0.1 second, notehed, of low voltage, and there was absence of the typical character of the T wave found in complete bundlebranch block. The normal complexes were easily restored by left vagal stimulation, which proved that the condition was not dependent in this case upon any anatomical pathology. After discussing various theories as to what caused this conduction disturbance, and how vagal stimulation relieved it, Sigler concludes that it was not the direct vagal effect on the bundle branches which produced the results in this case. It was merely the slowing of the impulse formation in the sinoauricular node, under left vagal stimulation, giving increased rest to the conduction apparatus of the ventricles, and it was this increased rest which restored normal conduction. Abnormal Q-R-S complexes occurred after as long a rest as 0.56 of a second, and normal complexes were restored by additional rest of 0.08 of a second.—American Journal of the Medical Sciences, February, 1933.

Physiochemistry of the Blood in Lobar Pneumonia .-- On the basis of a study of the literature and of 11 personal cases of lobar pneumonia, M. Sigon concludes that at the peak of the attack the blood presents a tendency to a more or less compensated alkalosis, from hyperventilation, with a lowering of the alkaline rescrve. urinc, on the other hand, shows an orientation toward acidosis, in that the elimination of organic acids and the hydrogen ion concentration are increased during the disease, to descend again after the crisis. The water and salt exchange is characterized by two phenomena: retention of water and chlorides, in both tissues and blood, during the attack, followed by a urinary crisis with discharge of chlorides during convalescence. This chloride retention is not of a renal nature, but is attributable solely to the fact that the amount of these substances in the blood does not reach the threshold of elimination. A lowering of the total protein content as compared with the volume of the plasma was always noted in Sigon's personal cases; the imbibition of the colloids of the serum. on the other hand, was clearly increased toward the crisis and just after it, to decrease again during convalescence. The reduction of proteins scems to have been more apparent than real; their absolute content is probably not diminished by the disease; they are merely more diluted, possess a greater affinity for the water, are more turgid and yield up this water only after the crisis, when with increased elimination of urine the amount of chlorides in the serum is increased, and the plasma mass decreased. It is interesting to note that these variations of colloid equilibrium appear to be less prompt in following the typical critical course of pneumonia and in returning to normal than are the electrolytic variations of the plasma and the acid-base equilibrium of the blood-a fact that is natural enough when one thinks of the immediate influence exerted upon the respiratory exchanges by the state of pulmonary phlogosis and by the high fever. An indirect proof of this was given by the fact that for several days after the crisis the velocity of sedimentation of crythrocytes continued to be markedly elevated. In addition a lowering of surface tension of the blood serum was observed, and a diminution of the difference between dynamic and static surface tension.-Riforma Medica, January 14, 1933.

Pneumococcus Research and Specific Pneumonia Therapy.—Among the exciters of pneumonia, according to Paul Martini, the pneumococcus Fraenkel holds first place. This microorganism has 32 different types, among which

Types 1, 2, and 3 are more constant and more virulent than Types 4 to 32. These 3 are found almost exclusively in pneumonia; the others are commonly met with in healthy individuals as well. An attack of pneumonia is the result either of infection with a virulent type or of decreased resistance on the part of the body. In the latter case, types that are but little virulent may also produce pneumonia. Variations in the virulence of a given type are not observed in any great degree. Studies in the epidemiology of pneumonia are still unsatisfactory; it is not yet known why one individual falls victim to pneumonia and another not. It is probable that constitutional characteristics play a rôle here, as well as factors of immunity and allergy. Immune substances that are type-specific are formed in pneumonia. These drive the cocci out of the blood; the same may be accomplished by injection of type-specific serum. Such serum hastens the crisis and prevents extension of the pulmonary process, but is powerless to promote its regression. For this reason early administration is a prerequisite for its favorable action. The high cost of serum therapy is the chief reason why its use has not been adopted to any great extent in Germany. The introduction of polyvalent serums has not produced much in the way of results. Quinine and optochin give the best promise if administered during the first 3 days. The dangers to the optic nerve reported from the use of optochin are not especially great if optochin base is employed. The simultaneous administration of milk according to Mendel's procedure to prevent too rapid absorption may be responsible for this improvement. It has not been shown, however, that optochin offers any advantages over solvochin (quinine-urethane of Cahn-Bronner). No dependable comparison between the various so-called specific treatments (immune serum, quinine, optochin) has yet been possible. During the War the exorbitant price of serum treatment and the recollection of the injurious action exerted by optochin made solvochin the treatment of choice in Germany.-Münchener medizinische Wochenschrift, January 20, 1933.

Report of a Case of Retotheliosarcoma (Reticulosarcoma) of the Cerebral Hemisphere.—Nathan Chandler Foot and Sander Cohen, writing in the American Journal of Pathology, January, 1933, ix, 1, describe a brain tumor of almost unique character. No description of an exactly similar neoplasm was found in modern text-books on brain tumors. The specimen was removed from a girl 9 years of age, who had been well until eight months before the operation. The symptoms were those exclusively referable to intracranial pressure. The child died two months after the operation, and permission for a general post-mortem examination could not be obtained, but there was no evidence of a primary tumor

elsewhere in the body. The specimen consisted of a mass 7.5 by 6.5 by 6 c.m. in size, fairly well circumscribed and enclosed in a sort of capsule Sections of the growth examined microscopically were found to be composed of nests of enormous and very bizarre giant cells and syncytia, lying in a stroma of rather edematous connective tissue. The cells had a most pleomorphic appearance, ranging through the gamut of morphological va-They contained a varying number of Some cells were strewn with minute vesicular nuclei. Mitotic figures were very abundant and ranged from quasinormal karyokinetic forms to the most bizarre and abnormal, multiple, asymmetrical, cross- or y-shaped types. In certain areas of the tumor there were cells resembling the reticuloendothelium of the lymphoid or myeloid tissues. The authors believe that they have ruled out nervous or neuroglial origin of the tumor by means of specific methods of impregnation and staining. The healthier areas of the tumor indicated a retothelial origin, but against this was the marked lack of vessels and the site of the growth, the retothelial type being notably limited to the base, medulla, cerebellum, and spinal cord. This tumor differed from the cerebral retrotheliomas hitherto described in its very active growth and definitely sarcomatous nature. Authorities agree that these neoplasms originate in perivascular congeries of retothelial cells, and the fact that they may be relatively poorly supplied with vessels is also recognized. It would appear therefore that this growth represents a malignant metamorphosis of such a tumor. The authors state that they have adopted the term "retothelial" for reticuloendothelial, as suggested by Rouley, for the reason that it is not only shorter but more correct.

Catechin (Inhibiting Substance) of the Thyroid Gland and Its Therapeutic Use in Basedow's Disease.-A report is made by Ernst Herzfeld and Alexander Frieder in the Deutsche medizinische Wochenschrift of January 20, 1933, on a series of tests in 18 cases, observed for 8 months, in which a preparation of catechin was used-a substance recently identified by Blum in the circulating blood, with antithyroid properties. One unit of this preparation represents the amount that will neutralize 1 γ (1/1000 mg.) iodine in the form of iodo-thyroid-protein in the rabbit metabolism. One tablet of the preparation contains 10 units of catechin. This is the first standardized restraining substance exerting an influence against the thyroid gland, and the authors have had excellent results with its use. Cases as severe as possible were chosen as a test of its usefulness, in some instances so grave as to contraindicate operation. Most of these cases had been treated for a long time, some by the authors themselves, some by others. It is very important that the right dosage be given, and at first the authors

ise a large enough amount. They began olets a day, but results as a rule did not itil 60 units per day had been given as a . In some cases it was necessary to a daily dosage of 90 units, and then decrease this. In no case was it ever to go higher than this amount. Imit was never observed within the first it appeared as a rule in the second. In cases was the treatment a failure: in one tumor was probably present in addition low's disease, and led to secondary in the other, a girl failed to follow direcen. In all cases a gain of weight was visne exceptional case this gain reached 13.5 months. The pulse rate decreased and I metabolism was considerably lower, es almost normal. Vegetative symptoms a, sudor, etc.) very quickly disappeared. ct on the existing exophthalmus was also od, but the size of the goiter itself was le affected. The length of the treatment turally depend on the severity of the case, age in this series being 4 to 6 weeks, after itermittent treatment with smaller doses

ethod of Closing the Eustachian Tube cal Operations on the Middle Ear. illing attention to the importance of closeustachian tube in radical operations on dle ear, and reviewing the methods-none isfactory-that have been employed, Gun-Imgren recommends the following proce-Vith good lighting, preferably an enlarging makes an incision in front of the labyrinindows through the mucoperiosteum of spanic eavity and with a small raspatory s it from the bone, from the back forward. reoperiosteum of the tube is then curetted n the lateral half of the circumference and p of mucoperiosteum inserted in the tube a manner that the promontorial periosadjacent to the exposed, lateral bony end tube, at the same time forming a wall the tympanic cavity. The insertion can be vithout difficulty with an instrument reig in shape the Yankauer tubal curette the flap is thus inserted in the tube, any membrane left around the tubal orifice is d as thoroughly as possible, after which iersch method is used to cover the exposed f the promoutory and the exposed surface flap, which is easily done by the method of pidan. This consists in spreading a thin of lanolin or other neutral fat on a piece linen cloth, and placing the Thiersch flap with the epidermis facing the fat. After er of cloth with the flap has been propted and placed, the tympanic cavity and the tost part of the auditory meatus are tam-

poned with a small strip of gauze, the remainder of the cavity being tamponed with a perforated rubber finger stall filled with gauze. The finger stall is removed after twenty-four hours, and the tamponade in the tynipanic cavity after about five days, the strip of linen usually accompanying it, as the Thiersch graft will probably have grown fast by this time.—Acta Medica Scandinavica, December 14, 1932.

Four Cases of Ocular Affections, Presumably Tuberculous, Favorably Influenced by Gold Therapy.-The favorable results that have been published with respect to the use of gold therapy in pulmonary tuberculosis have led Felix Terrien to report four unusual cases following ocular infections which he has treated by this method, namely sclerokeratitis, iridosclerokeratitis, iridochoroiditis, and choroiditis, probably of tuberculous origin. These eases, which had resisted all the usual methods of treatment, were greatly improved by intravenous injections of salts of gold. In the first 3 cases, 3, 4 and 5 injections, respectively, of 5-10 cg. chrysalbin at intervals of 3-4 days were sufficient to bring about these good results; in the 4th case 30 injections at the rate of one a week caused almost complete disappearance of the lesions. The eoexistence, in all these four eases, of old tuberculous lesions, with negative tests for syphilis, permitted the conclusion that the cases were of tuberculosis origin. Side by side with the classic forms of tuberculosis of the iris and eiliary body there are a large number of other manifestations with more attenuated symptomatology, the etiological diagnosis of which may be in doubt. Many of these cases of torpid and painless iritis and iridocyclitis are accompanied by no appreciable reaction and betray themselves only by a more or less evident diminution of visual acuity, a dull appearance of the iridian membrane and the presence of precipitates. The diagnosis here always remains more or less uncertain, in view of the impossibility of inoculations and of research for the bacillus. However, after elimination of the most frequent causes, certain factors, such as the relatively youthful age, the vascularization of the iris, sometimes even the presence of a slight degree of hypopyon, the slow evolution of the lesions, and the general habitus of the subject, suggest a tuberculous origin. In such cases the excellent effects of the gold treatment will support this diagnosis. Terrien has confined himself to the use of intravenous injections, with deliberate avoidance of instillations and subconjunctival injections, because these have been known to aggravate tuberculous keratitis. Thus, in the rabbit a series of 30 instillations produced large superficial ulcerations of the cornea, which disappeared when the instillations were stopped.-Bulletin de l'Académic de Médecine, January 31, 1933

Indications and Effects of Medicinal Treatment in Association with Carbonated Baths .--It is the opinion of Libensky that a discrimination must be made between diseases which are amenable to carbonated baths and those which prove refractory. The affections for which patients are habitually sent to institutions giving balneotherapy are most frequently (1) mitral or aortic valvular affections, (2) hypertension in the phase of decompensation, and (3) sclerotic nephritis of hypertensive origin. It is in mitral affections that discrimination of cases is most important. An analysis of these reveals that the success of balneotherapy administered alone depends essentially upon the stage which the reactionary modifications of the heart and vessels have reached. This stage can be recognized only with the aid of radioscopy. From this point of view mitral affections can be divided into 3 stages: (1) The silhouette of the heart presents in its ensemble no characteristic enlargement, but the distance from the arch of the aorta to the clavicle is ordinarily diminished, the pulmonary arch lengthened, and its pulsation in profile more marked. Here balneotherapy may of itself produce good effects, by diminishing anhelation and causing regression of peripheral stasis, etc. (2) The arch of the left auricle is longer than that of the aorta and pulmonary artery; it exhibits a weak pulsation, but not always presystolic; the left ventricle is more strongly curved, the contour of the right heart begins to increase, the heart having the appearance of having "turned" upon itself. In this stage the rhythm may or may not be affected. If it is still normal, baths may still suffice to quiet the heart, possibly combined with administration of theobromine. If decompensation has begun, however, the baths must invariably be supplemented by medication. The amount of medica-(digitalin) necessary will be relatively smaller and the results better than if the baths were not used simultaneously. If, however, complete arrhythmia is present, stronger doses must be employed than in normal rhythm. (3) The heart is enlarged in all directions; as a rule, complete arrhythmia of tachycardial type is present. Here the patient should be prepared for the baths by a preliminary digitalin treatment of very energetic character. Only when this has restored conditions to a satisfactory state should balneotherapy be expected to produce any effect. Carbonated baths are of little use in aortic affections. In pure, uncomplicated hypertension they can be dispensed with, any improvement observed from their use being chiefly objective. In hypertension with cardiac or renal complications, however, their employment is advisable when combined with appropriate medicinal therapy, according to the case.—Bulletin de l'Académie de Médecine. January 3, 1933.

Spontaneous Hyperinsulinism.—After brief reference to the literature on spontaneous hyperinsulinism, C. L. Derick, C. F. Newton, R. Z. Schulz, M. A. Bowie, and N. A. Pokorny report the following case: A woman, aged 56 years, who came under observation in May, 1927, gave a history of having suffered, since 1924, from attacks of faintness. dizziness, and inability to walk straight. She did not entirely lose consciousness, and had found that the attacks could be prevented or aborted by taking a glass of malted milk. The diagnosis, at first, lay between neurasthenia, epilepsy, and cerebral tumor. After disappearing for a time, she was admitted to the hospital in March, 1928. Roentgenograms gave no evidence of intracranial tumor. The fasting blood sugar on two different occasions showed 65 and 58 mg. per cent of sugar. She was discharged with the diagnosis of hypoglycemia, cause unknown. She continued on a regimen of three glasses of malted milk daily in addition to her meals. She returned to the hospital about a year later, stating that her attacks were becoming more frequent, and she had grown more helpless and irresponsible. After another thorough examination, it was concluded that she suffered from periodic attacks of hyperinsulinism secondary to a tumor of the islet cells of the pancreas. Further tests were made and operation was finally decided upon, and performed in May, 1930. A tumor, ovoid in shape, and measuring 1.6 by 1.2 cm. was removed with the tail of the pancreas. The tumor was completely encapsulated. The pancreatic tissue was normal in appearance. The tumor was composed of epithelial cells supported by a vascular stroma with only a slight amount of connective tissue. The tumor cells were somewhat larger than those of the islands of Langerhans and among them there were occasionally cells in various stages of degeneration. No mitotic figures were found although cells with hyperchromatic nuclei were not infrequent. Acid granules were not encountered. The acinar and duct elements revealed no morbid changes. A fragment of the fresh tumor was macerated in physiological salt solution, and the supernatant fluid injected intravenously into a rabbit. Blood sugar determinations made at half hourly intervals after the injection gave values of 170, 70, 90, and 120 mg. per cent. This demonstrated that the tumor was very rich in insulin or a substance which gave a pronounced insulin effect. The patient is the oldest (57 years) on record in whom a neoplasm arising from an island of Langerhans has been found, and one of the few cases in which the benignity of the tumor was unquestioned. She made a good recovery, the blood sugar became normal, and the attacks have been entirely absent since the operation .- New England Journal of Medicine, February 9, 1933, ceviii, 6.



LEGAL



PHYSICIANS—GOOD-WILL OF PRACTICE NOT SUBJECT TO TAXATION AT DEATH

By LORPNZ J BROSNAN, LSQ Counsel Medical Society of the State of New York

An interesting point has several times come be fore the courts involving the question of the value and transferability of a physician's personal practice, both during his lifetime and after his death a number of cases in this country and in England hold that a doctor may sell his practice and its good will, and where the selling physician does not live up to the terms of his agreement the purchaser may resort to the courts to enforce the benefits of such contract.

Some years ago in such a case the contention was made that the sale by a professional man of ins good will was void as an illegal restraint of trade. The courts however, overruled this contention and upheld as valid a contract whereby one physician had agreed to turn over his practice and its good will to another doctor and further agreed to no longer engage in practice in the same community.

The question line also arisen as to the right of the State upon the death of a physician to assess a transfer tax upon the good-will of his practice In the case under consideration the deceased, a physician, was one of the pioneers in the field of roentgenology He had devoted most of his career to the specialty and had also invented and prefected improvements in the mechanical and chemical processes involved in the use of the He had been known as a lecturer on the subject, and his ability was known and recog nized widely In his practice he had two as sistants, and by the terms of his will he be queathed his apparatus and equipment and also his good-will to his assistants, one a doctor and the other a technician After the decedent's death, the doctor who had been his assistant leased the same offices and continued in practice. removing the decedent's name and substituting his own name

In the proceedings settling the estate, the transfer tax appraiser put a value upon the good-will of the practice of some \$38 000. The executors appealed from the order assessing the transfer tax upon the sud item, squarely presenting for determination the question of whether the good-will of the practice and business of a man who has attained eminence in his profession has, upon his death, a value that is capable of ascertainment or computation. The Surrogate in a ruling subsequently affirmed by the Appellate Division, determined that the case presented was not one

where the good-will of a business or profession of a decedent could be taxable after his death. The opinion of the Surrogate set out as reasons why the good-will of the decedent did not pass upon his death to his successor the following

"The extensive and lucrative business trans acted by the decedent was the result of his repu tation for great skill in taking x-ray pictures, and as this skill and knowledge died with him it could not constitute an element of good will that would survive him. The death of a man who had attruncd such priminence and reputation as a roentgenologist must have received such publicity as would bring it in the attention of practically all the members of the medical profession who knew him by reputation or who would ordinarily have sent patients to him Therefore, after his death those doctors would not send any more patients to the office theretofore conducted by him, and if the office passed into the possession of another doctor or rocntgenologist, it could scarcely be said that its former occupancy by the decedent made it more valuable to his successor succeeded in the office by Dr I, but the business was conducted under the name of Dr I, and the name of the decedent was not used in connection with it

"The skill and knowledge which Dr I acquired during the years of his association with the decedent, and which induced physicians to send their patients to him, were entirely personal to him, and were not transferred to him by the decedent as part of the good will of the business. The reputation which the decedent had acquired was personal to him, and it was not due to the place where he maintained his office or to any trade mark or trade name."

In his opinion the Surrogate acknowledged the fact that a doctor might during his lifetime, for a valuable consideration sell his practice and goodwill but distinguished from that situation the situation presented upon a doctor's death. He said

"** * * there seems to be a distinction between the business sold by a doctor during his lifetime and the value of that business after his death If sold during his lifetime, he could introduce the purchaser to his patients and friends as a prudent and reliable physician, and such introduce tion would immediately give the purchaser a reputation and standing which otherwise might require years to establish. It seems to me that such introduction and recommendation to patients constitute the real consideration for the money paid to a retiring professional man by one who wishes to succeed him. But after a man who has acquired a reputation for great skill or knowledge is dead persons who would go to his office for the purpose of consulting him and availing themselves of his superior skill would not go there merely because the office was still open and occupied by another person who had no reputation for superior knowledge or skill. The name of a physician who is prominent in his profession is known to the public generally although few of them may know where he maintains his office. If any person should require his services they would have no difficulty in obtaining his office address from the directories. It is not, therefore, where he practices that is important—it is the reputation which he has attained. But that reputation is necessarily personal to him; it is built upon his personal achievements; it is independent of the location of his office or his assistants. When he dies the fact is usually brought to the attention of the public, and if persons should thereafter require the services of a physician skilled in the particular branch of medicine or surgery with which the deceased physician had been identified, he would not ordinarily go to the office that was maintained by that physician in his lifetime, but would consult some other physician who was regarded as a specialist in the same line of work."

The court stated that one of the tests for determining whether the decedent left to his successor anything of taxable value, was to consider the case that would result if some unknown and inconspicuous physician took over the office that Dr. I had taken, putting his own name on the door. The Surrogate asked the question as to whether, under such circumstances, any considerable number of the decedent's clients would con-

tinue to come to that office. The answer, the Surrogate said, in his opinion was that it was highly improbable that such a person would receive any patients who had patronized the decedent because of his exceptional skill and knowledge. The Surrogate also made clear that he felt that the specialty of roentgenology was such that a man obtains employment from his own patients and from other doctors, primarily because they "know him personally and have special confidence in his skill and knowledge of such profession."

The Surrogate also noted in his opinion that much of the success of Dr. I may have been the result of his association with the decedent, saying:

"The appraiser's report shows that Dr. I, who was an assistant of the decedent, and who occupied his office after his death, did a reasonably profitable business, but the evidence shows that Dr. I, because of his association with the decedent, had acquired considerable skill in making x-ray examinations, and he became well and favorably known to the physicians who were in the. habit of sending patients to the decedent. The special knowledge of roentgenology which Dr. I acquired was probably due, to a considerable extent, to his association with the decedent in the conduct of his business, and the opportunities for becoming acquainted with physicians who usually sent their patients to be x-rayed were also due, in no small measure, to his association with the decedent. But they were both acquired during the lifetime of the decedent, and could not have been transferred to Dr. I by the will of the dece-

The holding of the Surrogate, in addition to being a distinctly sound one, is a source of considerable satisfaction for it recognizes that the practice of medicine is regarded in legal contemplation as a profession primarily founded upon the skill and ability of each individual practitioner.

TREATMENT OF LACERATION OF PALM

A doctor engaged in the general practice of medicine was consulted about midnight by a young woman who explained to him that she had hurt her hand by falling. The doctor removed the handkerchief which was tied around the left hand, and on examination found a laceration of the palmar surface, which laceration was uneven and jagged and approximately one and one-half inches in length. The doctor immediately treated the patient by thoroughly washing the surface of the wound with lysol, making the wound clean, painting it with iodine and applied a sterile bandage.

The patient was next seen the following morning when substantially the same treatment was repeated, and the patient was directed to return the next day. The doctor continued to see the

patient daily for about ten days and on each occasion he dressed the wound which progressively improved. On each of these visits the fingers of the injured hand were found to be perfectly normal

Although the patient was told to return for further treatment, she did not do so and was not seen by the doctor until about three weeks later when he happened to meet the girl. At this time he examined the wound and found that one of her fingers was somewhat flexed by reason of contraction of scar tissue formed in the healing of the laceration. The patient, however, refused to have any more treatment given by the doctor.

An action was commenced by this patient against the physician sometime later, in which

the claim was made that the doctor had failed to properly treat the plaintiff's injuries, as a result of which one of her fingers had become defective, crippled and erooked and that the free use of said finger was impeded. The case came on for trial before a judge and jury, and at the close of the testimony put in on behalf of the plaintiff a motion was made to dismiss the complaint on the ground that plaintiff had failed to prove her cause of action, and the court granted said motion, thereby terminating the matter in favor of the doctor.

ALLEGED NEGLIGENT ADMINISTRATION OF

A middle-aged woman consulted a doctor who specialized in physiotherapy, complaining of pain in the shoulder.

Examination resulted in a diagnosis of bursitis. He suggested electric treatment, to which she consented and he administered to her a halfhour treatment using a Wappler Teletherim In administering the said treatment the doctor saturated two towels with saline solution, fastening one over her shoulder and the other around her body. To each of these towels were applied tinfoil pads connected by wires to the machine. Six such treatments were given at intervals of every second day. A seventh treatment was undertaken and on this occasion, after the patient had been exposed to the electric current for about five minutes, she complained of heat in the shoulder. The doetor reduced the current and the patient stated that she felt all right and requested him to go alread with the treatment as before. When he again turned on the current to its usual intensity, the patient again complained of heat. The doetor then shut off the current and removed the bandages and readjusted them, after which he again administered a ten-minute treatment. Again the patient complained of heat and on this occasion the doctor took off the bandages and observed a reddened spot on the shoulder at a point under one of the poles. He dressed the said area and the patient went home, returning in a few days complaining that a burn which appeared to be a second degree one had developed. She told him that she wanted no more treatments and that she was going to her family doctor who would take over the eare of the case.

The doctor heard no more of the matter until an action was instituted against him, charging that he was negligent in his treatment of the case and further charging that the burns that the plaintiff received had required more than six weeks to heal and that a large circular scar about three inches in diameter remained on her shoulder as a permanent disfigurement.

The case came up on the Calendar and when it was about to be reached for trial the plaintiff's attorney agreed to discontinue the matter, thereby terminating the same in favor of the doctor without trial.

BROKEN ASPIRATING NEEDLE

A general practitioner was consulted by a young man who complained of pains in his cliest. The doctor after examination diagnosed his case as pleurisy with effusion, gave the man a prescription, directing him to go to bed, and telling him he would call at his home in a few days. The doctor did so taking with him an assisant. patient was found in bed and after examination the doctor decided to aspirate his pleural cavity, by the use of an aspirator with pump and needle equipment. After the needle and syringe had been sterilized in boiling water the man was eaused to sit in a chair. The needle was inserted between two ribs below the shoulder and with the aid of the assistant the doctor pumped a large amount of pus from the patient. As the doctor prepared to remove the needle it snapped at the hilt and about two inches of it disappeared into the muscles. The doctor sterilized a scalpel and incised at the spot where the needle had disappeared. The doctor probed in vain for the needle

for some time. The patient was then directed to enter a hospital for operation. The case was turned over to a surgeon. X-rays were taken which showed the location of the needle. The surgeon made an attempt to remove it under a fluoroscope, but it could not be located. The patient remained under the surgeon's care for further treatment for the condition of empyema. When discharged the needle was still in the patient's cliest.

A suit was brought against the general practitioner, charging him with negligence in permiting the needle to break and to remain in the plaintiff's body. The case finally came on for trial and the defendant appeared by his attorney, ready to defend the action. The plaintiff's attorney appeared and told the court that he could not locate his client, and asked that the case be adjourned. The case had already been adjourned previously for the same purpose, and on motion of the defendant's attorney the action was dismissed.



NOTES NEWS



FINAL ANNOUNCEMENTS OF THE ANNUAL MEETING

The preparations for the Annual Meeting of the Medical Society of the State of New York, on April 3-5, in the Waldorf-Astoria, New York City, have been developed to a greater extent and completeness than ever before, and have been published in the Journals of March first and

March fifteenth. The two announcements which follow complete the arangements, so far as they may be foreseen and outlined. The program is attractive and practical from beginning to end, and will appeal to members of every tempera-

RADIO SCHEDULE OF THE ANNUAL MEETING

A radio broadcasting program of thirteen addresses from eight stations has been arranged for the Annual Meeting of the Medical Society of the State of New York. The subjects will be those which are frequently discussed by the people, and which therefore have a news value. The speakers will be outstanding leaders in those medical activities in which the public has an active share and responsibility. The complete schedule is as follows:

Station WABC-485 Madison Avenue.

Monday, April 3—5:15 p.m.—15 minutes.

Subject, "Recent Advances in Child Welfare."

Speaker, Dr. G. F. McCleary, A Deputy Senior Medical Officer of the Ministry of Health, Great Britain.

Wednesday, April 5—5:00 p.m.—15 minutes. Subject, "Cancer and the Community."

Speaker, Dr. Burton J. Lee, Professor of Clinical Surgery, Cornell University Medical College.

Station WEAF-711 Fifth Avenue.

Monday, April 3—3:00 p.m.—15 minutes.

Subject, "The Doctor-Fact and Fiction."

Speaker, Dr. Chas. Gordon Heyd, President of the Medical Society of the State of New York.

Tuesday, April 4—2:45 p.m.—15 minutes.

Subject, "The Costs of Medical Care." Speaker, Dr. Arthur W. Booth, Member of

the Board of Trustees, American Medical Association.

Station WJZ—711 Fifth Avenue.

Wednesday, April 5-4:30 p.m.-15 minutes.

Subject, "Children and Their Hearts."

Speaker, Dr. William D. Stroud, Associate Professor of Cardiology, Jefferson Medical College of Philadelphia.

Station WOR-1440 Broadway.

Wednesday, April 5-4:45 p.m.-15 minutes. Subject, "The Health of the State."

Speaker, Dr. Thomas Parran, Jr., Commissioner and Executive Health Officer, State Department of Health, New York.

Station WNYC—Room 2510—Municipal Build-

Wednesday, April 5—11:20 a.m.—12 minutes. Subject, "The Story of Insulin."

Speaker, Dr. Charles H. Best, Professor of Physiology, University of Toronto.

Wednesday, April 5-7:00 p.m.-10 minutes. Subject, "Rheumatism and Arthritis."

Speaker, Dr. Russell L. Cecil, Asst. Prof. Clin. Medicine, Cornell University Medical College.

Station WINS-114 East 58th Street.

Monday, April 3—10:00 a.m.—15 minutes.

Subject, "Standards of Medical Practice."

Speaker, Dr. Frederic E. Sondern, Treasurer of the Medical Society of the State of New York.

Tuesday, April 4—10:00 a.m.—15 minutes.

Subject, "The Goiter Patient."

Speaker, Dr. Frank H. Lahey, Surgeon, New England Deaconess and New England Baptist Hospital, Boston, Mass.

Wednesday, April 5-9:30 a.m.-15 minutes. Subject, "Gall-Stones."

Speaker, Dr. Lester R. Whitaker, Visiting Surgeon, Memorial Hospital, Boston, Mass.

Station WEVD-Hotel Claridge-44th Street and Broadway.

April 4-4:45 p.m.—15 minutes.

Subject, "Your Eyes At Forty."

Speaker, Dr. Arthur J. Bedell, Chairman of Scientific Work, Medical Society of the State of New York.

NEWS NOTES

467

Statinn WLWL—425 West 59th Street. Wednesday, April 5—6:15 p.m.—10 minutes. Subject. "Diabetics and Their Doctor." Speaker, Dr. Elliott P. Joslin, Clinical Professor of Medicine, Harvard University Medical School, Boston, Mass.

DEMONSTRATION OF WORKMEN'S COMPENSATION ARBITRATION

The Bureau of Compensation Arbitration of the New York County Medical Society will hold its regular meeting on Thesday, April 4th, at 3 o'clock, in the Pillemont Suite on the fuurth floor of the Waldorf-Astoria Hotel. Dr. Morris Rosenthal, Director of the Bureau, announces that the meeting will be a conference of the members of the Bureau with representatives of the Compensation Insurance Companies, for the purpose of discussing and arbitrating specific cases of disputes between the attending physicians and the insurance companies. Members of the Medical Society of the State of New York are invited

to be present and to witness the procedures which have been in successful operation in New York County for over twn years, during which time more than six hundred cases have been arhitrated and settled.

This is an opportunity for the chairmen and members of the Economic Committees of County Medical Societies to attend an actual arbitration "chinic," and to meet the physicians representing the insurance companies. The procedure will be informal, and visiting physicians will be encouraged to take part in the discussions and to ask questions on their own problems.

LEGISLATIVE BULLETIN NUMBER 10

Legislative Bulletin Number 10

March 17, 1933.

Hearings

March 22nd—Assembly Committee on Ways and Means.

Assembly Int. No. 329—Colien, Workmen's Compensation Law, creating commission on

Action on Bills

Senate Int. No. 426—Twomey, habit-forming drugs, passed the Senate and has been referred to the Education Committee in the Assembly.

Assembly Int. No 772—Doyle, bichloride of mercury, passed the Assembly and has been referred to the Codes Committee in the Senate.

Assembly Int. No. 1970—Brownell, Workmen's Compensation Law, immates of charitable institutions, has been advanced to third reading in the Assembly.

Assembly Int. No. 784—Robinson, expert psychiatrists, has been reported out of committee in the Assembly.

Assembly Int. No. 705—Austin, Health Department rules, has passed the Assembly and been referred to the Health Committee in the Senate.

Senate Int. No. 487—Esquirol, Health Department rules, has passed the Senate and been referred to the Health Committee in the Assembly.

New Bills Introduced

Senate Int. No. 1556—Esquirol; Assembly Int. No. 2095—Austin, to amend the Mental Hygiene

Law generally. Referred to the Health Committee.

Senate Int, No. 1589—Buckley; Assembly Int, No. 2126—Dunkel, enacts alcoholic beverage control law, appropriating \$100,000 for expenses of state control board of five members to be selected from an eligible list of twelve persons, three of whom shall be physicians nominated by the Council of the Medical Society of the State of New York. Referred to the Finance Committee, Recommended by the State Liquor Control Commission.

Senate Int. No. 1590—Buckley; Assembly Int. No. 2125—Dunkel, adds new articles to the Tax Law, providing for an excise tax on beer; \$50,000 of the revenue to be paid yearly to the Education Department for temperance education. Referred to the Finance Committee. Recommended by the State Liquor Control Commission.

Senate Int. No. 1596—Dunnigan, adds new article to the Tax Law, creating an excise bureau in the State Tax Department. Referred to the Excise Committee.

Copics of these three bills are being mailed to you today under another cover.

Assembly Int. No. 2035—Breen, amends the Public Service Law, empowering the commission to require operators of all omnibuses to be physically and mentally qualified to perform duties. Referred to the Public Service Committee.

The hearing on the antivivisection bills was as satisfactory to us as in previous years. It was a very dignified affair so long as the physicians

were testifying, but when the proponents took the stand, dignity withdrew. The arguments advanced in support of the bill were as fallacious, inaccurate, and emotional as in previous years. The proponents of the Bernhardt bill asked for a postponement of one week for the privilege of submitting their evidence, on the ground that they found it impossible to get their "doctors" to come to Albany on the 14th. The committee graciously granted them permission to introduce three physicians on Tuesday, March 21st.

Dr. Sondern, Chairman of the Committee on

Medical Research, brought to Albany for the hearing Drs. Peyton Rous and Florence Sabin, from the Rockefeller Institute; Dr. John Wyckoff, from Bellevue; and Drs. Whipple and Morton, from the University of Rochester. In addition, Commissioner Parran, Dr. Wadsworth, and Dr. Mackenzie, of Cooperstown, and Dr. Schiff of Plattsburg, were present. The latter two represented the New York State Association of Public Health Laboratories.

HARRY ARANOW, Chairman.

KINGS COUNTY

The program of the monthly meeting of the Medical Society of the County of Kings held on the evening of Tuesday, February 21, was as follows:

Address: "Common Ground in the Next Steps for the Medical Profession and the Profession of Social Work," Bailey B. Burritt, M.A., New York City.

Address: "Compulsory Health Insurance

Abroad," Emil Koffler, M.D., Bronx.

Address: "The Problems of Medical Practice and the State Society," Chas. Gordon Heyd, M.D., F.A.C.S., New York City.

Friday Afternoon Lectures: The Friday Afternoon Lecture Series for March, 1933, is as

follows:

March 3rd—Dr. Charles H. Andrew will discuss "The General Practitioner and Eye Conditions." We shall be happily informed as to conditions which we should recognize and care for, and also that other group of eye conditions which we should recognize when they are present but which we should not attempt to handle ourselves.

March 10th—Dr. Frank B. Cross will present "The Patient with Nephritis." A happy title, as Dr. Cross considers the patient primarily rather than the pathology. We shall be told how to care for the individual rather than merely to treat for a physiological breakdown.

March 17th—Dr. Joseph B. L'Episcopo will speak on "Disabling Feet." How often the cry—"My dogs sure ache!" Our speaker will tell us all about the why, the wherefore, and what to do

about it.

March 24th—Dr. E. Jefferson Browder will discuss "Head Injuries." Dr. Browder will give, in his usual clear manner, a consideration of head injuries—what to do and what not to do . . . what constitutes good treatment and what is "meddlesome interference."

March 31st—Dr. Max Goldzieher will present the subject of "Physiology and Pathology of the Pituitary Gland and Their Clinical Aspects." This may sound somewhat highbrow but pituitary disturbance is a real condition to the one suffering from it and we must know how to recognize pathology of this endocrine when present.

Radio Broadcasting: The Subcommittee on Radio Broadcasting of the Committee on Public Health wishes to report that medical talks prepared by members of the County Society for broadcasting were forwarded upon request to the American Medical Association. To date nine of these talks have been rebroadcast by the Bureau of Health and Public Instruction of the American Medical Association. These talks have also been supplied to other county medical societies throughout the United States by the American Medical Association. The Medical Society of the State of Wisconsin has also broadcast one of our talks.

Assistance in the preparation of radio talks will be given gladly by the Subcommittee on Radio Broadcasting. It is a ruling of the State Committee on Press Publicity that all talks must be submitted to the committee before broadcasting.

The Committee on Public Health suggests that the medical profession would be interested in the series of radio talks entitled "Gripping Moments in Medical History," over Station WEAF at 4:30 on Sunday afternoons, and the "History of Medicine," over Station WEAF at 7:15 Sunday evenings. The Committee on Public Health will appreciate receiving the comments of the medical profession on these programs.

Health Talks: Health talks are being given every Monday evening at 9:00 o'clock by members of our Society at the Eastern District Y. M. C. A. Similar talks are being given at the Navy Y. M. C. A. The Subcommittee on Radio Broadcasting is furnishing the speakers. If you have a subject to present before a lay organization, send it in to the committee with a note telling your available hours of the day and the day of the week you prefer, thus assisting the com-

mittee in meeting requests for speakers that may be made in the future.

The Library: Nineteen thirty-two witnessed the biggest year in the use of our library. The daily statistics kept show that 12,538 readers consulted 50,164 books in the library and borrowed for home use 9,327 publications. This is an increase of 18 per cent in the number of readers, 30 per cent in the number of books consulted, and

43 per cent in the number of books taken out, as compared with 1931.

As far as an appraisal can be made from statistics, this record indicates the value and usefulness of this activity of our Society. The greatly increased use has added considerably to the work of our staff. This has been carried on by the same number of workers in addition to the other duties in the daily routine of the library.

MONROE COUNTY

The February News Letter of the Medical Society of the County of Monroe contains the following news notes:

Costs of Medical Core Considered: A hearing on the report of the National Committee on the Costs of Medical Care by the Comitia Minora acting as the local Committee on this question, was held on January 17, 1933, with an attendance of fifty-seven physicians. The opinion was expressed by some that the question of group insurance for either hospital or medical care should not be lightly brushed aside. The view was expressed by others that some type of group insurance could be developed which would not disrupt the traditional relationship between doctor and patient, and which would not exploit either patient or doctor for private gain, and which would not introduce the element of politics into medical practice. The consensus of opinion, as expressed, was that it is desirable to enhance the value and importance of the family physician, and that it is eminently desirable to emphasize and retain the personal relationship between patient and family physician.

Referring to the increasing amount of free service being given by physicians, the view was expressed that unless reimbursement for this service was made by the State, no other form of payment was probable. It was the consensus of opinion that the County Medical Society should continue to view the entire question with an open mind, and feel free to call upon lay organizations in order to obtain their point of view; and should welcome any help if there was any assurance that such help might result in a solution of this difficult problem.

Dispensary Admissions: At a joint meeting of the members of the Academy of Medicine and the Medical Society of the County of Monroe held on January 25th, attended by 206 physicians, the question of dispensary admissions was considered. The speaker, H. Van Caldwell, Executive Secretary of the Academy of Medicine of Cleveland and the Cuyahoga County Medical Society, discussed the plan of dispensary admis-

sions in operation in Cleveland, Ohio, and stated that the dispensaries there found themselves overburdened with a new group of patients who in the past were able to care for their medical needs and who in the future may again be able to do so.

The thought behind the Cleveland plan is that all patients who in normal conditions could inance their medical needs should at the present time be referred to private physicians of their own choice before they are accepted as dispensery patients. The plan is under the joint supervision of the medical societies, the hospitals, and social agencies.

In a discussion by hospital directors present and practicing physicians, it was the consensus of opinion that this question of dispensary admissions should be further considered by all interested agencies with the general welfare of the whole community in mind.

The joint Committee in charge of this study is continuing its work, and conferences will be held with representatives of interested agencies.

Doctors' Hobbies: At the March meeting of the Academy of Medicine, there will be held an exhibition of the hobbies of the various doctors of the community. The exhibition will include such things as doctors may make or collect, such as oil and water colors, charcoal drawings, photographs, ship models, jewelry, musical instruments, stamps, rare books, guns, and so on. Notable exhibitions of this sort are held each year by both the New York and the Toronto Academies of Medicine.

Academy Library Notes: Members are requested to save all old journals, except the J.A.M.A., for the Library of the Academy. They will be used to exchange with other libraries. The State Journal is particularly needed.

The Library needs proceedings and transactions of any medical society of any year. If you have any copies not in use, please give them to the Library.

 Phone in any reference you wish to have looked up and the librarian will have it ready for you when you come in.

RENSSELAER COUNTY

The Medical Society of the County of Rensselaer had a lengthy and enthusiastic discussion on the report of "The Doctor and the Free Clinic" Committee, at their regular meeting on February 14, 1933. The entire evening was given over to the subject. It was expected to introduce the "Costs of Medical Care for the American People" report, but no time was left for the subject.

"The Doctor and the Free Clinic" Committee submitted a detailed report of the annual free public medical service rendered by the doctors of the country. According to the statistics given by the committee it was disclosed that the clinic doctors cared for more than 18,257 patients during 1932, not one of whom could have received the same care as a pay patient for less than \$2.00, and many of whom would have had to pay more than \$100.

This means that in Troy, with a population of less than 75,000 people, approximately one out of every five people have received free medical care during 1932. The physicians believe that the clinic privileges are being abused; and the committee was authorized to continue its work and also to make a study and report on the final report of the National Committee on the Cost of Medical Care.

The Trov Record of February 15, 1933, published an excellent summary of the report, which was well adapted to inform the public of the free contributions of the physicians to the relief of physical suffering and distress. The Record said:

"In its survey of clinical problems in the city, the Society stresses the point that this clinical work, now efficiently organized, will not in any way be curtailed. It is the Society's belief that when poverty and unemployment are prevalent it is a bad time to curtail or in any manner hamper charity work among the physicians."

The Medical Society of the County of Rensselaer met at the Troy Hospital on March 14th and adopted a widespread plan of action in regard to the dispensing of free medical care to the people of the county.

From a previous report it was shown that considerably over 18,000 patients are receiving free medical care at our public clinics each year. With Troy's population of less than 75,000 it was pointed out that our indigents are either relatively larger than usual, or people are visiting the clinics and receiving free care when they are able to pay for a doctor.

With this in mind, and in order to provide for a more even distribution of the charity work done by the physicians, the society recommends the adoption of a new card system by every clinic in the county. According to the plan, each new patient who applies for care at the free public clinics will be given a yellow card which the patient will be required to take to a physician of his own choice. This family doctor will then either care for the patient as his own private charity case; or will issue a red card recommending the patient to the clinic for free medical care.

By this method, patients will have a wider range of selection of doctors, and will many times be saved the embarrassment of having to wait in an open public clinic, to be cared for by a doctor not of their own choice.

It was made clear that the physicians of Rensselaer County realize that everyone is entitled to receive adequate medical care; and ample provision is being made for such care by their private as well as public beneficent efforts.

The resolution adopted by the Society read as follows:

WHEREAS, The attendance at the Free Public Clinics in Troy is already assuming vast proportions and it is evident that such attendance may continue to increase in view of the present economic depression; and

WHEREAS, For many years past it has been demonstrated that individual selection of physicians by the laity is the essential element of proper medical care; and

WHEREAS, It is the desire of the members of the Medical Society of the County of Rensselaer that the Free Public Clinics shall not overlap other medical eifort, and that each physician of the county is ready to assume his share of the economic burden; therefore be it

RESOLVED: First: That our secretary have printed an ample supply of yellow cards suitable for patients to take from a clinic to a physican of their choice requesting his opinion on their eligibility for admittance to the clinic; also an ample supply of red cards suitable for physicians to use in recommending patients to the free

Second: That our secretary supply the members of the society with the red cards and explain to them that on and after April 1st, 1933, it is the request of the Medical Society of the County of Rensselaer that no new patient be admitted to any of the free public clinics of the county of the request of the county without this pour line and the request of the county without this pour line and the request of the county without this pour line and the request of the request o ty without this card signed by the patient's family physician.

Third: That our clinic committee be requested to interview the sponsors of Free Public Clinics and explain the plan and purpose of the card system; and

Finally, That the name of any member of the Society who willfully violates the provisions of this act be referred to the board of censors.

The following scientific program of the meeting was carried out by the hospital staff:

"Carcinoma of Penis," Dr. J. H. Reid.
"Juvenile Hypertension," Dr. H. V. Foley. "Complicated Cataract," Dr. J. D. Carroll.
"Extra-Uterine Pregnancy," Dr. C. R. Lewis
"Coronary Thrombosis," Dr. G. D. Hoffeld.
"Gumma of Penis," Dr. J. J. Curley.

WM. B. D. VAN AUKEN.

INDEX OF ACTIVITIES

of

MEDICAL SOCIETIES OF COUNTIES AND STATES RECORDED IN THE NEW YORK STATE JOURNAL OF MEDICINE DURING THE FIRST QUARTER OF 1933

Activities of Medical Societies (Ed.)	24 359	Veterans' Administration Hospitals	292 285 184 182
Annual Meeting Announcements:		Barbers' Certificates in Kentucky	56
Annual Meeting, the distinctive	316	Rook Reviews in Indiana Journal	63
Panauet	408	Bulletin of Saratoga County	4C
Clinic Day	326	Bulletin of Monroe County	242
Dance	408 400	Bureau of Physiciaus and Dentists in Washington	189 186
Editorials	403	California, Insurance of Medical Care	193
House of Delegates	409	Cancer Education in Dutchess County	240
Open Popular Meeting	317	Certification of Specialists in New Jersey	418
Press Service	318	Chairmen of County Legislative Committees	338
Radio Broadcasting	409 409	Child Health in Nebraska	424
Reference Committees Scientific Exhibit	325	Christian Physicians, League of, in Kentucky	48 235
Scientific Program	319	Clinics in Factories	235
Scientific Program Technical Exhibits	332	Colorado, Journal Rules	56
		Commonwealth Fund and Family Doctor	180
Annual Meeting, Reports to House of Delegates	1:	Contract Practice in Georgia	257
Arrangements, Committee	268	in Nehraska	257 128
Brattleboro Health Insurance Plan	295	Correlation of Activities in Wisconsin	346
Blood Transfusion	281 278	Costs of Medical Care, Editorial on the Report of	040
Cancer	283	the National Committee	25
Committee Appointments	264	the National Committee	33
Council	263	County Health Department, in Columbia County	112
Counsel	310 288	in Oneida County	234 34
Detroit Health Plan	288 300	in Suffolk County	74
District Branches	264	County Society Reports:	
Financing Sickness	293	Bronx35,	174
Foreign Medical Schools	279	Columbia	112
Graduate Education	276	Dutchess-Putnam114, 240,	345
Hospitalization, Economics of	283 290	Greene Herkimer	174 42
Hospitals, State-aided Indigent Patients	291 291	Jefferson	113
Industrial Medicine	284	Kings114,	340
Industrial Medicine Insurance Against Malpractice261,	265	Livingston	345
Insurance for Health Service	295	Monroe	242
Journal Lectures to Medical Students	267 274	Nassau New York	35 34
Legislation, Committee	298	Oneida	239
Legislation, Committee Malpractice Defense, Rules nf	265	Orange	111
Maternal Mortality Medical Economics, Committee Medical Research, Committee	278	Qucens	35
Medical Research Committee	283 268	Rensselaer	43
Membership Statistics	263	Richmond	36 175
Membership Statistics National Health Plan, Inc., Providence, R. I	295	Saratoga	40
Periodic Health Examinations Physical Therapy	279	Seneca	236
President	279 259	Suffolk	242
President Press Publicity, Committee	299	Sullivan	413 41
Preventive Medicine	289	Ulster	114
Providence Health	295	Washington	239
Public Health and	276	Westchester	43
Public Health Council of State Dept, of Health	276 289	Course for Aledical Secretaries in Rochester, Minn.	193
Public Relations, Committee	272	Crippled Children in Illinois Delaware, Social Trends Director of Activities in Kings County Distribution of Medical Services in William	251 356
Reference Committees of House of Delegates.	409	Director of Activities in Kings County	35
School Medical Inspections 273, Scientific Work, Committee	278		124
Secretary	275 262	DISTRICT Dranch Alcertnes in lower	127
State Aided Hospitals	290	District of Columbia Activities Economies, Medical, in Nebraska	50 421
State Salaried Physicians in Private Practice	274	in Wyoming	57
Treasurer Trustees	270 269	in Wyoning	243
Tuberculosis Reporting278,	281	Editor of Indiana Journal	525
,		Executive Secretaries in Pennsylvania Counties	60

Ex-Presidents in Florida	193	Hospitalization Insurance	418
Family Doctor:	117 123	New York County Activities	421
Fees, Workmen's Compensation, in Utah	193	Official Recognition of State Medical Society	34
Florida, Ex-Presidents	353	Ohio, Costs of Medical Care	169 351
Examination of School Children	360	Oklahoma Journal	58
General Health Council in Pennsylvania	358	Orange County, Care of Indigent	111
Graduate Education in Texas	129	Pennsylvania, Annual Registration	62
Guthrie, Dr. Samuel, Jefferson County	113	Executive Secretaries	60
Hospitalization in Orange County	111	General Health Council	358
Hospital of Greene County	174	Philippine Islands, Journal	355
Ideals of Kansas State Society	191	Physical Examinations of School Children in Bronx	
Illinois, Women's Clubs and Health	59	County	35
Crippled Children	251	Physical Examinations of School Children in Kings	25
Costs of Medical Care	346	County	35
Indiana, Book Reviews in Journal	62 350	Physical Examinations of School Children in	360
Costs of Medical Care	52	Florida	48
Editor of Journal	360	Popular Medical Education in Oneida County	233
Indigent, Medical Relief in Indiana	360	——————————————————————————————————————	35
- Michigan	190	Press Comments on Costs of Medical Care	188
- Nebraska	256	Press Relations in Nassau County	35
- New York	412	Public Health Laboratories Association	37
- Nassau County	39	Public Relations, Committee, Meeting of, December	
- Orange County41,	111	0 1032	34
Oswego County	236	Public Relations, Committee, Meeting of January 16 January 17	233
Suffolk County	34		235
Industrial Contract Practice in Washington	189	Public Relations in Monroe County	343
Industrial Health Talks	233	— Westchester County	36
Insurance Against Malpractice, Rules of	169	Queens County Activities	35
Insurance for Hospitalization in Minnesota New Jersey	254	Registration, Annual, in Texas	248
	418	Pennsylvania	62
Insurance for Medical Care in California	186	Secretarics, Course for Medical	193 63
——————————————————————————————————————	110	Secretary, Full-Time, for Kansas	60
Nebraska Washington	54	Sickness Insurance in Nebraska	54
Insurance for Medical Care in 1840	190 243	Social Medicine in Nebraska	257
Iowa, District Branch Meetings	127	Social Trends in Delaware	356
Costs of Medical Care	351	Specialists in New Jersey	418
Journal Rules in Colorado	56	Students, Medical, Choosing	234
Journal in Nebraska	422	Survey of Family Practice in Suffolk County	243
— — Oklahoma	58	Survey of Health Agencies in Michigan	248
Kansas, Full-time Secretary63.	354	Surveys, Mcdieal (Ed.)	160
Ideals of State Society	191	Survey for St. Lawrence County	235
Kings County Activities	35	Texas, Advertising in Journal	359
Kentucky, Barbers' Certificates	56	—— Annual Registration	248 59
Christian Physicians, League of	48	Dr. Emma T. Miller	129
Laboratory Service, Use by Physicians	38	Graduate Education	357
Law Enforcement in New Jersey Law, Public Health, in Wisconsin	421	Library Service	40
Legislative Bulletins	192 410	Tuberculin Test in Saratoga County Temporary Emergency Relief Administration Rules	412
Legislative Chairmen of Counties	338	Tri-State Conference	413
Legislature, Committees of	173	Utah, Workmen's Compensation	122
Library Service in Texas	357	Venereal Disease Control	236
Malpraetice Defense Rules	169	Veterans' Administration Hospitals	43
Massachusetts Committee on Costs of Medical Care	3 46	Washington, Insurance of Health Plan	190
Medical Students, Choosing	234	Welfare Commissioner, Rules	412 34
Michigan, indigent	190	Welfare Commissioner in Suffolk County	48
Survey of Health Agencies	248	West Virginia Political Platforms and Medicine.	36
Miller, Dr. Emma T., of Texas	59	Westchester County Public Relations	128
Minnesota, Course for Medical Secretary	193	Wiseonsin, Correlation of Activities Bureau	188
Missouri, Auto Accidents	254 182	Costs of Medical Care Distribution of Medical Services	124
Monroe County, Activities	344	Public Health Law	192
Nassau County, Activities	35	Workmen's Examination Clinic	120
Nassau County, Care of Indigent	39	Women's Clubs in Illinois	59
Nebraska, Child Health	424	Workmen's Compensation Committee	415
Costs of Medical Care	353	Workmen's Compensation in Utah	122
Economics	421	Workmen's Compensation, Record Cost of a Case in	193
Indigent, Carc of	256	California	120
Insurance for Medical Care	54	Workmen's Examination Clinic in Wisconsin	57
Journal	422	Wyoming, Eeonomies in	177
New Jersey, Certification of Specialists	257	Zoning of Health Districts Proposed	
Jacoby Certification of Specialists	418		



THE DAILY PRESS



COMPULSORY HEALTH INSURANCE

The New York Times of March 17 carried a first page news note on the annual meeting of the Milbank Fund, in the New York Academy of Medicine on March 16, and said:

"Compulsory health insurance on a State-wide basis was urged last night by Albert G. Milbank, president of the Milbank Memorial Fund, at the annual dinner of the fund at the New York Acadeny of Medicine. The dinner was attended by leaders in health and social welfare work.

"Mr. Milbank deelared that the time was ripe to ask State Legislatures to adopt health insurance plans, with contributions from employers and employes, to become effective as soon as employment and business activity would permit. The eventual creation of unemployment reserves, he added, should complete the social insurance program.

program.

"The States should be asked to provide for the appointment of representative commissions, which, through coordinated efforts, would work out a detailed plan of operation,' he continued. I would like to see the new Secretary of Labor,

with her unique experience and rare talents, act as a sponsor for a conference of such State commissions, if appointed, or of representatives of the States if such commissions are not appointed, to insure the maximum uniformity as to plans that will not only benefit labor but at the same time be helpful and not harmful to the general financial structure of the country.

"'The plan should be based on certain fundamental principles. It should be reasonably adequate to meet the strain that will be put upon it; it should be on a contributory basis and, for the same reasons that the employe's contribution should be limited to a percentage of his wages when received, so the contribution of the employer should be limited to a percentage of profits when earned; lastly, the part to be taken by the State should be restricted to supervision and regulation.'

"The voluntary form of insurance recommended by the Wilbur Committee on the Cost of Medical Care, Mr. Milbank said would not produce the results contemplated."

SPECIALISTS

The New York *Times* of February 15 comments editorially on the medical specialists as follows:

"Economists are not the only profession interested in the Law of Diminishing Returns. The doctors and the college presidents, to name only two gainful occupations, are taking note of its effects. But it does not always have the same name. Sometimes it is the swing of the pendulum. Sometimes people say that what has gone up must come down. In this sense all life is subject to the principle of Diminishing Returns.

"The doctors have been giving too much thought to the problem of the specialist versus the general practitioner. The annual Congress on Medical Education opened at Chicago the other day with a full-length debate on the menace of the ill-trained 'specialist.' But a cheerful view was taken by one speaker who argued that it won't be long now before every medical specialty will have reached its saturation point. 'This may result in the development of a type of general practitioner better trained than the graduate of today.'

"When medical practice has split up into a mass of narrow specialties, the time will obviously have come for a liaison officer or coordinator. He will be the general practitioner; once more illustrating the Law of Diminishing Returns."

INDIVIDUALISM

Individualism is essential in the practice of medicine, but it is essential in all human endeavor, as is shown in the following editorial in the New York Times of March 2:

"The merits of traditional American individualism as against public enterprise were debated yesterday in addresses at a luncheon of the Advertising Club of New York by Dr. Virgil Jordan, president of the National Industrial Conference Board, and Professor Walter Rautenstrauch of the Department of Industrial Engineering of Columbia University. "Dr. Jordan said it was absurd to expect government to run industry 'when in the present emergency, government cannot even feed, house and clothe the destitute or protect the public against robbery through bank failures.' He was not attacking individual public officials, he remarked, but was pointing out that 'everything creative is done by somebody and not by everybody.'

"The only revolution today,' he continued, 'is in the direction of greater individualism exempli-

fied by the back-to-the-land movement and the decay of big business, the growth of small enterprises. It is a decentralizing movement.'

"Although there might be an increase in public control of utilities and banking, he predicted the greatest period of individualistic enterprise ever

seen lies just ahead.

"'No administration can do for us,' Dr. Jordan asserted, 'what we don't do for ourselves. The "new deal" may reshuffle the pack, but the game will remain the same.'"

NARCOTICS IN TURKEY

The New York Times of February 28 has the following editorial comment on the advanced stand taken by Turkey for the control and the production and sale of opium and other narcotics:

"Of a Christmas gift to humanity by Turkey little note has been taken in the midst of the ills that have befallen the world. On that day at the Cabinet meeting, presided over by President Mustapha Kemal, Turkey took her stand with the United States and eight other countries in ratifying the opium conventions of The Hague 1912 and 1914 and of Geneva 1925 and 1931. Under the draft laws adopted for submission to the Grand National Assembly, cultivation of drugproducing plants will be supervised and limited, all private factories that have been manufacturing narcotic drugs will be closed, and the manufacture of such quantities as are required for medical purposes in Turkey and elsewhere will be entrusted

to one factory owned and managed by the Government. The export of opium will be confined to a semi-official organization under Government control.

"That this step has been taken at the instance of the Gazi gives assurance that it will be adopted by the Assembly and rigorously enforced. Turkey has been, according to the narcotic reports of the League of Nations and of the United States Treasury, the worst offender in the export of opium. Her move in the other direction is the more to her credit, since it can hardly be to her commercial advantage. She has even anticipated some of the foremost European nations in this wholesome policy, for England, France, Germany and Italy have not yet ratified the 1931 Geneva Convention. It would appear from the reports that America had some influence upon Turkey in determining upon this course of action."

RESEARCH REGARDING BLUSHING

The research workers in the psychology department of Colgate University have made extensive investigations of the problem of sleep, and are now searching for the cause and means of control of blushing, as is shown in the following editorial in the New York Herald Tribune of February 28:

"Whatever may be the psychological secrets behind the blush which rises from time to time to the faces of most humans, they are about to be plumbed with scientific precision for the edification of a waiting world. The master minds of Colgate University's department of psychology are about to make an intensive study of the flush which mounts the cheeks in moments of embarrassment, happiness or discovered guilt, and to this end they have broadcast a questionnaire, preparatory to a monumental blush report. Do you blush when praised or ridiculed, in the presence of persons of the opposite sex or in crowds, when happy, offended or upon hearing smoking room

anecdotes? And when you blush do you blush a little or plenty, feel faint, fidget with your hands, break into a sweat, adjust your tie or try to run away? In short, what are the details of your blushing life?

"We hope this blush investigation turns out to be really fruitful and, most of all, that it will disclose some method of preventing at will the betraying rush of blood to the face which has served us to no good end any number of times. Stuttering and stammering can be conquered by patient training; fidgeting, fiddling and watch chain twirling can be mastered by intense effort and application, and if these psychologists are worth their salt they'll find a blush prevention treatment. The gestalt theory, behaviorism and inferiority compensation can, for the moment, be neglected, but if the science of the mind is going to justify its existence it will grapple with and dispose of this manifestation if for no other reason than to render obsolete the cliché of the blushing bride.

W)

BOOKS RECEIVED



- Acknowledgment of all books received will be made in this column and this wilt be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits or in the interests of our readers
- Medical Clinics of North America Vol 16, No 3, November, 1932 (University of California Number) Published every other month by the W B Saunders Company, Philadelphia and London Per Clime Year (6 issues) Cloth, \$1600 net, paper \$12.00 net
- MEDICAL CARE FOR THE AMERICAN PEOPLE. The Final Report of the Committee on the Costs of Medical Care Octavo of 213 pages Chicago, The University of Chicago Press, 1932 Cloth, \$150
- RADIOLOGIC MAXIMS By HAROLD SWANDERG, M D 12mo of 127 pages Quincy, 111, Radiological Review Publishing Company, 1932 Cloth, \$150
- THE PRACTICAL MEDICINE SERIES Comprising Light Volumes on the Year's Progress in Medicine and Surgery Series 1932 General Medicine Edited by George H Weaver, M D and others 12mo of 837 pages, illustrated Chicago, The Year Book Publishers, [c. 1932] Cloth, \$300
- The Practical Menicine Series Comprising Eight Volumes on the Year's Progress in Medicine and Surgery Series, 1932 The Lyc Edited by E V L. Brown, M D and Louis Bothman, M D The Ear, Nose and Throat Edited by George E. Shahiralch, M D and Elmer W Hareys, N D 12mo of 686 pages illustrated Chicago, The Year Book Publishers, [c. 1932] Cloth, \$250
- THE 1932 YEAR BOOK OF RACIOLOGY DIAGNOSIS, Edited by CHARLES A WATERS, M D Therapeutics, Edited by Ira 1 KAPLAN M D Octavo of 750 pages, illustrated Chicago, The Year Book Publishers, [c 1932] Cloth, \$600
- Possibilities and Need for Develorment of Legal Medicine in the United States Prepared by Oscar T Schultz M D Octavo ol 135 pages Washington, DC Published by the National Research Council of the National Academy of Sciences, 1932 Paper, \$150 (Bulletin of the National Research Council, No 87)
- THE MEDICAL RECORD VISITING LIST OR PHYSICIANS' DIARY FOR 1933 12mo Baltumore, Williams & Wilkins Company (William Wood & Company), 1933 Flexible cloth, \$175
- PICTORIAL MIDWIFERY BY COMYNS BERRELEY, M'D Second Edition Octavo of 172 pages illustrated Baltimore, Williams & Wilkins Company (William Wood & Company), 1932 Cloth, \$300
- ASTHMA, HAY FEVER AND RELATED DISORDERS A Guide for Patients By SAMUEL M FEINGERG M D 12mo of 124 pages illustrated Philadelphia, Lea & Febiger 1933 Cloth, \$150
- INFANTS AND CHILDREN Their Feeding and Growth By Frederic H Bartlett, M D 16mo of 409 pages New York, Farrar & Rinehart, Inc [c. 1932]
- Office Surgery By Fenwick Beekman, M.D. Octavo of 402 pages, illustrated Philadelphia, J. B. I ippin-

- eott Company [e 1932] l'abrikoid, \$500 (Every da) Practice Series)
- THE SEX TECHNIQUE IN MARRIAGE By ISABEL EMISLIE
 HUTTON, M.D. 12mo of 160 pages New York,
 Emerson Books, Ine. [e. 1932.] Cloth, \$2.00
- A STANDARD CLASSIFIED NOMENCLATURE OF DISEASE Edited by H B Logie, M D Compiled by the National Conference on Nomenclature of Disease 12mo of 702 pages New York, The Commonwealth Fund 1933 1 abrikoid, \$3.50
- Neue Gedanker, Über Das Blutt---Uno Nierfn---Prooley By Kurt Bertel. Octavo of 92 pages, illustrated Berlin, Deutsches Verlagshaus Bong & Company [e 1933] Paper, 3 Marks (Irrtümer der Medizin 1)
- Some Factors in the Localisation of Disease in the Boby By Harolo Burrows, C D Octavo of 299 pages, illustrated Baltimore, Williams & Wilkins Company (William Wood & Company) 1932 Cloth, \$4.50
- CHRONIC ARTHRITIS AND TIBROSITIS Diagnosis and Treatment By BERNARD LANGOON WYATT, M D Octavo of 201 pages illustrated Baltimore, Williams & Wilkins Co (William Wood & Co.) 1933 Cloth \$350
- THE PRACTICAL MEDICINE SERIES Comprising Light Volumes on the Year's Progress in Medicine and Surgery Series 1932 Chicago, The Year Book Publishers, [c. 1933] General Surgery Edited by Evarts A Graham, M D 12mo of 816 pages illustrated Cloth, \$300
- THE PRACTICAL MEDICINE SERIES Comprising Eight Volumes on the Year's Progress in Medicine and Surgery Series 1932 Chicago, The Year Book Publishers, (c. 1933) Obstetries Edited by Joseph B Delee, M D Gynecology Edited by J P Green MILL M D 12mo of 679 pages, illustrated Cloth \$250
- FOOD IN HEALTH AND DISEASE. By KATHERINE M. THOMA B A Octavo of 370 pages Philadelphia F. A Davis Company, 1933 Cloth, \$2.75
- PROCEDURES IN TUBERCULOSIS CONTROL FOR THE DIS PENSARY, HOME AND SANATORIUM BY BENJAMIN GOLDBERG, MD D Octavo of 373 pages Philadelphia F A Davis Company, 1933 Cloth, \$400
- CALCIUM METABOLISM AND CALCIUM THERAPY Second edition By AGRAHAM CANTAROW M D 12mo of 252 pages Philadelphia, Lea & Febiger, 1933 Fabrikoid \$2.50
- THE ACTION OF THE LIVING CELL BY FENTON B TURCK, M D Octavo of 308 pages illustrated New York The Macmillan Company, 1933 Cloth, \$3 50
- THE HISTORY OF DERMATOLOGY By WM ALLEN PUSEY, M D Octavo of 223 pages illustrated Springfield, Ill, Charles C Thomas, 1933 Cloth, \$3.00

"Dr. Jordan said it was absurd to expect government to run industry 'when in the present emergency, government cannot even feed, house and clothe the destitute or protect the public against robbery through bank failures.' He was not attacking individual public officials, he remarked, but was pointing out that 'everything creative is done by somebody and not by everybody.'

"The only revolution today,' he continued, 'is in the direction of greater individualism exempli-

fied by the back-to-the-land movement and the decay of big business, the growth of small enterprises. It is a decentralizing movement.'

"Although there might be an increase in public control of utilities and banking, he predicted, the greatest period of individualistic enterprise ever

seen lies just ahead.

"'No administration can do for us,' Dr. Jordan asserted, 'what we don't do for ourselves. The "new deal" may reshuffle the pack, but the game will remain the same.'".

NARCOTICS IN TURKEY

The New York Times of February 28 has the following editorial comment on the advanced stand taken by Turkey for the control and the production and sale of opium and other narcotics:

"Of a Christmas gift to humanity by Turkey little note has been taken in the midst of the ills that have befallen the world. On that day at the Cabinet meeting, presided over by President Mustapha Kemal, Turkey took her stand with the United States and eight other countries in ratifying the opium conventions of The Hague 1912 and 1914 and of Geneva 1925 and 1931. Under the draft laws adopted for submission to the Grand National Assembly, cultivation of drugproducing plants will be supervised and limited, all private factories that have been manufacturing narcotic drugs will be closed, and the manufacture of such quantities as are required for medical purposes in Turkey and elsewhere will be entrusted

to one factory owned and managed by the Government. The export of opium will be confined to a semi-official organization under Government control.

"That this step has been taken at the instance of the Gazi gives assurance that it will be adopted by the Assembly and rigorously enforced. Turkey has been, according to the narcotic reports of the League of Nations and of the United States Treasury, the worst offender in the export of opium. Her move in the other direction is the more to her credit, since it can hardly be to her commercial advantage. She has even anticipated some of the foremost European nations in this wholesome policy, for England, France, Germany and Italy have not yet ratified the 1931 Geneva Convention. It would appear from the reports that America had some influence upon Turkey in determining upon this course of action."

RESEARCH REGARDING BLUSHING

The research workers in the psychology department of Colgate University have made extensive investigations of the problem of sleep, and are now searching for the cause and means of control of blushing, as is shown in the following editorial in the New York Herald Tribune of February 28:

"Whatever may be the psychological secrets behind the blush which rises from time to time to the faces of most humans, they are about to be plumbed with scientific precision for the edification of a waiting world. The master minds of Colgate University's department of psychology are about to make an intensive study of the flush which mounts the cheeks in moments of embarrassment, happiness or discovered guilt, and to this end they have broadcast a questionnaire, preparatory to a monumental blush report. Do you blush when praised or ridiculed, in the presence of persons of the opposite sex or in crowds, when happy, offended or upon hearing smoking room

anecdotes? And when you blush do you blush a little or plenty, feel faint, fidget with your hands, break into a sweat, adjust your tie or try to run away? In short, what are the details of your blushing life?

"We hope this blush investigation turns out to be really fruitful and, most of all, that it will disclose some method of preventing at will the betraying rush of blood to the face which has served us to no good end any number of times. Stuttering and stammering can be conquered by patient training; fidgeting, fiddling and watch chain twirling can be mastered by intense effort and application, and if these psychologists are worth their salt they'll find a blush prevention treatment. The gestalt theory, behaviorism and inferiority compensation can, for the moment, be neglected, but if the science of the mind is going to justify its existence it will grapple with and dispose of this manifestation if for no other reason than to render obsolete the cliché of the blushing bride.

HANDBOOK OF BACTERIOLOGY. For Students and Practitioners of Medicine. By Joseph W. Brocke, M.D. (Dublin) Third edition. 12mo of 459 pages, illustrated, Baltimore, The Williams & Wilkins Company, (William Wood & Company), 1932. Cloth, \$5.00.

This handbook describes the usual bacteria which are of interest to the practitioner. It also contains among others chapters on the preparation of culture media, serological technique, and the bacteriology of water, milk, and shellfish. There is a full description of the theories of immunity and their practical application in claptes on phagocytosis and opsonins, toxin and antitoxins, agglutinins and precipitins, and anaphylaxis. The text, which has been brought up-to-date in this revision, is profusely illustrated and easy to read.

E. H. Nunsu-

THE ADVANCE OF MEDICINE. By The Right Honourable Lord Mounthan, K.C.M.G., C.B. 16mo of 64 pages. New York and London, Oxford University Press, 1932, Cloth, \$1.00.

There is something ennobling and elevating in this little book on the advance of medicine which the medical bibliophile will no doubt cherish. Most of our medical books are dead and forgotten long before their authors have lived their span of years. Not this book.

Moynihan has projected his being into the distant past and has made classical figures in medical history seem like living contemporaries and he has defily welded theo together with our modernists so as to inspire renewed faith in the accomplishments and in the future of medicate

The reader may not quite agree with his unbounded praises for Lister and the utter disregard for Pasteur. Possibly he has here revealed himself as an uncompromising nationalist. This important omission may be pardonable on the basis of one's national pride but will be more than balanced by the superb style and culture reflected in every paragraph.

EMANUEL KRISISY.

COMMUNITY HEALTH ORGANIZATION, A Manual of Administration and Procedure for Cities of 100,000, with Suggested Modifications for Larger and Smaller Urban Units. Edited by Ira V. Hiscock. Octavo of 261 pages. New York, The Commonwealth Fund, 1932. Cloth, \$2.50.

"Community Health Organization" is a new and completely revised edition of the volume published in 1927, is a book of 18 chapters and 251 pages and is published by The Commonwealth Fund under the editorship of The V. Hlscock, Professor of Public Health, Yale School of Medleine. It is sponsored by the Committee on Administrative Practice of the American Public Health Association and reflects that Committee's judgment concerning the scope and content of desirable health services after 12 years study of the health organizations of over 200 communities ranging in population from that of Chicago and New York to towns of 20,000 inhabitants.

The Committee has collected information concerning prevailing administrative health practices, has analyzed this data, has conducted extensive surveys, has recommended special types of organization for communities having special problems and has watched the development of the programs, has developed appraisal forms for city and rural health work, has studied public health records and the relationship of health departments and hospitals and, in short, has exhausted all available sources of information and has apparently spared no effort to make this an authoritative, comprehensive and practical plan of organization for all desirable public health activities.

One would think from the extensive material studied

and digested that this comparatively small volume would be stuffed with tables of statistics interspersed with short explanatory text and would be highly sophorific. This is not so. It conveys a vast amount of information in a highly interesting way and the reviewer eordistly recommends it not only to other public health officials who will need it in their libraries but to his fellow members of the medical profession who will find it most readable and informative.

To illustrate the comprehensiveness of the subject matter treated the chapter of but 17 pages on School Hygieue contains sub-licads on Purposes, Communicable Disease Control, Sanitation of School Buildings, Health Examinations, Professional Attention, Nursing Service, Records, Physical Education, Health Education, The Balaoced Program. Cloldren in Industry, and Personal and Budget. Each branch of public health work is likewise comprehensively treated in all its phases. At the end of each chapter is the Committee's appraisal of the number of full-time and part-time workers with salary schedules needed for that particular health activity in a city of 100,000 people, the unit used by the Committee throughout the book. Everywhere are scattered yardsticks by which the Health Officer can compare the work of his different bureaus with what the Committee consider reasonable standards of public health service.

The only criticism the reviewer would make is that the total per capila cost seems somewhat high and more than most city administrations are willing to incorporate in their budget. However, the editor states: "The plan contains the elements of the best present practice in the country, applicable for one organizing a health department in a community where there is a reasonable mnount of money available. The plan should not be considered as a scheme for immediate adoption as a whole, but for gradual adaptation to existing programs after consider-

gradual adaptation to existing programs after consideration of local problems, possibilities and future policies." The bibliography is most complete and is conveniently placed at the bottom of the pages.

J. F. Morrison,

THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Series 1931. Chicago, The Year Book Publishers, 1931. Neurology, Edited by PETER BASSOE, M.D., and Psychiatry. Edited by FRANKLIN G. EOUUGI, M.D. 12mo of 471 pages, illustrated. Cloth, \$2.25.

In this volume, attention is given to a review of the literature for 1931 in the field of Neurology and Psychiatry.

There are interesting articles on cephalic auscultation and epilepsy. The latter is treated from the standpoint of physiology and chemistry with discussion on sodium chloride and water balance, the urea content of the spinal fluid and relationship with tetany as elucidated by calcium and alkali reserve determinations. Several new varities of arachidits, leptomeningitis and encephalitis are described. There is discussion of the etiology of potionyclitis and encephalitis with reference to different types of polio virus. There is also a summation of an article classifying intra-medullary cord tumors.

In the field of psychiatry, there are a series of articles of a general nature dealing with the relation of psychiatry to other branches of medicine, the amount of psychiatry tanght in the medical schools of the country and psychoanalytical technique. There is an interesting article on the use of, inhalation of carbon dioxide and oxygen and intravenous sodium amytal on certain neuropsychiatric conditions. Attention is directed toward the major psychoses, Finally there are a host of articles on mental hygiene and the social psychiatric field. This book should be read by all physicians, as the manifold neurological and psychiatric problems discussed, necessarily border on all fields of medicine.

STANLEY S. LAMM.



OUR NEIGHBORS



DUES AND MEMBERSHIP IN TEXAS

Last year the dues in the State Medical Association of Texas were made eight dollars, instead of ten dollars as formerly. The argument for the reduction was that doctors would thereby be induced to retain their membership in the State Association. Regarding this expectation the Texas State Journal of Medicine for March says:

"On March 1 of last year, our paid membership was 1,275. On the same date this year, our paid membership was 998, a shortage of 277. The figures reported for last year were commented upon at that time, in view of the fact that they showed an increase over the previous year of 127. Deducting this increase from the present shortage, we deduce that we are behind the normal just 150 members. That is now, however, the frank way of looking at it. The truth is, we have recently reduced our dues 20 per cent, which means that our membership should be increased that much if we would compensate. It was following insistence upon this phase of the situation that there was an increase in membership last year, in the face of the depression.

"We are still in need of the 20 per cent increase in membership. Indeed, we are in need of more than that. Our advertising income has been

reduced materially (and more than it should, we are sure), and the cost of doing business has not decreased in proportion. Salaries have been reduced, and printing is a little cheaper, but postage has actually been increased. Most of the items that have been so noticeably reduced in price are not purchased by the association. So it happens, that those of us who are interested in the welfare of the State Medical Association, and of all times in the history of our profession now is the time when we should be interested, should not fail to do two distinct things: (1) Boost the payment of dues; (2) boost our advertising business.

"Some of our advertisers have quit us because the depression has given them an excuse. Some have quit because they are uneasy and desire to hedge financially, while others actually could not afford to continue. No matter, those who are staying with us, and who continue to pay us, are entitled not only to credit, and to our thanks, but to our business as well. They should know that we appreciate that fact. And by the same token, if they are made to realize it, we will hold their business, and many of the lost sheep will return to the fold."

FEATURES OF MINNESOTA ANNUAL MEETING

The February number of *Minnesota Medicine* has the following description of some unusual features of the coming annual meeting of the Minnesota State Medical Association:

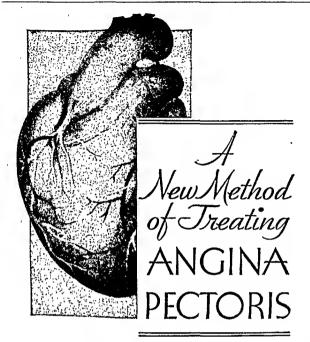
"A call for every available scientific film of interest has been issued by the Committee on Scientific Assembly to all members of the State Association. These films are to be used for the Scientific Cinema which is to be an important feature of the eightieth annual meeting of the society to be held in Rochester, May 22, 23, and 24, 1933. Eighteen films, most of them new, have already been submitted for the committee's consideration.

"A wide variety of small group demonstrations is also under consideration by the committee as another exceedingly important part of the meeting program. These demonstrations, following the precedent set last year at the Saint Paul meeting, will be given for an hour each day in the same halls that house the scientific and technical exhibits. Among the subjects tentatively scheduled for them are many that were suggested by the membership on cards sent out last month by the committee. They include malaria treatment

for syphilis; the Elliot use of heat in pelvic disease; physiotherapy for arthritis; injection treatment for hernia; autopsies; bruises and sprains; practical dietaries; interpretation of blood pictures; psittacosis; the state of vaccine treatment in lobar- and broncho-pneumonia; diagnosis of early pregnancy; pernicious anemia; mucin treatment in peptic ulcer; liver and renal function tests; practical therapy for allergic states; oxygen therapy; fractures; hemorrhoids; spinal anesthesia; diathermy vs. surgery for tonsillectomies; plastic surgery; intravenous technic in leg ulcer; deformities after wrist fractures; tularemia; relation of streptococci to the etiology of ulcer; experimentally produced peptic ulcer; studies of gastric secretion; symptoms of hematemesis; lesions of the stomach; retinal hypertension; cancer of the uterine cervix; intravenous urography; ketogenic diet in urinary infections; technic of making and staining blood smears; differential characteristics of malignant cells; phtelometer and electromotive thermometer.

"Prominent among other novel program fea-

(Continued on page 480-adv. xii)



N the treatment of angina pectoris, vasodilators, especially the

nitrates, have proved helpful in relieving acute attacks, but they exert only a limited influence upon the course of the disease.

Because of its prolonged action upon the coronary arteries, Myorgal, a preparation of active nucleosides, prevents the acute attacks and exerts a beneficial influence by improving the nutrition of the heart muscle.

Anumber of reports have been published attesting the value of Myorgal in various types of angina pectoris. It has also proved of decided benefit even in the presence of cardiac dilatation and decompensation when administered with digitalis.

OTHER INDICATIONS: Myorgal has also been recommended in the treatment of cardiac neuroses in general, sclerosis of the cerebral vessels, and the vascular disorders of the menopause when associated with anginal manifestations.

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- (b) To furnish pecuniary aid to members in cases of urgent need.

The founders builded better than they knew, for from their small beginning of less than a hundred members there has grown an Association whose membership now is in the thousands.

This Association makes no distinction as to sex, race, creed, or color, welcoming all that are eligible to its membership at the actual cost of the service it performs. Its officers and trustees receive no salaries or other financial recompense, feeling honored in being chosen by their colleagues to manage its affairs. They are elected each year at the annual meeting of the Association. Full information may be had from the headquarters of the Association, New York Academy of Medicine, 2 East 103rd Street, New York City.

THE ANNUAL MEETING

of the

Medical Society
of the
State of New York

will be held at the

WALDORF-ASTORIA NEW YORK CITY

April 3rd, 4th, 5th, 1933

(Continued from page 478)

tures are the meetings of the special societies to be held Monday. These meetings will provide open programs on surgery, dermatology, obstetrics, heart tuberculosis (arranged by the Trudeau society), orthopedics. eye and ear and

r-ray.

"Several symposiums of special interest are being arranged for the Tuesday and Wednesday programs. One of these is to be a nutritional symposium and another emergency surgery, with a pathological conference and a cancer symposium also under consideration. Subjects of papers to be read include pneumonia, gastric ulcer therapy, migrane, epilepsy, management of hypertension, management of cancer, asthma in infants and young adults, diabetic management in general practice, prevention of obstetrical castastrophes, industrial surgery with estimation of disabilities.

"Clinics to be held in Rochester hospitals will occupy Tuesday and Wednesday afternoons. The usual social events, gold tournaments, luncheon reunions and banquet, together with various special tours, will complete the unusual three days' program.

INSURANCE PLANS IN WEST

The March issue of the West Virginia Medical Journal has the following editorial on the solicitation of applicants for the insurance of hospital care:

"From time to time the attention of the Association is called to some new form of health insurance in West Virginia that involves the solicitation of patients. Every doctor and every hospital that subscribes or participates in any plan of health insurance should first make sure that the element of solicitation is entirely eliminated. Solicitation of patients is the one thing that will bring havoc to the medical profession, because it creates dissension and strife within the profession itself. Organized medicine has little to fear so long as the doctors put up a united front, but organized medicine has everything to fear if the doctors lose faith in one another.

"Somehow it rarely occurs to the average doctor or hospital superintendent that there is one form of solicitation that is entirely harmless, that is, the solicitation of patients for some form of health insurance that leaves the patient absolutely free to select the doctor and the hospital of whis choice. One such plan is already in operation in West Virginia and, while it has certain faults, it does not antagonize the doctors with the solicitation problem.

"No group of doctors and no group of hospitals can operate any ethical plan of health insurance unless all the doctors and all the hospitals are in-

(Continued on page 481-adv. xiii)

(Continued from page 480-adv. xii)

luded in the plan. That should be he iron-elad ule in every health insurance plan. Otherwise, ither the plan or the profession will sooner or

ater come to grief.

"Suppose in a community there is a real leader of the profession. He looks far enough ahead to nticipate the chaos that will result from the plan nutlined above. So he gets the two hospitals together, he explains the whole matter to the staff nembers of both hospitals, he recognizes the denaud for some monthly-payment plan, and the wo hospitals join hands to work out their mutual problem. The result is a plan that may employ the same solicitor at the same rate, but which gives all subscribers free choice of hospital and physician. Here, instead of chaos, we have union. We have a plan that will draw the hospitals and the physicians together, instead of driving them further apart.

"The journal does not for one minute advocate the organization of health insurance plaus throughout the state, nor does it endorse any particular plan in any particular community. We do feel that in some sections, where there is an unquestionable demand for some health insurance plan, the doctors and the hospitals would be wise to go into the matter openly and frankly and work out a satisfactory solution before someone else works out an unsatisfactory plan. There is no reason why any county society should hold aloof

from such a move."

GRADUATE COURSES IN VIRGINIA

The February issue of the Virginia Medical Monthly contains the following description of the courses in Prenatal Care:

"The third circuit of five post-graduate classes conducted by Dr. Maxwell E. Lapham, of Philadelphia, full-time clinician of the Joint Committee on Prenatal and Postnatal Instruction, came to a close in the last week of January. These classes were located in Roanoke and adjacent cities. One new enrollment during the month, that of Dr. G. A. L. Kolmer, brought the membership for the circuit to a total of fifty-two. The attendance for the first part of the course was somewhat better than the records of previous circuits; and it remained creditable to the end, in spite of the disadvantages of the holiday intermission, rough weather, and the busyness of the season.

"As in previous classes, every enrolled member was invited to give the Joint Committee the benefit of his frank opinion as to the value of the course and his suggestion for further improvement. The replies received at the time of writing have been unanimous, with a single exception, in stating that the course was worth the cost in time and money—twenty-three affirmative to one opposed; and that similar courses in other subjects would be welcomed—twenty five affirmative to none opposed. (Continued on page 482—adv. xtv)

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non-irritating...
in the treatment of
coughs...grippe
...and bronchitis

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(Continued from page 481-adv. xiii)

"In its first nine months the Joint Committee has now completed sixteen classes with a total enrollment of 228. Of this number only six have been doubtful of the value of the work, and only six have indicated their lack of interest.

"The fourth circuit of classes in and around Norfolk, as described below, and an intensive course of two weeks already arranged for Bedford in April, will end the year's work. The organization of additional study groups for the summer in the most distant sections of the State will be immediately undertaken.

"Unanimous votes in approval of the courses in prenatal and postnatal care by the medical societies of Norfolk, Nansemond and Southampton Counties, and the application of members of the (colored) Norfolk-Portsmouth Medical, Dental and Pharmaceutical Society, have resulted in a more favorable beginning for the fourth circuit than in any previous groups of classes. Active committees on membership and clinical material and an advance enrollment of fifty-one are indications of the success that may be confidently expected in the graduate courses conducted in the new territory."

PSYCHIATRIC NEEDS OF WEST VIRGINIA

The February issue of the West Virginia Medical Journal records a controversy between the Governor of the State and the medical profession over the State Hospitals for the care of the Insane. The Governor seems to have accused the doctors of selfishness when they criticize the hospitals. Dr. D. A. MacGregor, President of the State Society, reviews conditions in the hospitals on the President's Page of the Journal as follows:

"Our state provides four hospitals for the care

of mental diseases. As custodial institutions they afford quite comfortable and satisfactory accommodations for about 3,300 patients. At the present time this capacity is slightly inadequate, but the problem of over-crowding is not serious.

"During the past two years there have been several important additions to the physical equipment of these institutions. Provision has been made for x-ray study, clinical laboratory examina-

(Continued on page 484—adv. xvi)

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(Continued from page 481-adv. xiii)

"In its first nine months the Joint Committee has now completed sixteen classes with a total enrollment of 228. Of this number only six have been doubtful of the value of the work, and only six have indicated their lack of interest.

"The fourth circuit of classes in and around Norfolk, as described below, and an intensive course of two weeks already arranged for Bedford in April, will end the year's work. The organization of additional study groups for the summer in the most distant sections of the State will be immediately undertaken.

"Unanimous votes in approval of the courses in prenatal and postnatal care by the medical societies of Norfolk, Nansemond and Southampton Counties, and the application of members of the (colored) Norfolk-Portsmouth Medical, Dental and Pharmaceutical Society, have resulted in a more favorable beginning for the fourth circuit than in any previous groups of classes. Active committees on membership and clinical material and an advance enrollment of fifty-one are indications of the success that may be confidently expected in the graduate courses conducted in the new territory."

PSYCHIATRIC NEEDS OF WEST VIRGINIA

The February issue of the West Virginia Medical Journal records a controversy between the Governor of the State and the medical profession over the State Hospitals for the care of the Insane. The Governor seems to have accused the doctors of selfishness when they criticize the hospitals. Dr. D. A. MacGregor, President of the State Society, reviews conditions in the hospitals on the President's Page of the Journal as follows:

"Our state provides four hospitals for the care

of mental diseases. As custodial institutions they afford quite comfortable and satisfactory accommodations for about 3,300 patients. At the present time this capacity is slightly inadequate, but the problem of over-crowding is not serious.

"During the past two years there have been several important additions to the physical equipment of these institutions. Provision has been made for x-ray study, clinical laboratory examina-

(Continued on page 484—adv. xvi)

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(Continued from page 484-adv. Avi)

ization, and all decisions as to the formation and conduction of clinics, the time, place and method of operation, as well us the selection of clinicians, is a matter to be settled entirely by the local Society. Several County Societies in Illinois, are now organizing their own clinic, to be conducted entirely by their own members, while several others have requested that the Scientific Service Committee aid them in selecting an outside clinician for the actual work.

"In adopting this outline schedule form as recommended by the Council, no additional expense is incurred by the Illinois State Medical Society, there are no field workers, organizers, traveling representatives, or other paid executives working at the expense of the Society, but the Society is merely using an office already ereated which is ever anxious to be in closer communication with all component County Societies, and assist them in every way possible.

"It is recommended in the outline that all patients able to do so, should pay a reasonable fee for services rendered, to reduce to the minimum, unnecessary pauperization, although, of course. final decision in this, as well as all other questions relative to the operation of clinics, is a matter to be decided by the County Society itself.

"It has been shown repeatedly, that in many of our communities there are physically handicapped children who have not actually been seen by the family physician since delivery, or after postnatal care was discontinued, and many of these cases have been discovered and brought to the Clinics by Welfare Nurses, or other workers, which again shows the value of these cooperative individuals or organizations in the clinical program.

'All decisions relative to the creation of physically handicapped children's clinics, are in the hands of the County Medical Societies, and if any additional information is desired relative to any phase of the subject, same will receive prompt attention, by addressing Miss Jean McArthu, Secretary, Educational Committee, Illinois State Medical Society, 185 North Wabash Avenue, Chicago,"

The Journal also gives the following description of a elinic held in Warren County:

"The regular Physically Handicapped Children's Clinic conducted by the Warren County Medical Society was held at the Monmouth Hospital, on January 19, 1933. This clinic established by the Society six years ago, has been gradually increasing in popularity, and has shown conclusively, that County Medical Societies can success-

(Continued on page 486-adv. xviii)

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fully conduct their own clinics without question. The citizens of the Community have not only been intensely interested with its progress, but have given many types of encouragement. The Society has had the cooperation of a group of women who formerly were interested in this type of welfare work, and who are now furnishing the necessary operating expense money,—a highly essential factor. The Press has always been generous in their reports and publicity for each clinic that has been held.

"During the clinic, a stenographer is present to take notes from which the records are properly revised and brought up-to-date subsequently, and as an additional check-up, a dictaphone is also used so there will be no question as to the findings, and prescribed treatment for the case. When x-ray pictures are desired, they are made immediately, and reported to the clinician before the patient leaves the hospital. Most of these bills are paid immediately by the patient, but in the case of those who are unable to pay for this service, the obligation is assumed by the special ladies' committee which is always in attendance.

"At the clinic on January 19, a total of fortyone patients were seen; twenty-seven of these had been seen previously and fourteen were new patints at the clinic for the first time. The family physician was present during the day, in nearly every instance, and he received definite information relative to his patient from the clinician.

During the six years this clinic has been in progress, it has been a matter of unusual interest to the physicians in attendance to see the wide range of orthopedic conditions presented for observation, and subsequently, to note the satisfactory progress of nearly every case. Some patients seen at early clinics, when they were carried in the arms of parents, are now seen walking satisfactorily. A number of endocrine disturbances diagnosed one or two years ago show a decided improvement under the prescribed treatment, as is noted particularly on x-ray examination."

WOMAN'S AUXILIARY IN ILLINOIS

The report of Mrs. T. O. Freeman. President of the Woman's Auxiliary of the Illinois State Medical Society, is printed in the March number of the Illinois Medical Journal, in which the following items appear:

"The President of the State Medical Society and Secretary of the Educational Committee advised that the Illinois Medical Society had endorsed 'Hygeia,' and the Board decided to ask the County Auxiliaries to take up promotion of 'Hygeia.' A special committee was named for 'Hygeia,' with Mrs. G. E. Johnson, Chicago, as Chairman.

"The Publicity Chairman was requested to col-

(Continued on page 487-adv. xix)

(Continued from page 486-adv. xviii)

lect clippings on matters of interest to the Auxiliary, to be made into scrap book for future reference. This scrap book was part of an exhibit at the National Convention in New Orleans.

"A letter was sent to Dr. Andy Hall, Commissioner of Public Health for State of Illinois, assuring him of our support in his work for compulsory vaccination, and offering to assist him in any way possible. Dr. Hall replied stating he

appreciated our offer of eo-operation.

"Plans for study programs were discussed and it was decided to continue with programs suggested by the Educational Committee of the Illinois State Medical Society for the previous year. The following subjects were made the basis for programs for this year:

"Contagious Disease Control and Emphasis on

Smallpox.

"Legislation—Medical Practice Act, Bills, etc.
"Survey of Magazines with regard to their presentation of Medical Practices, costs, etc.

"A Thorough Study of the Magazine 'Hygeia.'
"List of Books written by Doctors or about Doctors with review of several.

"Some Economic Aspects of the Practice of

Medicine.

"Child Welfarc and the Examination of School

Children.

"In April a letter was addressed to County Presidents calling attention to an article in a popular magazine, and the comment on this article which appeared in the April Illinois Medical Journal. Presidents were asked to bring this before their auxiliary members requesting each one to pledge herself to interest three lay friends to write letters of protest to this magazine.

"Up to date we have eleven active organized counties, with 555 paid members, as follows:

"Wills Grundy County, 25; St. Claire County, 57; McLean County, 13; Randolph County, 15; Cook County, 298; Vermilion County, 52; Kane County, 21; Rock Island County, 18; Douglas County, 10; Coles Cumberland County, 12; Sangamon County, 35."

ANNUAL MEETING IN ILLINOIS

The March number of the Illinois Medical Journal contains the following editorial description of the Annual Meeting of the State Medical Society to be held in Peoria, May 16-18, 1933:

"The meeting will begin on Tuesday morning, May 16th, with the Annual Secretaries' Conference, which will begin at 10:00 o'clock. The officers of the Conference are arranging an unusually interesting program that will appeal not only to the officers of the component societies, but to other members as well. It is hoped that the attendance at this conference will exceed that of former years.

(Continued on page 488-adv. xx)

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Ref.: Higgins & Kittel, Lancet, Page 68, 1-11-30.
Tunick & Nach, Annals of Surgery, Vol. 95, Page 734,
May, 1932.
Smith, F.L., J.A.M.A., Page 2008, 12-10-32.

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Trial package of 3 ampoules \$1.00

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"The General Opening Meeting which has previously been held on Tuesday evening, has been changed to 1:00 P.M. when the President will officially call the meeting to order. This session will be very brief, and will be followed by the Oration in Medicine. All Sections will be in session that afternoon from 3:00 to 6:00. Tuesday evening from 6:00 to 8:30, will be given over to the Veterans Dinner, for which the Committee is arranging an excellent program, the Fraternity, Alumni, and Section Dinners, as desired. At 8:30 that evening, the Peoria Society will be host at the Annual Stag, and this will be entirely different from the usual entertainment of former years.

"All Sections will Wednesday morning from 8:30 to 11:00, and from 11:00 to 12:00 the Oration in Surgery will be given. The President's Address will be given at 1:30 P.M. Wednesday,

to be followed by Section meetings.

Wednesday evening is to be used to honor our President, Dr. John R. Neal. The President's Dinner will be held at 6:30, and there will be no speeches during or following the Dinner. The President's informal dance, or cards, as desired, will follow, and occupy the remainder of the

evening.

"On Thursday morning, the five Scientific Sections will join together for a meeting which will interest all members, regardless of their specialty in practice. Forty minutes is available for each Section to present interesting subjects, and there will be time for discussion of all papers. It is quite probable that two or three of the Sections will arrange a symposium taking up the various phases of some interesting group of conditions, complete details will be announced in the April Illinois Medical Journal.

"The House of Delegates will have the first meeting at 3:00 P.M. Tuesday, to hear the annual reports of officers, councilors, committees, the presentation of resolutions, and other business which will be presented for action by the House.

"The second meeting of the House of Delegates will be held at 8:30 Thursday morning.

"All exhibits, both commercial and scientific, will be shown in the Pere Marquette Hotel, and arrangements are under way to have an excellent display which will be of interest to everyone at the meeting."

HOUSE OF DELEGATES IN FLORIDA

An editorial in the February Journal of the Florida Medical Association, Inc., describes one of the customs of the House of Delegates which seems strange to New York physicians:

"We are now selecting men who will represent us in the house of delegates at our annual meeting to be held in Hollywood in May. In this house

(Continued on page 489-adv. xxi)

(Continued from page 488-adv. xx)

last year a precedent was set in that a person desiring to address the house, if he were not a properly seated delegate, had to obtain permission from the hody. If this method of procedure is to continue-hand we believe it should—much valuable time could be saved, if individuals, who are qualified to speak with authority, should be elected as delegates and to those individuals should be handed, for introduction, any matter which a component society wished brought up, thus discouraging extra corporal speaking. Thus, the ruling body of the society, is always rushed for time, and overcharged with work, so every moment that

it is in session should be conserved and not wasted by this injection of unseated speakers, and of oratory, often of a meaningless type, on some subject which a regularly elected delegate could and should have introduced.

"It might even be well to have the house of delegates meet only in executive session. Then each county would be desirous of sending as a delegate only its strongest and best informed men—men who could and would truly represent, and not men who meaninglessly waste not only their own time like our curbstone friend, but also the time of others, which tests the temper, even of angels."

INDIGENTS IN DELAWARE

The February number of the Delaware State Medical Journal has the following editorial description of medical relief work among the indigents of the State:—

"Success has at last been achieved by the organized medical profession of the state in its efforts to be relieved of part of the burden of caring for the indigent sick in their homes. Following a conference between officers of the State and County Medical Societies and officials of the State Temporary Emergency Relief Commission a plan

was evolved under which the two most important objectives of the profession have been recognized; (1) the patient shall have free choice of physician; and (2) the physician shall receive some remuneration.

"The plan works as follows: when an indigent needs medical attention he makes application to the nearest Relief Commission office, of which several will be established throughout the State. His indigency will then be investigated by the

(Continued on page 490-adv. xxii)



(Continued from page 489-adv. xxi)

Commission, and if verified, the Commission will then ascertain the name of the physician chosen by the patient, and request the physician to treat the patient.

"If the patient is not able to make application to the Commission in person, application can be made by any member of the family, or by any friend or neighbor, after which the wheels will start moving as above. Where the doctor is needed promptly or at once, he is to be called first, and the Commission then notified of the case.

"The physician shall keep the usual record of his visits and treatments, medicaments, and supplies, and, on the discharge of the patient, shall render his bill for this service to the Commission office that issued the original authorization. Upon verification of the account, the bill will be paid out of the Relief Commission's funds. amounts agreed upon at present are: for the first visit, 50 cents; for subsequent visits, 35 cents; for dressings and materials, 25 to 35 cents; for drugs dispensed, 35 to 50 cents. These sums are not considered fees; they are to be booked and billed as part of the physician's expenses in attending indigent cases. Cases treated in the doctor's office or in some organized clinic do not come within the purview of this agreement, as it stands at present.

"The promptness with which the Commission officials agreed to this plan is a matter for congratulations, both to them and to us. Their fairness in conceding at once that the whole burden of providing medical care for Delaware's indigent should not rest solely on the medical man's back is a guarantee that this fundamentally important Commission is composed of men of broad vision. They do not hesitate to acknowledge that the charity contributed by the Delaware medical profession, estimated at \$2,500,000 a year, is the most persistent and the most consistent charity in the state.

"Furthermore, their willingness to help lighten this load shows that, after all, the intelligent layman can and will understand some of the medical man's problems if only they be placed clearly before the laymen; which is equivalent to saying, conversely, that one reason why the doctor now finds himself in serious straits is because, with his inherited and acquired timidity over direct approaches to the public, he has not taken this same public into his confidence enough for Mr. John J. Businessman to realize that medicine means much work, little pay, and many problems which the doctor alone cannot solve. Whether we doctors like it or not, our public relations and the means thereto are changing. We, too, had better change our tempo and keep step with the times."

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CHIROPRACTIC IN TEXAS

The first article in the March issue of the Texas State Journol of Medicine describes a chiropractic bill which was introduced in the House on February 10, and a motion to refer it to the Health Committee was lost by a vote of 64 to 55. The account continues:

"Immediately following the announcement of this vote, and presumably as a joke, a motion was made to refer the bill to the Committee on Live Stock and Stock Raising. This motion carried, and the bill was so referred.

"A hearing on this measure was conducted by the Committee on Live Stock aud Stock Raising. February 16, in the main hall of the House of Representatives. A large audience was present, and for the first time that we can reall, the opponents and proponents of the chiropractic bill were about equal as to numbers, and for the first time in the history, we think, the chiropractors failed to conduct a clinic.

"Dr. Marvin D. Bailey, as osteopathic physician from Houston, representing the State Board of Medical Examiners, was chairman of the opposition and directed the fight on the bill. Judge B. Y. Cummings, of Wichita Falls, delivered the principal argument against the bill. Dr. N. D. Buie. of Marlin, president, represented the Board of Medical Examiners; Mrs. Bertha C. Alford, chairman of their legislative committee, represented the Graduate Nurses Association; Dr. H. C. Morrow of Austin, represented the Homeopaths and Eclectics; Dr. Paul M. Peck, of San Antonio, represented the Osteopathic group, and Dr. Holman Taylor, of Fort Worth, represented the State Medical Association of Texas.

"At the conclusion of the argument Representative Jones moved that the bill be referred to the House with the recommendation that it do not pass. This motion was defeated by a vote of 6 to 7.

"The committee met again on February 22 and reported the bill unfavorably, by a vote, we understand, of 8 to 9."

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LECTURES TO MEDICAL STUDENTS IN INDIANA

The February Journal of the Indiona State Medical Association has the following account of a course of lectures to senior medical students, which is much more extensive than that given under the auspices of the Medical Society of the State of New York:

"The Indiana University School of Medicine has announced a new course in medical economics and medical ethics to be given to the senior class. This course has been approved by the Indiana State Medical Association. Members of the Indiana State Medical Association are invited to attend the lectures, which will be as follows:

"1. General Principles of Ethics—Mr. Daniel S. Robinson, Dept. of Philosophy, Indiana Uni-

versity,

"2. Principles of Medical Ethies –Dr. J. M. Barry.

"3. Work and Ideals of Organized Medicine—Dr. Joseph Weinstein.

"4. Newer Forms of Medical Practice—Dr. Olin West, Chicago.
"5. Duties of the Doctors in Safeguarding Public Health—Dr. Thurman B. Rice.

"6. Conduct of Consultations-Dr. William N. Wishard, Sr.

"7. Prognosis — Dr. J. Oscar Ritchey.

"8. Code of Medical Ethics— Dr. W. D. Gatch.

"9. Problems of the Young Physicians—Dr. Cyrus Clark.

"10. Savings and Safe Investment—Mr. Evans Woolen, Jr.

"11. The Mathematics of Life Insurance—Mr. Charles Beckett. "12. Life Insurance Examina-

tions—Speaker to be announced.
"13. The Office Equipment of the Doctor—Dr. Carl McCaskey.

"14. The Work of the Indiana State Board of Medical Registration and Examination—Dr. William R. Davidson.

"This course of lectures will begin at 1:00 o'clock on Wednesday, February 1, and thereafter the classes will meet regularly each week on Wednesday at 1:00 o'clock.

(Continued from page 489-adv. xxi)

Commission, and if verified, the Commission will then ascertain the name of the physician chosen by the patient, and request the physician to treat the patient.

"If the patient is not able to make application to the Commission in person, application can be made by any member of the family, or by any friend or neighbor, after which the wheels will start moving as above. Where the doctor is needed promptly or at once, he is to be called first, and the Commission then notified of the case.

"The physician shall keep the usual record of his visits and treatments, medicaments, and supplies, and, on the discharge of the patient, shall render his bill for this service to the Commission office that issued the original authorization. Upon verification of the account, the bill will be paid out of the Relief Commission's funds. amounts agreed upon at present are: for the first visit, 50 cents; for subsequent visits, 35 cents; for dressings and materials, 25 to 35 cents; for drugs dispensed, 35 to 50 cents. These sums are not considered fees; they are to be booked and billed as part of the physician's expenses in attending indigent cases. Cases treated in the doctor's office or in some organized clinic do not come within the purview of this agreement, as it stands at present.

"The promptness with which the Commission officials agreed to this plan is a matter for congratulations, both to them and to us. Their fairness in conceding at once that the whole burden of providing medical care for Delaware's indigent should not rest solely on the medical man's back is a guarantee that this fundamentally important Commission is composed of men of broad vision. They do not hesitate to acknowledge that the charity contributed by the Delaware medical profession, estimated at \$2,500,000 a year, is the most persistent and the most consistent charity in the state.

"Furthermore, their willingness to help lighten this load shows that, after all, the intelligent layman can and will understand some of the medical man's problems if only they be placed clearly before the laymen; which is equivalent to saying, conversely, that one reason why the doctor now finds himself in serious straits is because, with his inherited and acquired timidity over direct approaches to the public, he has not taken this same public into his confidence enough for Mr. John J. Businessman to realize that medicine means much work, little pay, and many problems which the doctor alone cannot solve. Whether we doctors like it or not, our public relations and the means thereto are changing. We, too, had better change our tempo and keep step with the times."

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April 15, 1933

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK: OUR RESPONSI-BILITIES AND OUR OBLIGATIONS

By CHAS. GORDON HEYD, M.D., NEW YORK, N. Y.

The Presidential address at the 127th Annual Meeting of the Medical Society of the State of New York at the Waldorf-Astoria Hotel, New York, Tuesday, April 4th, 1933.

THE Medical Society of the State of New York has 13,400 members, in sixty component County Medical Societies, and represents in its membership a single, consolidated, medical organization working in harmonious relationship from one end of the State to the other. It would seem wise therefore to canvass a few of the salient backgrounds of the practice of medicine, and to see wherein the Society has fulfilled its obligations.

THE INDIVIDUAL PRACTITIONER

The fundamental object of medical practice is to provide and make available adequate, effective medical service; and the most effective basic unit for the distribution of this service is the individual practitioner of medicine. We believe that medical service today in the State of New York is both effective and efficient, though in some localities it is not readily available, and rarely is inadequate!

If the practice of medicine from the community viewpoint was ineffective or inadequate, we should expect that society in the United States would suffer from such defects of medical service. This is not apparent because the decline in modern mortality is impressive. If the death rate which obtained in 1900 had continued unabated, there would have died in 1925 approximately 1,962,999 people; on the contrary, the actual deaths were 1,389,673 persons, an actual saving of life in the year 1925 of 573,326 lives.² Paralleling this gross mortality decline has been a reduction in the per thousand per annum death rate from 18,6 to 9.6.

BURDEN OF FREE SERVICE

There is no logical reason for believing that the professional item for adequate and effective medical care will be materially lessened or reduced, for any plan to meet the so-called inadequacies of medical service will certainly carry with it a remuneration to the physicians for the professional services rendered in clinics. Since the doctor is a citizen and must discharge all of his obligations of citizenship the same as other individuals in the community, he is by the same token entitled to a monetary return for his labor, experience, and knowledge that is commensurate with the services rendered and with his training and experience.

The present day method whereby the tyranny of hospitol and dispensary administration enforces free services from their attending staff is ethically wrong and economically unsound.

The doctor must be paid for his services irrespective as to the method of distribution in order that he, as an individual, may function as a useful and contributing member of society.

In 1900 there were 160 medical schools in the United States, and today there are 66. Yet, we are producing approximately the same number of physicians today from 66 schools as we did in 1900 from 160. Whereas the population in the United States increased from 1890 to 1930, 95 per cent, the number of graduates from institutions of higher learning increased over 1,360 per cent.

Before 1929 fifty per cent of the physicians in this country had an annual gross income of \$3,800 or less; and 25 per cent of the total number of physicians had an annual gross income of \$2,300 or less.⁴ This is in remarkable contrast to the fact that in the same period a conductor of a railroad freight train received about \$3,750 a year and a locomotive engineer about \$4,700; while the very meagre budget of a street railway employee of about \$1,900 a year* was only \$400 a year less than that received by 25 per cent of the physicians after an extensive and prolonged, costly and special type of education. It may be said without fear of contradiction that there can be no solution of medical costs by a reduction in the average professional medical income.

It is axiamatic that whenever the remuneration for professional services becomes meager or difficult, there is a fundamental lessening in the

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FOR THE TREATMENT OF CHRONIC ARTHRITIS

Many clinicians hold to the theory that arthritis is due to a streptococcic infection. Subcutaneous injections of streptococcus vaccines, both autogenous and stock, have been used for many years with indifferent results in the treatment of arthritis.

A strain of Streptococcus viridans that has been under cultivation, for nine years or more, is of low virulence and safe for intravenous injection, is now available and is in growing use in the treatment of chronic arthritis. This new biological is a product of the Lilly Laboratories. The basis upon which its use is advocated rests upon the work of Drs. Clawson and Wetherby, of Minneapolis, Minnesota, and the results they obtain in administering a streptococcus vaccine, intravenously, in over five hundred patients.

Streptococcus Vaccine (Intravenous), Lilly, is not the ordinary streptococcus vaccine. It is a monovalent vaccine prepared from a strain of Streptococcus viridaus isolated from a case of acute rheumatic fever. It is available in 20 cc. rubber-stoppered vials. A booklet will be sent upon request addressed to Eli Lilly and Company, Indianapolis, Indiana.—Adv.

VITAMIN "D"

Winter is a jailer who shuts us all in from the fullest vitamin D value of sunlight. The baby becomes virtually a prisoner, in several senses: First of all, meterologic observations prove that winter sunshine in most sections of the country averages 10 to 50 per cent less than summer sunshine. Secondly, the quality of the available sunshine is inferior due to the greater distance of the sun from the earth altering the angle of the sun's rays. Again. the hour of the day has an important bearing: At 8:30 A. M. there is an average loss of over 31%, and at 3:30 P. M., over 21%.

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"Vichy Célestins" water bottled at the Spring at Vichy, France, owned by the French Government. There are other Springs at Vichy also owned by the French Government such as Grande Grille and Hopital which are imported by these Agents but these are not sent here in as large quantities as the "Vichy Célestins." This Agency also importe the tins." This Agency also imports the Vichy Salts and Vichy Pastilles which are called Products of Vichy-Etat because they are made from the Salts extracted from the waters of these government-owned Springs. Medical Profession of the United States annually sends many patients for the treatment of diseases of the stomaclı, liver, etc.-Adv.

PNEUMONIA

The most recent statistics dealing with pneumonia indicates its successful control in a large number of cases. In 707 cases of pneumonia in which Type I Antipneumococcic Serum was used, the death rate was 18.5% as compared with the untreated cases, in which the death rate was 30% in 553 cases. When serum was used within 72 hours after the onset, the death rate was 10.7% in 177 cases.

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nities in New York State, and the expansive areas

of Nevada or Dakota;

(5) That no substantial evidence can be produced that, even under an idealistic system of medical service, irrespective of cost, medical service can be provided for all the people, at all times, under all conditions. To accept the thesis that medical service can be so provided is to deny the lessons of experience, and to cancel entirely the human factor—that a great many people in close proximity to adequate medical service never avail themselves of the opportunity.

HOSPITALS

In surveying the medical scene we find the following conditions: the tremendous over-development and over-extension of hospital facilities; the erection of hospital structures and hospital administration that are beyond the capacity of the community to pay for; and in the absence of large donations from extraordinarily rich individuals or foundations, there is little prospect that most of the hospitals can sustain the load that they have undertaken. We find in thirty years a constant diminution in the ward bed service of our hospitals, and a tremendous augmentation in the environmental conditions of comfort and luxury in semi-private and private accommodations.

In 1906, 28 per cent of the hospital beds were classified as ward; 10 per cent of the hospital beds

were classified as semi-private.

In 1928, 7 per cent of the hospital beds were classified as ward; 23 per cent of the hospital beds

were classified as semi-private.

This is a loss of one per cent a year in ward beds. The inference that must be drawn is that the increase in the number of semi-private bedrooms has brought about an increase in the unit cost of medical service.

The number of clinies in the United States in 1930 was over six thousand, in contrast with only about one hundred and fifty in 1900. We find that the clinics in New York City are increasing their attendance at the rate of 200,000 per year; and that at the present time about one-third of the population are attending clinics and dispensaries. An extrapolation of this curve of clinic attendance will demonstrate that the medical needs of the citizens of our large cities will be supplied entirely by clinics and dispensaries.

We find in 1932 that out of 100,000 in-patients in the City Hospitals of New York less than 1,000 contributed anything for their hospital maintenance or medical services. We find the clinics clarging from ten cents to a dollar for admission; and from then on there is levelled against that individual varying charges for all the laboratory tests that may be necessary. These charges vary up to as much as five dollars for a basal metabolism on a so-called indigent patient, so that our clinics in spirit, and in many cases in fact,

are practicing medicine. We are convinced that from 80 to 85 per cent of the illnesses of which mankind complains are simple conditions that can be easily diagnosticated and treated. We are likewise of the opinion that extensive laboratory work should be devoted only to the 15 or 20 per cent of abstruse conditions.

A PLAN FOR MEDICAL SERVICE TO THE POOR IN NEW YORK

We find yearly a tremendous number of individuals exceptionally trained and unusually well educated seeking admission to the medical profession, a field of professional activity that has apparently readied the saturation point as it is showing an annual accretion in numbers of 1,600 more graduates than deaths in the profession, with the number of doctors throughout the United States distributed in rather remarkable proportions, one physician to 1,431 of the population in South Carolina, one to 571 in California, and one to 621 in New York State.3 It would seem therefore that in a State as well organized as that of New York the worthy poor should obtain all medical services absolutely free of charge; and that in order that these services may be rendered to those that deserve it and to prevent exploitation and a fraud against the taxpayers, such worthy poor should be registered and have a certificate of indigency, and should be directed to a hospital that could serve their needs in the geographical area of the community in which they reside.

For this service to the poor the hospital should be remunerated from the general tax funds; and the doctors providing the professional services within the institution or clinic should be paid a fair and reasonable compensation. To all other patients not coming within the classification of indigency a service charge should be made in keeping with their economic resources.

The funds derived from the tax rate for the maintenance of this service to the poor should not be allocated by the hospital authorities to the general expenses of the hospital, but should be used for maintaining the equipment and the physical condition of the clinic, as well as for the compensation of physicians for their professional services. These two features would imply an unequivocal enforcement of the dispensary law. The benefits that would accrue from such a policy would be to bring free clinic and hospital services within well defined limits. There should be no profit-making element in hospital administration; hence hospital authorities could plan their budgets to serve the community in the best possible way with the least expense consistent with good service. This would lessen hospital deficits by definitely limiting the conditions of free service, and would tend to introduce effectiveness and economy in hospital and dispensary administration.

character of the individuals entering that profession, with a tremendous depreciation in the quality of the service rendered.

We have in this State no lack of medical resources. We have to some extent a defective distribution of medical services; and the greatest problem before the medical profession is to make these services available to the entire population. This will not come about through shackling of society by a colossal incubus of a medical bureaucracy capitalized by the State. We must ask ourselves the question, can society afford all of the panaceas that are recommended to us by professional reformers, non-medical idealists, social service workers, medical technicians, and social theorists in general?

The cost of social service, exclusive of education, represents one-fifth or more of the total expense of our cities, and in the State of Massachusetts the cost is nearly two-thirds of all of the State outlay.⁶

Cost of Federal Government per capita Cost of State Government per capita Cost of City Government per capita	3.97	1929 \$32,26 16.38 58.64
•	\$30.24	\$107.28

The per capita cost of all government has increased as follows:

1890		\$ 13.56
1903		19.38
1913		30.24
1923		88.94
1929		107.28
1932	(it will be approx	imately) 124.00

The present is the time in which everything that is suggested for the betterment of the community should be weighed. It is certainly not the time to enter upon any fanciful excursions into a theoretic state of social benefits. The members of the medical profession stand ready at all times and under all conditions to contribute in full measure their services for the benefit of the community. They have a right to expect that the community shall not exploit them under any State-endowed scheme of "social insurance" the cost of which must be superimposed upon a tax rate that has already reached staggering proportions. The medical profession should be on guard lest, as Benjamin Franklin said, "they pay too much for somebody else's whistle."

It is claimed by competent statisticians that in 1928 physicians treated one-eighth of the population of the United States free of charge. At all times there are two per cent of the population incapacitated, and about four per cent physically impaired. In other words, there are approximately three to four million individuals in the United States ill every day. It follows logically therefore that from 375,000 to 500,000 persons are treated daily without charge—which repre-

sents a money contribution to the community for free medical service week days and Sundays, holidays and work days, of \$750,000 to \$1,000,000, or \$365,000,000 a year. It would require \$7,300,000,000 invested at five per cent to produce this large sum contributed annually by the medical profession.¹

On the authority of Dr. S. S. Goldwater, who certainly may be credited with due caution, it is asserted that this item of professional services rendered by the staff to a hospital exceeds the total of all other contributions received for the year by the hospital. It is pertinent to inquire as to why hospitals charging for dispensary visits and for the services rendered, have so significantly failed in balancing their budgets.

If all the medical and quasi-medical foundations were consolidated into one organization, their entire contribution to society in dollars during the last twenty years is not equal to the annual donation of the physicians of the country. The medical profession may justly claim that, under the present medico-social system, they stand without a rival in the entire field of medical charity

and health philanthropy.

Our studies indicate that there is a very definite increase in the percentage of our population who avail themselves of the dispensary facilities of our so-called free hospitals. It is conservatively estimated that fully fifty per cent of these individuals are not in the indigent or pauper class. but that they pay substantial rents and are in the main self-supporting citizens; yet by availing themselves of the facilities of charitable hospital and dispensary services they are in fact and in principle committing a fraud upon the remaining taxpayers who do not avail themselves of these loopholes of medical charity. It has been repeatedly demonstrated that many patients occupying hospital beds are quite able to pay for their support and maintenance in the hospital, and that by occupying hospital beds they are depriving many of the indigent and worthy poor of hospital facili-The taxpayers' money is being expended for the care of people who are not, in fact, indigent.'8

INDIVIDUALITY IN MEDICAL SERVICE

We believe in the following principles:

(1) That sicknes is the problem of the individual;

(2) That the most desired objective is a continuous improvement of the quality of medical

(3) That future efforts in preventive medicine is an individual problem and one not capable of being solved by the mass efforts of health departments;

(4) That no plan of medical service can be devised that is applicable to the diverse conditions of, let us say, New York City, the rural commu-

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THE CONTROL OF MEDICAL ACTIVITIES BY THE MEDICAL PROFESSION By FREDERICK H. FLAHERTY, M.D., SYRACUSE, N. Y.

The inaugural address of the President of the Medical Society of the State of New York, delivered on April 4, 1933, before the House of Delegates, in the Hotel Waldorf-Astoria, New York City.

NE hundred twenty-seven years ago, April 4th, 1806, the New York State Legislature passed an act incorporating the Medical Society of the State of New York. In the original by-laws, written in 1807, it reads "and be it further ordained by the authority aforesaid that the President of the said Society shall at the Annual Meeting and at the end of each year after his election to office deliver to the Society a dissertation on some appropriate subject and in case of default he shall forfeit and pay to the Society a fine of twenty-five dol-This usual address, so far as I can learn, has existed ever since that early date.

Members of the House of Delegates, by virtue of the power invested in your body by the Medical Society of the State of New York, you have seen fit to honor me as your President for the ensuing year. I take this opportunity to thank you for this great honor.

When I review briefly the history of this Society, it fills me with pride to know that I do belong to such an organization, that I am allowed to take part in its deliberations, that the opportunity is given to me and to every member of this Society to earry on, to uphold and protect the principles, the high and lofty ideals upon which this Society was founded. Principles and ideals which were established by it at the very first meeting in 1807.

It is quite apparent, from the early history, at the time the Dutch occupied Manhattan Island prior to 1664, the praetice of medicine and surgery had very little regulation and most of it was of low order. In 1664, when the English took over control of the Island, the Duke of York caused to be enacted more definite regulation for the practice of medicine. During the following eentury there are recorded various laws enacted for the control of contagious and infected conditions, also laws pertaining to military and eivil duties of the physician. In 1760 an act to regulate the practice of "Physick and Surgery" was passed. This was the first effectual measure to regulate the practice of medicine in the City of

New York. This law read: "No person whatsoever shall practice as a physician or surgeon in the said City of New York before he shall first have been examined in Physick or Surgery, and approved of, and admitted by one of His Majesty's Council, the Judges of the Supreme Court, the King's Attorney General and the Mayor of the City of New York for the time being or by any three or more of them taking to their assistance for such examination, such proper persons or person as they in their discretion shall think fit." If the person, so examined, was approved, a certificate was given him allowing him to praetice Physick and Surgery, or both, throughout the province.

It is recorded in the history of the Medical Society of the State of New York that the members of the medical profession in Saratoga County during the end of the eighteenth and early part of the nineteenth century attempted to secure the legal regulations of the practice of medicine by the establishment of a corporate State Medical Society composed of representatives of the different County Medical Societies which should have power of granting or refusing licenses to practice medicine. An act to incorporate Medical Societies for the purpose of regulating practice of Physick and Surgery in the State of New York was passed, as previously stated, April 4th, 1806.

The first meeting of the Medical Society of the State of New York was in February, 1807, at Albany, N. Y. The preamble starts in the following manner: "Whereas well regulated Medical Societies have been found to contribute to the diffusion of true science and particularly the knowledge of the healing art, therefore be it enacted." This law gave to each County Society the right to issue a diploma, after an examination, for the physician who desired to practice in a county. The State Society was given the right to grant a diploma and to review the aet of the County Society in case a diploma had been refused. History of the Medical Society of the State of New York states that "the practice of Physick in the State of New York was regulated by no public authority and of course was not in the happiest condition to promote the usefulness of the respectability of the profession." A representative from each of the Counties of Saratoga, Montgomery and Washington was appointed. A memorial to the Legislature was adopted. They, with the influence of other medical gentlemen, succeeded in establishing the State and County Medical Society.

This act may be regarded among the first efforts in this country to reduce medicine to a regular science by investing the privileges of medical men in the body of the members of the profession.

In a circular communication sent to County Societies, dated 1810, I found this quotation, "especially attention is called to the necessity for careful medical education not only for the students but also of physicians and for the purpose it is suggested that lecturers on medicine be chosen by the County Medical Societies to keep the members in touch with medical progress." This apparently is the first mention of our present Committee on Medical Education and Public Health which in the past few years has been so efficient and has accomplished so much under the present Chairman, Dr. Thomas P. Farmer.

The Medical Society of the State of New York in 1823 adopted a system of medical ethics "which breathed a lofty spirit of professional honor in the relation of the physician to his brother physician, the physician to the patient and to the State. There was scarcely a circumstance in the physician's relations to others which was not touched upon." It was of such a character that years later, when the American Medical Association drew up their original code of ethics, they adopted largely the principles enunciated in the code of the Medical Society of the State of New York.

In the brief foregoing quotations from the history of our Society, I have endeavored to give you a picture of the ideals, the principles and purposes upon which our Society was organized. These ideals, principles and purposes have transcended and endured since the very first meeting of this Society one hundred twenty-six years ago. Our Society today is composed of over thirteen thousand members. It is a federation of sixty County Societies, each represented by its pro rata share of delegates. We, the House of Delegates, are entrusted with the destiny of the State Society, the destiny of every graduate practicing in this State but far beyond that the future of the profession of this great State largely depends upon the ideals and principles which we maintain

Since the foundation of this Society I very seriously doubt that there has existed so many radical ideas, so much effort to change the very principles and ideals for which we have fought

as exist today. We must not forget for what our Society was organized. The primary idea was betterment of medical education. It established its ethics to create and maintain a better relationship of one physician with the other, a better understanding with the public. It has always endeavored to prevent and discourage quackery. It has stood for laws for the public welfare and public health. In its very incorporation it endeavored to place the control of the medical profession in the hands of the physician. The best medical authorities have always felt that the control of the practice and teaching of medicine must be controlled by the medical profession. There is no reason or logic existing why this principle shall not be maintained.

The activities of our Society are fairly well known to this House of Delegates but I am fearful that the great mass of the thirteen thousand members of our Society do not realize what the Society is doing for them. They are not aware of many activities of our Standing Committees.

There are no less than sixty-five members on the Standing and Special Committees including the Trustees and Executive Committees. These gentlemen give each year in the aggregate an enormous amount of time for the affairs of this Society and in so doing sacrifice their own personal time and work. Our Standing Committees are the backbone of the work of this Society. Our committee activities have greatly increased in recent years. Organized medicine is constantly being undermined. In times such as we are now experiencing it is the duty of every member of our Society to give his utmost support to organized medicine. Members of the House of Delegates, it is time that we sell our Society to ourselves.

It has always been necessary, since the first meeting in 1807, to be in touch with our State Legislature to see that the principles established in those early days were not destroyed. Many constructive changes have been made. It is far more urgent today than ever before that we support our Committee on Legislation. No committee can accomplish its purpose without the support of every member of this House of Delegates together with the loyal support of every one of the thirteen thousand members of our Society. What an influence on proper medical legislation against cults, antivivisection and other numerous inroads constantly being attempted, which destroy the very essentials of our efforts, could be made if each County Society would bring the potential influence of every member of its Society on the local representatives in the Legislature. Our Legislative Committee is a most important committee and must be supported. I take this opportunity of calling the attention of the House of Delegates to the necessity of increasing the influence of county units in legislative activities.

Our Economic Committee is a very vital institution in our Society. This Committee under the able leadership of its present Chairman has accomplished a tremendous amount of work and it deserves the praise of this Society. The bylaws of our Society state: "The function of this Committee shall be to conduct investigations, to gather facts, to make studies or surveys on the general subject of the relationship of the physician individually and collectively with the public. It shall review matters of general public information and study them both in regard to their effect upon the practice of medicine in private or institutional work. It shall concern itself with the financial aspects of the practice of medicine, throughout the State of New York, especially insofar as it affects the efficiency of medical service to the public. It shall concern itself with all economic phases regarding the practice of medicine in hospitals, private or public clinics, commercial organizations and other institutions established for diagnosis and treatment."

It is quite apparent the Committee is instructed to investigate, study and pursue fact-finding efforts in all the economic problems involving our present day practice of medicine. It is gratify-

ing to note that they, during the past year, "have concentrated on a few important pressing problems rather than attempt to carry forward to final action a multitude of considerations."

We are all familiar with the many attempts being made by laymen, by institutions, by insurance groups, by physicians not affiliated with organized medical societies, by health organizations and foundations, to change the present status of the care of the sick. Efforts, which tend to place medical activities and the practice of medicine in the hands of lay organizations, are dangerous and far more dangerous in the hands of commercial organizations. We must recognize the tremendous force of this movement.

We, the House of Delegates, will consider some of these problems during the ensuing session. Let us be calm in our deliberations. Our policies and our recommendations will be read and studied by many outside of our organization. What we do today will have important influence on the medicine of the future. If we are to have mass practice, let us so shackle it to such an extent that the individual will be protected and all medical activities will remain under the control of organized medicine.

COSTS OF MEDICAL CARE

THE REPORT OF THE SPECIAL COMMITTEE APPOINTED BY THE MEDICAL SOCIETY OF THE STATE OF NEW YORK TO CONSIDER THE FINAL REPORT OF THE NATIONAL COMMITTEE ON THE COSTS OF MEDICAL CARE WHICH WAS ISSUED ON NOVEMBER 29, 1933.

This report was read to the House of Delegates on April 3, 1933, by Dr. Arthur W. Booth, chairman, and was adopted unanimously.

70UR Committee, after giving the matters before us careful consideration, is prompted to reiterate the truism that both the problem of quality of medical care and the problem of distribution of medical service are questions for the consideration of organized medicine. Your Committee believes that the Medical Society of the State of New York is the competent body to suggest measures and remedies for medical services in this State, and that the professional aspects of these problems can in the long run be administered adequately, and the remedies suggested can be made only by a personnel that by training and experience is competent to do the To place regulation and distribution of medical service in the hands of non-professional bodies usually results in an overwhelming increase in bureaucracy and a resultant augmented tax rate. Your Committee can find nothing in history or experience that obligates a community to give a perfectability of service simply because a part of the community demands it, when the costs would be beyond the ability of the community to bear.

Holding these views, we first present our general comments on the reports before us, and then offer substitute recommendations for your careful consideration.

GENERAL CONSIDERATIONS

When it is considered that the Committee on the Costs of Medical Care has been five years on its survey, and has expended a sum of money considerably over \$800,000, its final report is an extremely disappointing and empty document. The data assembled under its supervision are both interesting and informative, but they hardly required so much time or so much money for their compilation.

In the interpretation and correlation of the data in these miscellaneous reports there is much that we question. It is significant that a Committee with a total membership of 48 should have had to submit five separate reports. The controversy provoked in the Committee itself by the recommendations in the majority report do not lend an air of authority to them or hold out unqualified hopes of success for the projects advocated.

It appears too that the leaders of the Committee set out with a distinct bias for some of the proposals urged so enthusiastically in the majority report. Thus, group practice appears to have been from the start a pet idea of the directing forces in the Committee. This finds support in the fact that the Committee uses as its examples a few outstandingly successful organizations for group practice, but ignores the many instances in which such groups were not successful.

Another point on which there appears to have been a definite bias is the apparent desire of the Committee to place control of the practice of medicine in the hands of social agencies. majority report creates the impression that the medical profession is unprogressive and stands in the way of effective reforms in the distribution of professional services. All of its projects involve the establishment of elaborate superstructures about the physicians, who, after all, are the principal agents in any medical project. Even in the recommendations for group practice the majority report makes only casual mention of the county medical society clinics, and merely suggests them as possibilities for rural areas or small towns, although a number of medical societies throughout the country have undertaken work along these lines.

The Committee's drastic recommendations for group practice and for health insurance—whether voluntary or compulsory—are based upon opinion rather than fact. Over and against the evils which they admit have heretofore inhered in medical practice by organizations under insurance systems and by governmental health services, they state the mere opinion, unsubstantiated by any concrete facts, that these evils will cease to exist if the methods referred to are put into general effect here. The majority report opposes compulsory health insurance because of its unsatisfactory results in Europe and its inapplicability to American conditions, and then goes on to urge voluntary health insurance, which it repeatedly states to be the forerunner of compulsory health insurance.

The Committee emphasizes the indispensability of the personal relationship between doctor and patient, and then proceeds to urge systems of practice which must inevitably destroy that personal relationship.

The entire trend of the majority report appears to be theoretical and visionary, rather than practical and concrete. Without specifying exactly what it considers adequate medical care to be, it implies an exaggerated and extravagant standard of medical care. Its attitude toward preventive medicine, for example, is highly theoretical and implies that it is possible to prevent a greater percentage of illness than actually can be prevented with our present knowledge. Under the present method of medical practice, which the Gommittee considers ineffective and inefficient,

every preventive method of specific value has been put into effect with striking results (e.g., prevention of smallpox, typhoid, hookworm, diphtheria, etc.).

No amount of organization is going to prevent disease unless we actually have substantial prophylactic measures to employ. Failure to employ preventive service is not due primarily to the individualistic state of medical practice, but to the fact that prophylaxis is still a relatively new idea, and that many people are unaccustomed to go to a physician for anything but the relief of pain or actual illness. Furthermore, as the Committee itself said, "the actual effect of preventive medical services in reducing illness and disability is difficult to measure because of the multiplicity of factors involved." There is a constant increase in the use of prophylactic measures, and physicians undoubtedly receive more training in the use of such measures, yet for a long time to come curative medicine will be by far the major part of medical practice outside of mass public health measures.

Many general hygienic measures for prevention are as dependent upon economic improvement as upon the application of prophylactic measures by physicians, and the report ignores an essential factor when it dissociates the problems of health, particularly in reference to the prevention of disease, from general economic conditions.

The Committee acknowledges the inadequacy of present medical income, and acknowledges that the provision for adequate compensation to physicians is a major essential of a satisfactory medical service. It also states as an essential that no plan is economically sound which does not safeguard quality. Nevertheless, the insurance plan which it sponsors makes it impossible to safeguard quality or to assure an adequate compensation for the physician unless the costs of such insurance are made so high as to defeat the primary purpose of reducing the costs of medical care.

The so-called "costs of medical care" is but one small aspect of a large sociologic problem. Sickness insurance in the last analysis means both direct and indirect taxation. There is no immediate prospect that our national income will materially increase. It is more than likely that for some time to come there will be a continuation in the fall of the national income—a tendency which has been noticeable for some time. Thus, the national income

in 1929 was....\$82,500,000,000, in 1930 was.... 71,000,000,000, in 1931 was.... 54,000,000,000, and in 1932 was.... 37,000,000,000 (estimated).

The tax rate per capita has shown a distinct tendency to increase. Thus, from \$19.39 in 1903 it rose to \$124 in 1932, and it cannot sustain an added burden.

The money required to finance an adequate system of insurance would safeguard quality and assure the doctor suitable compensation would have to come from the State, and the costs of such a system would be so tremendous as to impose a terrific burden of taxation upon the nation. Since taxation must ultimately be borne by all the people, including the poor, this would be a transference and not a lessening of the costs of medical care.

Organization as such is not a thing to be worshipped. To call a place a medical center does not imply that it is a center of perfection. It is the character of the medical service that needs to be stressed, not the organization, nor its cost.

The conception that organized service through medical centers will insure a better grade of medical care is basically fallacious, since the quality of medical care depends ultimately on the quality of the practitioner. A good practitioner working alone holds out more promise of good medical care than a mediocre practitioner working in an elaborate center. The benefits which the Committee hopes to achieve through the creation of large centers are purely theoretical, while the losses that will accrue to the community through the destruction of the personal relationship between family and doctor are very real and very important.

It has already been observed by those interested in medical education that too much stress is placed upon laboratory procedures and not enough attention paid to clinical signs.

The concentration of medical practice in large centers would accentuate the tendency to diagnose by summarizing laboratory reports rather than by fine observation and sound clinical judgment. Furthermore, we are of the opinion that about 85 per cent of the diseases or affections with which people suffer are complaints that present no difficulties in diagnosis, but yield readily to treatment by the individual doctor in his private capacity. They are not susceptible nor amenable to mass treatment by health departments, centers or bureaus.

To place that portion of the public suffering from this 85 per cent group of cases upon the clinical resources of the country for elaborate "diagnostic workups" is to shoulder an expense that has no reasonable basis and its cost would be beyond the financial resources of the community.

On the other hand, the present system of medical practice, for all its disadvantages, is flexible. It encourages the physician to be independent, courageous and resourceful in his thinking. It is better adapted to periods of depression like the present than an elaborate, expensive organization. Actually, even the indigent here receive a better type of srvice than the poorer class in Europe under compulsory health insurance.

From the time of the French revolution in

1792 to the recent sickness insurance in 1930 it has been manifestly apparent whenever compulsory lealth insurance has been put into practice that (1) the mortality has not decreased; (2) the average days' illness has increased from seven to seventeen days; (3) there has developed a hinge amount of industrial neuroses; (4) malingering often reaches such extensive proportions as to call forth governmental reactions; and (5) there has been no corresponding increase in preventive medicine.

In addition, your Committee contends that a fall in the death rate from 18.6 per thousand per year in 1900 to 12 per thousand per year in 1930 is an adequate answer to the critics of the present system of medical care.

FUNDAMENTAL PRINCIPLES

Your Committee believes that in considering the questions before it certain fundamentals must be comprehended. We believe first that sickness is primarily the problem of the individual; second, that the most desirable goal to attain in earing for the sick is a continuation and an improvement in the quality of medical care; third, that preventive medicine is also an individual problem, and not capable of solution by mass efforts of health departments; and fourth, in most cases the medical problem is a local one, differing with locality.

Thus the medical service in large cities differs from the problems presented in rural communities, and no plan of medical service can be devised applicable alike to a city like New York or rural communities in a densely populated State like New York, and communities in sparsely populated areas like those of Nevada or the Dakotas.

Your Committee contends that no substantial evidence can be produced under which an idealistic system of medical service, irrespective of cost, could be devised, where medical service could be provided for all the people at all times and under all circumstances of equal type and quality. To believe otherwise would be to deny the lessons of experience learned in history and cancel entirely the human factors which come into play, for it has often been shown that a great many people in close proximity to adequate medical service never avail themselves of the opportunity it affords them.

RECOMMENDATIONS

Based upon the fundamentals outlined above, your Committee recommends to the Medical Society of the State of New York the following specific propositions:

Proposition Number 1

Under plans suited to the needs of the given community, and with an organization adopted and

approved by the organized medical group of that community—

The worthy poor of the community shall be treated free, and no charge shall be levied against them for any medical service whatsoever. They are properly the charge of the community, and the costs of medical treatment for them should be paid for from taxation. The physician who treats them should be paid, a minimum fee fixed by the community. To have the physician, who in most instances is also a taxpayer, carry the financial burden of their care in addition to paying his share of taxes is a social injustice because it imposes a double tax on the physician.

Indigents would be entitled to treatment in the organized hospitals of the community, or, under authorization of health departments or social service organizations, they would be entitled to treatment by physicians at their private offices or at the patient's home at special fee rates fixed for such cases. When such service is extended to this class group by voluntary hospitals, these should be paid from public funds. Indigents who are ambulatory cases and are served by the clinics and outpatient departments of voluntary hospitals also should be made a charge against public funds. The physicians who serve in the clinics and outpatient departments of the voluntary hospitals giving this service should be paid by the hospitals.

Voluntary hospitals should not render this type of service so as to make a profit from it, and since there would be no profit your Committee believes that the details of the hospital service should be so arranged and managed that there would be no incentive to increase this type of service beyond the reasonable physical capacity of the hospital to render such service. To better accomplish this purpose, your Committee recommends

Proposition Number 2

namely, that free service in all hospitals should be limited to those residing in a definite zone, and that the erection of hospitals in the future shall be in accordance with predetermined plans of hospital zoning, so that the anomalous situation of over-hospitalization in some zones and under-hospitalization in other zones may be avoided.

Proposition Number 3

There is in every community a group of people below the "comfort level," on whom the costs of medical care impose a heavy burden. These are self-respecting people of the salaried class in most instances, whose living expenses are met from their weekly earnings. For them the greater part of medical costs comprise charges for hospital and nursing care.

To lessen the burden of hospital and nursing care for this wage-earning group, your Commit-

tee recommends the adoption generally of a plan of hospital insurance, whose principles may be stated as follows:

- (a) Members of employed groups may receive for the payment of a small annual sum hospital care in semi-private accommodations for a period of 21 days in any one year, such care to include bed and board, general nursing service, x-ray and laboratory examinations.
- (b) All reputable voluntary hospitals and some proprietary hospitals be entitled to participate in this plan.
- (c) Except in emergencies, all admissions of patients cared for under this plan must be made through the patient's personal physician.
- (d) Certificates of membership issued to subscribers shall state specifically that the service does not cover the fee of the patient's physician.
- (e) In each community under the supervision of its organized medical group there shall be developed the details of this plan so as to meet local conditions and make it workable.

Proposition Number 4

Your Committee recommends that the Medical Society of the State of New York strongly express itself against any further extension of the federal government in hospitalization and medical service to non-war-incurred disabilities of veterans. From President Hoover's message on the Budget of 1934, governmental hospital services for veterans, their families and their dependents for illnesses and complaints that have arisen outside of the actual war service disability, will amount to \$452,000,000.

Your Committee contends that this medical service should be handled by the civilian medical profession and by the civil hospitals, and your Committee holds that even for the veterans with service-incurred disabilities, the necessary medical service should be done at the veteran's home city or town, in the civil hospitals by local surgeons, who should be paid for their services by the Government, thus lessening the costs of medical care for the war-disabled veteran. For the non-war-disabled, the cases should run their normal course in the local community where they occur.

And lastly, your Committee feels that it might not be amiss to call attention to the criminal waste in public funds in erecting governmental hospitals designed especially to treat war veterans, often located with no definite relation to the population and the needs of these very veterans, while long-established civilian hospitals, competently manned by physicians and surgeons in every city and large town of the country are now operating at only 63 per cent of their full capacity. These veterans' hospitals are not needed. The civilian hospitals could care for the veterans more efficiently and at less ultimate cost to the people and at much more convenience to the veterans themselves. This is another waste in the medical field of the nation and adds generally to the costs of medical care.

Proposition Number 5

Hospitals supported by public funds treat injured workmen in their cliarity wards and retain the fees allowed by the law of the State in such cases, including the fees earned by the physicians in some instances. Wage-earning workers are not paupers, and the law provides the necessary compensation in their cases. Industry pays the cost of workmen's compensation insurance, which is distributed as indirect taxation upon the community, and there is no social justice in hospitals supported by public funds extending medical service to a group for whose treatment provision has been made possible by other channels of taxation through the law of the State.

The Medical Society of the State of New York believes that there should not be an excursion of public hospitals into the field of treatment of workmen's compensation cases for industrial diseases. The fees allowed by law for the payment of medical charges should be given to the playsicians who serve this group of patients, so that the physicians can better do their share toward serving those others in the wage-earning scale whose inability to meet medical service charges

require adjustment of their bills.

Your Committee recommends that the Medical Society of the State of New York take action and urge upon the proper State and municipal officials the discontinuance of treatment of workmen's compensation cases by all hospitals supported by taxation, except where in a given community there are no other hospital facilities, and except in such hospitals as treat workmen's compensation cases at full cost, charging same and providing for the payment to the physician treating such cases of the fees allowed him by law.

Proposition Number 6

Your Committee recommends that the present method of treatment of tuberculosis, insanity, mental defectives and epilepsy be continued as heretofore, and that the treatment of crippled children under the direction of the State Department of Health be continued, but that such treatment be carried out under a program which shall include the employment of the local physicians in the treatment of the cases.

Finally, your Committee urges that the Medical Society of the State of New York take measures to see to it that the State Department of Health does not become an agency for the treat-

ment of such crippled children.

Proposition Number 7

Your Committee believes that the costs of preventive medicine can be lessened, and that the

personal relationship between family physician and patient can be maintained by the adoption of the Gieb-Vaughn-Detroit Plan of Public Health Work. Under this Plan physicians are paid for the services they render, preventive medicine is enhanced, and as far as the Plan has been at work there has been a reduction in both mortality and morbidity. Graduate education of physicians in preventable diseases has found encouraging support. Moreover the costs of preventive medicine to the community are reduced. In other words, people receive more and better service and the taxpayer pays less than for any other plan now in operation. The Plan decentralizes rather than centralizes service. It provides for the abolition of, rather than the increase in, clinics and pay clinics. While the feasibility of this Plan has not been recorded in the report of the Committee on Medical Costs, nor has it been evaluated, your Committee recommends that the House of Delegates approve the principles underlying the Detroit Plan as a means of distributing the burden of medical care and making preventive medicine an active, live issue for all practicing physicians in the community.

In conclusion, your Committee endorses and quotes from the Commission on Medical Education, whose report was also before us for study,

the following:

"Allowing for the defects in present methods, there are fundamental advantages in the American form of practice which need to be strengthened. It is not necessary to substitute for the present efforts a paternalistic plan, ill-adapted to the philosophy of American life, but rather to encourage the evolution of a pattern which will embrace the desirable leatures of our present methods and the correction of their defects. Some efforts are being made to provide standardized service on a mass production basis, reflecting recent practices in industry. It is a fundamental fallacy to base any program upon the assumption that the human being who is the unit of practice can be, or is likely in the future to become, a uniform, standardized organism. Voluntary sickness insurance has always led to compulsory insurance. As programs of insurance become compulsory they are inevitably made a part of social legislation and are subjected. The fore, to the hazards, advantage of the subject of locality in the subject of loca

Respectfully submitted,

(Signed) ARTHUR W. BOOTH, M.D., Chairman GEORGE W. COTTIS, M.D. CHARLES H. GOODRICH, M.D. EDWARD E. HALEY, M.D. SAMUEL J. KOPETZKY, M.D. JAMES F. ROONEY, M.D.

FLOYD S. WINSLOW, M.D.

FINANCING SICKNESS

By FREDERIC E. ELLIOTT, M.D., BROOKLYN, N. Y.

From the Committee on Economics of the Medical Society of the State of New York. Read at the regular meeting of the Medical Society of the County of Kings, March 21, 1933.

THE profession of medicine in its very nature can never be solely a mercenary pursuit. Of all the emoluments that come to him who serves the sick and injured there is none so precious as the generous gratitude from the heart of the one who is served, or from an understanding kinfolk. It is this element of reward which distinguishes the work of a physician from all other occupations. It makes men and women meet the hardships, the personal sacrifices and the exacting demands of unending years of effort with unfaltering devotion to duty. When money is the sole motive, the practice of medicine is not a profession.

There are few, if any, who are able to maintain themselves in the practice of medicine independent of any remunerative reward from the rendered service to the sick and injured. "wherewithal" to provide equipment and supplies, office and transportation, and to meet the other incidental expenses, to say nothing of continued intellectual growth, must be obtained from professional occupation. And who can deny the justice of the costs of customary comforts, food, clothing and shelter, and a reasonable financial security for the physician and his family, out of his earned recompense? The obligation of the patient is a true debt: the fee-for-service is a just claim. Discord grows in the relations between physician and client when the debtor relationship is loosely or not explicitly understood

"What-should" and "how-can" the patient pay? What is a fair and equitable value of the rendered services? Much uninformed and confused thinking has been done on these questions. public mind has been misled by the magnified complaints of a few disgruntled, dissatisfied, unidentified persons publicized in the recent reports of an unofficial, self-constituted committee "on the costs of medical care." There is nothing in the reports to indicate that this committee concerned itself with the investment-costs incidental to medical education; nor did they apply themselves to an analysis of the essential costs of maintaining adequate medical service. problem of what return the doctor should justly receive on his investment and labor, "the doctor's bill," remains with us.

Financially, our people are of three ranges the indigent, who depend on charity; the wealthy, who have the means to get what they want; and the great "in-between" group, who are of various and variable solvency.

The doctrine that the indigent are properly the wards of the community has been established in our State in the Social Welfare Law. The poor, to the eternal glory of our profession, have never

been denied medical care because of their inability to pay for it. However, when the Welfare Law is perfected and made to apply equitably to the urban, as it now does to some of the suburban and rural localities, the burden of financing sickness in this class will be shifted from the individual members of the medical profession to the public tax funds, where it properly belongs. Sickcare presents no monetary problems to the wealthy.

There are millions of people, between the indigent and wealthy, who, when they require medical care, need guidance in "how to pay for it." Many among them are not currently in possession of liquid assets to meet immediately the expenses of such an experience. The problem of "ways and means" becomes acute and commonly is complicated with emotional disturbances of anxiety and fear. We of the medical profession have been derelict in the consideration of this phase of their troubles. The problems of financing sickness confront these millions.

A changing national psychology necessitates a change in the set of the professional mind toward the economics of sick-care. We engage in a discussion of matters which involve or hazard the patient's life without hesitation or embarrassment, at the same time, we are timid and fearful of undertaking to arrive at an understanding on a matter which merely involves the pocketbook. fear to profane the nobility or professional character of our work by speaking of money and helping to plan the money matters of sick-care. Certainly, we are unprepared to direct the patient or his family to trustworthy hands where they can find financial assistance to self help. conventional, unbusiness-like attitude toward the patient's obligation for sick-care is unintelligent and unsuited to a people who are replacing sentimentalism, "make believe" and hypocrisy with frankness, candor and realism.

Time-honored custom has made "credits," "collections" and "accounts receivable" the by-products of sick-care. Most of the criticism leveled at the medical profession, and all of the agitation about the "cost of medical care" are rooted on the debit side of the doctors' ledgers. It seems stupid to continue to incubate trouble for ourselves in these old "joke-books," in which we "wish-charge" with hope, and "discharge" with disappointments and despair. On the ill will cultivated by unpaid medical bills, the so-called "health economists" plant the seeds of socialized medicine. counts" do not germinate or generate unhappiness and misgivings. Some program must be devised which will eliminate all pending money obligations from the direct relationship between the physician and the people whom he serves. The millions of "white collar" people want quality service, and a thrift or budget payment plan. The husiness aspect of sick-care is destined to be modernized—in our hands, or by others.

Insurance will not provide that modernizing change. In theory, a measure of security, against the excessive financial stresses occasioned by sickness, seems attainable by the distribution of the costs over large numbers by one or another scheme of insurance. In practice, the fundamental economic fallacy of such insurance develops because of two inalienable features. First, of its own nature, there is added, to the necessary carecosts, a very considerable burden of "administration machinery" to solicit, collect, investigate, distribute, examine, adjust, police, and otherwise conduct such insurance. Second, human nature cannot be rectified by statute, and malingering, fraud and corruption desecrate all such humanitarian social experiments whenever and wherever tried. The collapse of the "Workmen's Compensation Law," threatened in various commonwealths today, is a clear demonstration of these truths.

Hospitals, so-called "guilds" or group practice have been proposed as the panacea for the troublesome financing of sick-care. The wasteful, ex-travagant building constructions and the high per diem operating expenses in our public institutions clearly indicate that our politicians are not to be trusted with the problem. To the quasi-private hospitals, who solicit gifts in the name of charity, to these we look in vain for exemplary economic administration-to reduce the costs of sick-care. By their own admissions, they are habitually in a state of financial distress. Fifty-five institutions in New York City report deficits of eight thousand to three-quarters of a million dollars for the year of 1932. Charity to the poor and indigent is honelessly confused with service to the solventcconomics muddled by sentiment—injudicious good mired in waste! The intellectual beacons to guide the way to sane financing of sickness do not shine in the administration offices of our hospitals. No system of sick-care, built around the presentday hospital administration, can prove thrifty or sound. The over-growth of medical dole and its heartless exploitation of the medical profession has come to a crisis. The "angels" who lifted the deficits have flown away. Revenue from which to meet the mounting deficits is the driving necessity of another transition from medical dole to medical practice-to the beginning of organized established competition for the sick-care of the selfsupporting classes—to the desertion of charity for the pursuit of profit-to the provision of medical care for the masses at a cheap price to cover the losses of mal-administration.

The so-called "guilds" and "groups" have made no significant demonstrations. The idea of "mass

production" methods of industry applied to medical service is immaterial, incompetent and not worthy of consideration.

The doctor personifies the key to the problem of financing sickness. He can open the way to a solution. His intelligence protects life through the complexities of disease-diagnosis and treatment. He must broaden his responsibilities and guide his people through the other problems incident to the time of sickness. The logical approach to the financial problem of sick-care is that of meeting it where it occurs-face to face with individual responsibility-keep it there and work out the best solution possible to each case. We of the profession must face frankly the fact that it is our task to render service, as, if, and when needed, to every one of that vast "inbetween" population, at a cost within the pricerange of each. The medical man must recast his ideas about "money matters" of sick-care; he must make readjustments to the present day social structure, and state of the popular mind. The challenge must be met, or we face the consequences of another "noble experiment"—the socialization of medicine with fanatic reformers and politicians at the controls. The day is here when the medical man must be economist as wel' as physician to his people.

An important item in the cost of medical care is the reward due the physician. The value of professional service cannot be measured by any of the ordinary standards. If calculated to give a reasonable return-on and recovery-of the investment cost of education and the expense-of maintenance, only the few could afford medical care. The reasonable worth of it must rest upon appreciation, the standard of living, and capacity to pay for medical service as for other needs. The natural impulse to feel grateful and the resources from which to make tangible remuneration are not possessed by all alike. The fee-forservice, diversified to the circumstances of the individual, is economically sound and has stood the test of time. It is the only system which automatically adjusts to the unevenness of income and resources, from one community to another, and from one time to another in the same community. It has successfully distributed the cost of medical care over large numbers without adding complex administrative machinery and the "poundage" of waste and countless "jobs" to the national sickcare burden. In a population of many millions with shifting fortunes and vagaries of pretense and "false fronts," it is to be expected that wrongs occur to both parties. Selected, isolated instances of such wrongs have been grossly magnified and publicized-to the naive purposes of certain persons. The defects of the fce-for-service system are insignificant, the benefits are indisputable. The preservation of self-respect is assured and a keener sense of individual responsibility encouraged by the exercise of personal initiative and self-reliance. The social agitators may well let the old traditional generosity continue to favor the people of moderate circumstances. Practically, the value of medical care is what the patient is willing and able to pay; no more and no less.

It has not been the custom of medical men to find a prompt, explicit understanding on the matter of fee and the time and method of payment. To our Fathers this seemed commercial. They handed down the unbusinesslike office habits of the day. It is in order and entirely ethical to attend the patient, win his appreciation and gratitude and then to dumbfound him with a 'bill for professional service." Our citizen neighbors are ready for a newer "business-ethics" in sick-care.

There is a proper and right time to establish the value of professional service. When one desires or needs something, he is at the peak of his appreciation. This is as true of medical care as of other things. The value fixed by the appreciation of today quickly fades with the passing of time and the coming of newer desires and needs. It is not ingratitude but a natural process of life that robs the old account for medical service of its "demand value." Conversion of an indefinite implied obligation into specific terms of settlement obviates misunderstanding. A written acceptance or acknowledgment of value, with a promise to pay, will make it possible and practical to take bookkeeping and bill collecting out of the practice of medicine. Determination of value left to the unwritten "implied contract," to pay an unspecified sum, opens the door to abuses by the unscrupulous. These abuses have occurred and have brought criticism upon the profession. It is more ethical and a better policy to give kindly, friendly counsel in a frank discussion of the material affairs of our work. The written "promise to pay" preserves the appreciation and good-will better than the fading memory and the nagging "statement of account." A mutually understood and agreed-upon "value" is the first step to a sound "credit" in medicine. Credit extended by the physician for rendered services can be made to have a true equivalence to money.

What is credit? Credit is the unknown quantity, "X," the variable, in many of the affairs and equations of everyday life. Economists acknowledge credit to be essential to the transactions of Industry and Trade. It is no less so to the provision of professional service. Credit is the complement of currency. Use of it results in immeasurable good, misuse leads to irreparable harm. Without it the world stagnates. Unfortunately, we of the learned walks of life rarely analyze or comprehend the constitution or functions of credit. We employ it with little skill and great

indiscretion.

Bookkeeping with the entry of a fee-charge is not credit. It is merely the memorandum of a

claim for service. Common Law says, "...in every sale where the price is not fixed there is an implied agreement that the buyer shall pay what the goods are reasonably worth." This principle would seem to establish the status of the professional fee. However, an agreement is in fact a contract, and a contract is not valid if it lacks any of the essential legal elements. Acceptance of a service does not carry with it the assent to the debt unless the "reasonable worth" of the service is understood and known. If, with assent to the debt, there is agreement that it shall be paid at some fixed, future time, that is credit. Credit in the financing of sickness should be made to conform to the rules of law and to standard methods of business and banking practice.

Payment is lawfully and properly due at the time when a professional service is rendered. All the discussion about the costs of medical care is nothing more than the indirect indictment of our old-fashioned, indefinite, haphazard, slipshod and methodless administration of the purely business side of medical care. When the patient is to be favored with a gratuitous service, he should know that fact at the time when his appreciation is greatest—at the time when the service is rendered. Many among the "in-between" millions are not able to pay at the moment but there is no honest person who cannot acknowledge the obligation and arrange a settlement which will give his credit a true monetary value. The financial obligation incident to sick-care must be faced with a little less sentiment, with a little more backbone, and with candid, rational frankness by the public and by the members of the profession. The troubles which habitually grow out of so-called credit for medical care are incurable. Prevention is the only sane treatment.

Bankers have provided service to virtually every field of credit except that of medicine. Adequate medical care—the fourth basic necessity of life-presents credit requirements of a volume second to no single Industry, still there is no established system to provide that service. Time does not permit the discussion of the reasons This undeveloped opportunity is now under survey. In fact, in a small way, a start has been made to set up such service. In Boston, Chicago, New York and elsewhere, firms have taken up the specialty of "small loans for sick care." A growing popularity with the public and the professions is indicated by the constantly increasing demands for service experienced by all of these firms. Their activities have been limited only by their available capital. And so arises a new problem.

What shall organized medicine do about it? What should be the attitude of the individual members of the professions? It might be well to recall what has happened in other directions. Medical education has gotten out of hand and

the pedagogists have undertaken to make book shelves out of grey cells. Brains which should be taught how to think and how and where to get the materials for thought, are made impractical with a supersaturation of unorganized and poorly related medical culture. Hospital development and administration, inherently a service to supplement the physician in the care of the siek, now brings the threat of organized, cheap impersonalized competition-the supplementing agent now proposes to substitute for the physician, introducing the era of medical practice by nurses and technicians-and they propose to sell their wares by straight commercial advertising. It is not irrelevant to point out that the control of eredits in Industry has exercised a large influence upon those engaged in Industry. Therefore, it would seem wise that medical men participate in the shaping of the growth of principles and methods of procedure while this new enterprise is in its formative stage of development-at least by some program of inspection, supervision or regulation, if not in fact by becoming an integral part of it through participation in ownership.

Volume 33

Number 8

The Committee on Economics of your State Society has concerned itself not so much with the mechanics of the details-notes, discounts, bookkeeping, etc., as it has with the fundamental prineiples which must govern the growth and funetions of medical credit financing. Provision of fair and open competition on rules that insure reliability, stability and security has seemed to promise the more wholesome growth of this enterprise, and we have preferred to consider these rather than to advise endorsement or express preferment of any one firm or system of small loan procedure. Experience in a working test must justify or condemn the particular points of method and practice. Each individual firm should stand or fall on the character of service which it renders. In every case, such service must conserve and promote the spirit of good will between the public and the professions who serve the public. The traditional humanitarianism of the medical profession cannot be put aside for the "glass eyed" banking of commerce. The costs of this service can be met out of the losses formerly suffered by physicians in the loose and less businesslike methods of the past, and with little or no increase of cost to the public, who are thus given an added service of financial help in the procurement of a necessity of life.

The Committee feels that banking psychology must make certain concessions toward the characteristics peculiar to our "credits," and it is frankly conceded that physicians must make many adjustments to fit a newer and better plan of making adequate medical care easily and readily available to all of the solvent people.

Some members of the Committee visualize a future development of the financing of siekness

which will take the form of an organized system of secretarial service. A service to which the nublic can go for guidance in the business matters of sick-care. Where they can obtain advice on the setting up of thrift accounts to anticipate the unpredictable accident or sickness-a need which is inevitable to 94 per cent of the "in-between" population, according to statistics. where the public may find guidance on the budgeting of health expenses and where they may establish eredit accountability. Where they may prearrange for the fixed, periodic payments of their medical bills out of earned, current income. The day may come when each physician, as he sees his patient, will receive immediate compensation, either by money or its equivalent in health-creditcurrency, scrip or a draft written on a credit account. On the latter, the patient will acknowledge the receipt and value of the medical care, and payments thereon will be made through the Financial Secretarial Service according to prearranged terms by fixed, periodic payments suited to the ability of the family income and resources. The physician, instead of keeping books, will deposit the "acknowledgments" with the finance eompany of his choice, much as he now deposits his ordinary bank checks.

Advantages of such a system will accrue to the public and the professions:

To the Public:

 Adequate medical care will be available to all who are solvent—either by resource or earning capacity. The unpredictable, inevitable need is prepared for.

2. Progressive development of the art and science of medicine, and continuity of the present standards of quality of service will be assured.

3. The burden of a bureaucratic sick-care insurance will not be imposed upon either Industry or the Taxpayer.

 Freedom of personal choice of professional medical care will be assured—with continued individual self-reliance, independence and self-respect.

5. Busy-body sociologists will be kept out of the poor man's bedroom. He and his family will not be made, like guinea pigs, the material for one or another "social or biologic experiment."

6. A low family income will not draw a class distinction in a race of free people: a politically controlled communism will not be set up: and the intimacies of the home and family life will not be made public property for those who live on statistics.

7. Those who do pay will not continue to pay more because those who ought to pay are not

made to do so.

To the Professions:

1. Success will remain the award to effort and ability arising out of fair and open competition

rather than a plum of preferment, political, panel or otherwise.

- 2. There will be escape from the vexations of the business side of medical care: bookkeeping and bill collecting will be taken out of the practice of medicine. The "doctor's bill" will fade out of the memory of man.
- 3. The rationalization of the professional fee to the income of each family, based upon full knowledge of income, resources, and justice.
- 4. When a debt has been incurred for medical care, it will be a debt to the "bank," not to the doctor. The old unpaid account will not stand between the physician and his patient—to drive the patient elsewhere if a new need arises.
- 5. The physician's income will be more liquid: his accounts receivable at the Finance-secretarial office will have a loan if not a cash value.
- 6. Plans for educational and recreational refreshment will be more feasible.
- 7. The "dead beat" will protest volubly—but will be made to pay.

To sum up:

The obligation to compensate professional medical care is being faced with greater frankness. Public attention is focused on the problems incident to the provision of adequate medical care and how to pay for it. Some of the proposed schemes are socialistic and some are patently communistic. Against these we propose a truly American, thoroughly democratic plan for a free, independent, solvent people, who, in the pursuit of life and happiness and the exercise of their natural rights, are privileged to select, without paternalistic guidance, the food, the clothing, the shelter and the medical care of the personal individual choice.

Meeting the expense of sick-care by small loans or by a program of periodic payments, through some responsible agency, is the rational solution of the problem of financing sickness.

Responsible representatives of ample resources

have indicated an interest in the possibility of such a program on a national, fully capitalized basis—with ownership participation by the professions, if that is desired—provided:

- 1. That organized medicine put the stamp of approval upon the general idea that the business of provision of medical care should be taken out of the practice of the profession of medicine.
- 2. And that organized medicine declare such service desirable.
- 3. And finally, that organized medicine indicate a willingness to assist, at least in an advisory capacity, to help plan and work out the details of operation and to safeguard the ethics and the traditions of the honored profession.

To us of the medical profession there is much promise that happier days are ahead. Congress and the President have concluded the Veterans' hospital and sick-care "racket." Commissioner Vaughan of Detroit has pointed the way to participation of the whole profession in public health work with the closing up of health department clinics. Steps have been taken to bring about the requirement of the certification of indigency as a condition to "free medical care." The Public Welfare Law makes the poor the wards of the community and the burden of the "medical dole" is in the way of being lifted from the shoulders of the profession. The idea of decentralization in industry is taking root in the minds of those who plan the care of the sick. There is the hope, at least, that the business of provision and the practice of profession may be made to complement, not confuse and confound each other. And finally, there is the beginning of consciousness that organized medicine shall proceed in an advolution to real unity of interest—to a form of organization which can discipline that free-lance individualism which we know to be animated only by selfish motives. We are coming to the day when the profession of medicine shall have the machinery to think collectively and to effectively act with its full potential power for the common welfare of mankind.

MAXILLARY SINUSITIS: PATHOLOGY*

By ANDREW A. EGGSTON, M.D., NEW YORK, N. Y.

In a recent publication a new classification of the pathological changes resulting from chronic infection of the accessory nasal sinuses was outlined. This classification serves as a basis for a revaluation of the processes involved in the production of permanent changes in the soft and bony structures of the nose and sinuses. The bases of these studies have been surgical tissues and post-mortem specimens from the

Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932. maxillary, frontal, ethmoidal and sphenoidal sinuses. In these cases the clinical histories, operative procedures, laboratory and x-ray findings have been correlated with the histological pictures presented by the tissues removed. This correlation is very essential to the understanding of the anatomical and pathological studies of any sinus disease.

The pathological anatomy resulting from chronic sinusitis has frequently been described and has received a varied terminology. In most

cases of chronic sinusitis, the clinical manifestation expresses altered physiology, which is the sequence to microscopically deranged histology the exact nature of which has not been elearly defined. The tissue changes observed have led to an explanation of the pathology involved. This should be of fundamental value in understanding the processes which may result ultimately in the clinical application of this knowledge to the treatment of sinusitis.

The tissues of the sinuses are supplied with blood by arteries and drained by veins and lymphatics, which are unique in structure and physiology. The blood supply is particularly excessive and peculiarly sensitive to the extrinsic and intrinsic changes to which these membranes are exposed. The circulation of fluids through these tissues varies momentarily, and a suitable adjustment to altered conditions is of prime importance. Vascular lesions in the tissues taken from the sinuses have been so universally observed that an attempt to explain the changes in the adjacent structures has been made with the circulatory system as a basis.

Repeated acute infections in the nasal sinuses is usually the basis of chronic tissue changes. The pathological histology of acute sinuisitis reveals practically the same vascular and cellular reaction of the soft tissue as occurs in other locations of the body. Briefly, these changes are dilated and congested blood vessels with cellular stasis, migration of leukocytes into the tissue, the appearance of lymphocytes, plasma cells and other cellular forms in the walls of the vessels and the immediate perivascular tissue, associated with diffusion of serum into the adjacent structures. These reactions occur primarily in the walls of the blood vessels and perivascular spaces, and secondarily The acute inflammatory in the soft tissues changes disappear as the irritation subsides, but it is an axiom in pathology that every inflammatory process, however small, leaves a disturbed tissue relationship, usually in the form of an increased fibrous tissue content. It is also known that the fibrosis leaves the tissue more sensitive to subsequent attacks. Repeated infections and inflammation ultimately produce fibrous changes of pathological importance. If the chief change in acute inflammation is vascular, it logically follows that the greatest chronic changes are also vascular. The distribution of these changes may be arterial, venous or lymphatic. The type of chronic pathological changes found in the soft and bony tissues depends upon which of the vascular channels is involved.

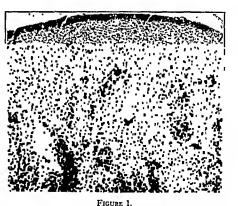
Types of Chronic Sinusitis

The acute processes of sinusitis are not easily demonstrated, as few surgical specimens are available for study. However, enough of the changes have come under our observation in acute

sinusitis to demonstrate the pathological processes responsible for the gross changes which are found in the terminal stages. These stages are the type with which this presentation is concerned and consists of the following three varieties:

- Hypertrophic or polypoid sinusitis is characterized by thickened and edematous changes in the mucous membrane and periosteum, and is usually associated with polypoid masses of the soft tissue and rarefaction and osteoporosis of the bone.
- 2. Atrophic, fibrotic sclerotic and arteriosclerotic sinusitis is characterized by an increase in the fibrous connective tissue in the stroma, thinning of the mucous membrane and metaplasia of the surface epithelium, associated with thickening of the periosteum and a condensing osteitis.

3. The third type of sinusitis results from a combination of the hypertrophic and fibrotic changes in the same patient or even in the same sinus cavity. This type is characterized by rugae and sulci, with the production of a papillated type of membrane.



Section of polypoid sinusitis showing desquamotion of the surfoce epithelium with loss of cilia; and edema with diffuse inflammolory recotions in the tunica-proprio. The perivasculor manteling of cells is illustrated in both the cross and longitudinal sections of the vessels.

Hypertrophic Sinusitis. — Hypertrophic sinusitis is the most common variety and is characterized by an increase in the volume of the mucous membrane and is commonly called polypoid sinusitis. In the earlier stages there is an increase in the thickness of the epithelial layers, with some cellular infiltration, chiefly lymphocytes, large amount of mucin secretion and desquamation of cells, with loss of cilia and ultimately metaplasia of the epithelium. The stroma shows edema with marked infiltration of mononuclear wandering cells, consisting chiefly of lymphocytes and plasma cells, and in some instances, eosinophiles. The

cellular reaction is most marked in the walls of the veins and lymph channels and the immediately adjacent stroma, presenting definite phlebitis and lymphangitis, with varying degrees of periphlebitis and perilymphangitis. (Figs. 1, 2 and 3.)

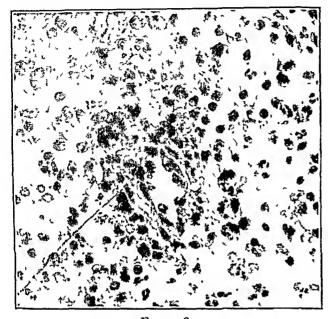


Figure 2.

A higher magnification of a lymph vessel showing perivascular infiltration.

In the later stages there is marked edema of the tunica-propria with separation of the fibrillar network. There is an increase in the quantity of fibrous tissue with a decrease in the amount of elastic tissue. This turgescence of tissue continues until there is a production of polypoid masses. The surface epithelium becomes thin, due to the pressure, and the mucous glands show cystic degeneration, due to obstruction of the excretory ducts from the pressure within the stroma. In some areas mononuclear cellular infiltration becomes so intense as to simulate lymph follicles. These have been designated by Fleming as secondary nodules. Fig. 4.)

The vascular changes consist of inflammatory infiltration of the veins and lymphatics followed by an increase in the fibrous tissue which replaces the smooth muscle and elastic tissue, consequently reducing the resiliency and contractility of these structures. These changes produce a partial or complete obstruction of the venous and lymphatic channels, resulting in interference with the drainage of the areas supplied. (Fig. 5.) This increased stagnation of the fluids results in further extravasation into the fibrous tissue spaces, increasing the tendency to polypoid hypertrophy. In some instances, actual thrombi can be demonstrated in the veins, producing the obstruction. (Fig. 6.) As the result of localized thrombi there will be dilata-

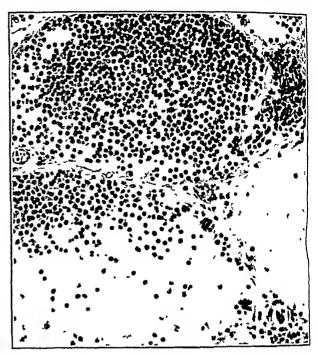


FIGURE 3.

Plate A. Section of polyps showing small and large dilated lymph channels containing marked accumulation of cosinophiles.

tion of the vessels proximal to the obstruction, which makes more difficult the true interpretation of the processes involved.

The blood vessels in nearly all instances show varying stages of inflammatory process, representing acute, subacute and chronic changes. This manner of producing polypoid changes in the nose is similar to the

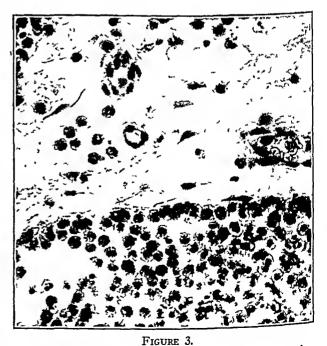


Plate B. Same as A, with higher magnification showing eosinophiles in the vessels.

processes involved in the production of polyps in the larynx, cervix, intestinal tract and rectum. Hemorrhoids are polypoid masses containing thrombotic and dilated veins with edema. As a result of venous and lymphatic obstruction, there will be changes in the soft tissues and involvement of the periosteum and bone. The perios-

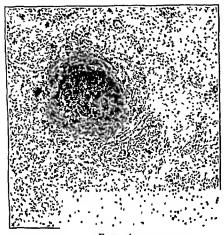


FIGURE 4.

Shows edemo of the stromo, morked mononucleor cellular reaction, with the formation of a secondary lymph follicle.

teum becomes thickened and edematous; its fibers are widely separated by fluid, and ultimately the bony structures show signs of absorption and osteoporosis. The bone may become necrotic and sequestrated, and in some instances, septa or plates disappear; in other places, bony cysts, spurs and deviations may result. The normal growth of bonc is due to the activity of osteoblasts (Fig. 7), which may have the faculty of absorbing and depositing bony salts from the circulating fluids. If the circulation is interfered with, bony absorption may replace formation Giant cells, so-called osteoclasts (Fig. 8) or wandering calls appear in great numbers. This type of lesion is usually easily diagnosed clinically, as there is a glistening, pale, polypoid, edematous thickening of the membrane, producing rather gross lesions which can be easily recognized. (Fig. 9.)

Fibrotic Sinusitis—The atrophic or fibrous type of sinusitis presents a picture which is an exact counterpart of the hypertrophic type. A decrease in the volume of tissue is characteristic, however, there may be a gross thickness of the membrane if the volume of scar tissue is great. In the earlier stages, there is very little atrophy,

but in the later stages marked reduction of the soft tissue and bony structures occurs.

The fibrotic type of sinusitis in its most ad-



FIGURE 5.
Diloted voins and lymphotes, resulting from complete obstruction in an orea of the vessels, with secondary dilotton proximal to the obstruction

vanced stage simulates the changes found in ozena, with a loss of secretion, crust formation and a putrid odor, but many cases do not progress to this stage of severity. Undoubtedly, the processes involved are of a similar nature. In the milder cases of fibrosis, there is no necrosis of tissue, little interference with glandular activity

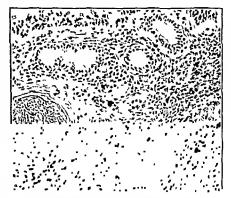


FIGURE 6.

Section of mucosa of the outrum, showing early metaplassa of the epithelium, corly thrombi in the vessels, with
inflammatory infiltration in the adjacent vessels.

and consequently no actual crust formation, and the putrefactive odor is usually absent in the early stages. Grossly, the membrane appears tenaceous and offers more resistance to instrumentation.



FIGURE 7.

Trabecule of bone showing large osteoclastic giant cell to the left, with osteoblastic cells surrounding the spicule of bone to the right.

Microscopically, there is considerable metaplasia of the surface epithelium with desquama-



FIGURE 8.

Necrosis of bone showing osteoclastic giant cells.

tion. In some areas the epithelium of the mucous membrane may be thickened, forming papillae, while in other areas it may be thin and become squamous. The basement membrane beneath the surface epithelium is thickened and hyaline and forms a very distinct hyaline band of tissue. (Fig. 10.) There is usually a marked condensation of the tunica propria characterized by dense bands of fibrous connective tissue. In the early stages this is fibroblastic, but later it shows marked hyaline degeneration. This is particularly noticeable in the basement membrane and around the glands. The secretory glands are usually small, atrophic and inactive. If the efferent ducts are obstructed, they become cystic. The cellular reactions of the stroma usually consist of fibroblasts, lymphocytes, plasma cells and other wandering monocytes. Lymphoid collections are rather common and frequently show a central arteriole. There is generally a greater simplicity in the variety of the cells than is found in the hypertrophic type.



Figure 9.

Early polypi showing edema, dilated and thrombotic vessels with perivascular infiltration.

The most striking changes occur in and around the afferent blood vessels in contrast with the changes occurring in the efferent or drainage vessels in the polypoid type. The vessels involved in fibrotic sinusitis are the arteries and arterioles (Figs. 11 to 14), which supply nourishment and not the veins and lymphatics which drain the areas, as in the case of the hypertrophic type. Usually, endarteritis, arteritis or periarteritis can be demonstrated. In the earlier stages there is considerable cellular reaction around the vessels and an increase in the fibrous tissue. In the later stages the vessel walls are distinctly thickened, the lumina of the vessels are decreased and in some instances arterio-

sclerotic changes with complete occlusion of the vessels occur. (Figs. 13 and 14.) There is degeneration of the elastic fibers and of the smooth muscles in the walls of the vessels, which interferes with the resiliency and elasticity of the vessels. The veins and lymphatics show decreased fluid content and in some instances are collapsed. There is irregularity of the bone, owing to the

Plate A. Shows marked thickening and hyalinization of the basement membrane, with metoplasia of the surface chithelium, fibrosis of Tunica-Propria.

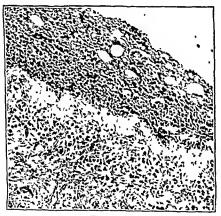


Plate B. Higher magnification of Plate A, with small cysts and abscesses in the surface chilhelium.

perichondric and periosteal inflammation, which results in alternating areas of cartilage and bone formation interspersed with areas of absorption

and in the more acute processes, necrosis of the bone. If the arteriolar vascular involvement is of a relatively subacute nature, so characteristic of syphilis, there will be marked necrosis of the soft tissue and bone. In atrophic sinusitis the process is of a more chronic nature, and necrosis occurs only in the advanced stages, on account of slight

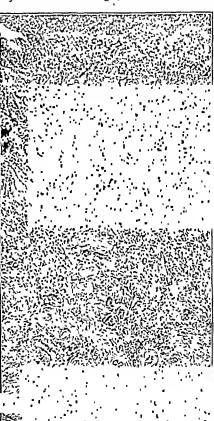


FIGURE 11.

Shows marked fibrasis of Tunica-Propria, atraphy of the glands and marked fibrasis and acclusion of the arterioles.

or no increase in the volume of the membrane and lack of objective signs. This type of sinusitis is frequently overlooked by the clinician and a favorable opinion usually follows even though there exists a low grade sinusitis which is probably of a more severe consequence than the hypertrophic type. This type is frequently the primary pathology of a cardio-renal-vascular disease and

the type usually found in retro-bulbar neuritis. (Fig. 15.)

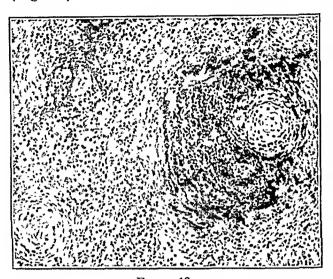


Figure 12.

Shows early stages of end- and peri-arteritis with manteling of the vessel. In the lower left hand border an occluded fibrotic arteriole is shown.

Combined Type of Sinusitis.—The third, or combined type of chronic sinusitis consists of an involvement of the afferent and the efferent vascular channels. The arterioles as well as the venules and lymphatics are involved in adjacent areas of the mucous membrane. The surface of the membrane reveals a rather nodular or trabeculated appearance produced by alternate areas of edema and hypertrophy, interspersed by fibrotic or atrophic zones. As the fibrous tissue contracts,



Figure 13.

Figures 13 and 14 show sections of antral mucosa with marked fibrosis of arteries and of the Tunica-Propria, and complete occlusion of the vessels.

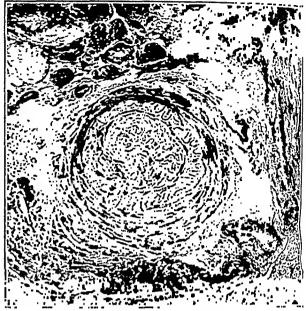


FIGURE 14.

the hypertrophic nodules become more apparent, forming rugae and sulci and resulting in a papillated topography. In the maxillary sinus, it is not uncommon to find rather large areas of hypertrophy and polyps, while other areas show



FIGURE 15.

Showing the terminal stages of fibrotic sinusitis with metaplasia of the epithelium, hyaline basement membrane, atrophy of the glands, fibrotic Tunica-Propria, sclerotic vessels, marked fibrous thickening of periosteum with irregular bony changes.

atrophy. This variety of pathological processes is particularly difficult to classify, because the tissue removed may be from a hypertrophic or atrophic area, and unless the source of tissue is

carefully correlated with the pathological processes involved these may be erroneously interpreted. The bony changes in this type are irregular. In some places there are osteoporosis and softening from absorption, while in others there are osteitis and exostosis. In many instances, in spite of the areas of atrophy, there is a general redundancy of fibrous tissue, and therefore the whole membrane appears thickened. The microscope reveals arthritis, phlebitis and lymphangitis, with perivascular involvement of the adjacent structures and the secondary changes in the tissue characteristic of both an atrophic and hypertrophic nature.

The elassification of chronic sinus diseases upon the vascular basis is supported therapeutically in the employment by rhinologists of drugs and measures which alter the blood supply to the mucous membrane of the nose and sinuses. The mucus membranes of these structures are more subject to vascular changes from intrinsic and extrinsic causes than any other similar surface in the body; also the physiological functions of these membranes have no analogy elsewhere. This is particularly true in relation to the amount of

blood which passes momentarily through this region, with frequent variations in the caliber of the blood vessels made necessary to adapt to every variation in the temperature, humidity and barometric pressure of the atmosphere. Therefore the slightest tissue alteration which affects the efficiency of the vascular structures to respond to these changes will certainly produce abnormal physiology in those tissues whose normal functions are primarily dependent upon the resiliency and contractility of the blood vessels and lymph channels.

Any dissertation on chronic infective diseases of the nasal accessory sinuses must necessarily be many-sided, because of the complexity and the distribution of the tissues under consideration; this vascular interpretation of sinusitis differs in certain respects from that presented in the literature. Our interpretation is given because to us it clarifies to some degree, the nature of the processes underlying the pathology and clinical course of the diseases; and is not given dogmatically or in any degree of finality, but in the spirit of discussion with the desire to stimulate further interest and investigation of the subject.

Discussion by Dr. David Robb: After a careful study of Doctor Eggston's paper, I feel that there is very little I can say in way of discussion. I feel that this paper is valuable because of the attention it calls to the importance of the rôle of blood and lymph vessels in the production of the polypi. These new growths are often lightly dismissed as the mere result of the effect of chronic inflammation, with no real thought as to the mechanism involved or as to what actually gives rise to them.

The paper also serves to differentiate the polypi of the sinuses from the true fibromata. The polypi apparently result from a passive type of con-

gestion rather than an active inflammatory hyperemia and thus can be classed as a mechanical type of tissue overgrowth rather than a neoplastic process. There has been a controversy as to whether or not these growths are genuine fibromata. Some pathologists still consider them as such, and this outline tends to make the line of demarcation between the two clear and definite.

The elassification offered by the author is simple and workable; and he is to be commended in that he clarified rather than confused the situation by refusing to introduce numerous new terms and complicated phrases in a classification based on pathological minutia.

MAXILLARY SINUSITIS—SYMPTOMOLOGY* By JOHN F. FAIRBAIRN, M.D., BUFFALO, N. Y.

I N a symposium of this kind, it is extremely difficult to avoid reaching beyond the limits of the subject assigned. However, I will attempt to enumerate the signs and symptoms of maxillary sinusitis, without undue reference to the pathology involved or the value of the symptoms in diagnosis, both of which will be presented as separate entities.

Pain is not a constant symptom. It occurs more frequently in the acute or acute exacerbation of

* Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

a chronic maxillary sinusitis. It varies in intensity through all the stages, from a mere uncomfortable sense of fullness or pressure in the upper jaw to the intense neuralgic type of pain resembling a tic douloureux. Because of its inconstant location, pain is not always a diagnostic symptom, as frequently the only pain complained of will be supra-orbital, no reference being made by the patient to the maxilla. In my experience, there is less tendency to periods of remission of pain in antral disease, that is, periodicity of pain is less marked than in inflamation of the other

sinuses. This symptom, pain, is usually relieved immediately either by spontaneous evacuation or

washing of the affected sinus.

Nasal blocking or stuffiness of the nose is an almost constant symptom, except in case of marked atrophic rhinitis. It is associated with more or less diffuse headache. As a rule there are periods of remission in which breathing will be comparatively free. On questioning the patient, it will be found, usually, that he notices relief following the evacuation of a large amount of mucous or muco-pus.

Disturbances of the sense f smell occur due to the blocking of the airway of the olfactory fissure. This may be due to congestion of the mucosa or

hyperplasia of the mucosa in chronic cases.

Consciousness of a foul odor, which may also be decidedly obnoxious to associates of the patient, is a symptom rarely found in other sinus infections, but frequently present in maxillary sinusitis, especially in maxillary sinusitis of dental origin. It is most marked when the patient sneezes, coughs or blows his nose.

While not a diagnostic symptom, excoriations of the alae or upper lip, especially in children should lead to consideration of the possibility of antral infection. I feel that it occurs more frequently in involvement of the antrum, because of the relatively greater amount of secretion from this sinus. I am not unmindful that this symptom is characteristic also of nasal diphtheria and for-

eign hody

It is remarkable to note the number of patients whose chief complaint is post-nasal discharge. They describe with great vividness the nausea attendant on the gagging and hawking necessary in the morning effort to clear the naso-pharynx. I consider this morning collection of pus or mucopus a very important symptom, though I believe it is more frequent in antral disease than in that of the other sinuses, first, because of the greater size of the antra and second, because of their tendency to drain when a person is lying on his back, for the accessory openings of the antra then have free play. It should be kept in mind, however, that over-indulgence in alcohol and tobacco frequently gives the same morning symptom.

The objective symptoms are external and intranasal. Swelling of the cheek may occur especially in antritis of dental origin, though I feel it is a rare symptom. Swelling is more frequently the result of infection of the alveolar process or a dental cyst. Palpation of the cheek may disclose a thickening of the periosteum of the canine fossa. Pressure over the canine fossa may elicit pain. Oedema of the lower lids, especially in children, is a symptom which should, at least, lead to investigation of the antrum.

Intra-nasally there are certain signs which are of great value. In acute cases particularly, there is always associated with the inflammation of the antrum, marked tumescence of the mucosa of the inferior turbinate. In chronic cases, due to the continued congestion, there may be true hyperplasia of the mucosa, not only of the inferior but also the lower portion of the middle. If anterior inspection shows pus flowing over the inferior turbinate or lying on the floor of the nose or if, posterior inspection discloses muco-pus coming over the inferior turbinate arising between it and the middle, it is a very significant indication of antral disease. Where large quantities of pus and mucous are found in the naso-pharynx or a condition of Pharyngitis Sicca exists, thought must be given to the antrum because of its size. At the same time it is well to remember that the same symptom occurs in involvement of other sinuses.

Nasal polyps arising about or coming through the opening of the antra and hyperplasia of the mucosa in that region are signs of chronic antral

disease.

In acute and acute exacerbations of chronic maxillary sinusitis there is usually some rise in temperature and an associated increase in pulse rate. In cases of chronic involvement there may be a slight daily rise in temperature. This symptom, however, is present more frequently in children. The leucocyte count is characteristic of infection and in the severe acute types shows a shift to the left.

A general symptom of importance is the marked mental depression so frequently associated with antral disease. In persons of unstable nervous temperament it may become a very serious melan-

cholia.

Having presented the signs and symptoms, I would add, that there are many cases of maxillary sinusitis, which unfortunately seem to run their course without the patients ever even suspecting or the physician having reason to recognize them. These are the cases that modern diagnostic methods are revealing and as a result we have reason to hope some cases of unexplained focal infection may be traced to their source.

Discussion: Dr. E. P. Hall, Syracuse, N. Y. The symptoms of maxillary sinusitis have been so thoroughly outlined that there remains little to say, unless to emphasize some of the important points. The essayist has divided the symptoms into subjective and objective; another classification that I like is reflex, functional and structural, and the reflex symptoms are most apt to lead us astray. The supra-orbital pain already mentioned

by the speaker should be emphasized as comprising almost half the cases, while many have generalized headache, without any reference to locality. Another reflex symptom which I have encountered is cough, non-productive and almost spasmodic in character. A case that impressed this on me was that of a young married woman who transilluminated normally, and in whom the X-ray picked the right maxillary as the offending sinus. Lavage

removed a large amount of muco-purulent material, with immediate relief of the distressing cough.

Of the functional symptoms, nasal blocking, profuse discharge and loss of resonance of the

voice are so obvious as not to require emphasizing. While the symptoms we class as structural, namely tenderness enternally, and swelling either externally or in the nose need only to be differentiated from alveolar trouble.

DIAGNOSIS OF MAXILLARY SINUSITIS*

By MARVIN F. JONES, M.D., NEW YORK, N. Y.

I FIND it most difficult to limit myself to the topic assigned to me. The diagnosis is inseparably a part of the symptomology of maxillary sinusitis.

My presentation will therefore consist of a description of routine and special examinations.

(I will use the lantern slides.)

Routine examination includes inspection of the nose, throat and larynx, first without medication. Following this procedure, alypine 30% and adrenalin 1-1000 is placed on a long pledget of cotton and the excess fluid removed. One of these is placed in each side of the nose and allowed to remain about five minutes. During this five-minute period the sinuses are transilluminated. The cotton is then removed and again the nose is inspected, the nasopharyngoscope being the last instrument used.

Since using the nasopharyngoscope routinely I have found it to be a most valuable aid. By introducing the instrument slowly, a good view is obtained of the nasal passage. Pus, which has been unnoticed by anterior rhinoscopy, is often seen with the scope. This is particularly true in the view of the nasopharynx. Posterior rhinoscopy is difficult and at times impossible. The view obtained is transient, except in the most favorable cases. Detailed examination of the entire field is not feasable. With the nasopharyngoscope one can examine the entire field in detail, leisurely and without discomfort to the patient.

In maxillary sinusitis pus may be seen flowing from the maxillary osteum, over the posterior tip of the inferior turbinate, along the lateral nasopharyngeal wall, around the eustachian orifice and down into the pharynx. Not uncommonly polypi may be seen emerging from the osteum. Hypertrophy or degeneration of tissue in the masopharyngeal area is an evidence of prolonged irritation resulting from sinus pathology.

I include the following under special examinations:

1---X-ray

2-X-ray with radiopaques

3—Antrascopy4—Aspiration

5—Lavage {Cytological Bacteriological

The x-ray is an aid to diagnosis and not of itself a diagnostic procedure. Poor radiographs and poor interpretations are worse than worthless, they are misleading. My patients are never subjected to the additional expense and trouble of having radiographs made unless there is a definite indication for making them. In other words, I do not order routine x-ray examinations.

Stereoscopic radiographs are always requested and these are taken in the lateral position. They are more informative than the picture without perspective. Three antero posterior flat plates are added to our lateral stereoscopic plates. Two of these are used for different angles through the antra.

We are revising our interpretation of radiographs because of information we have obtained through the use of radiopaques. This brings us to the second subject under special examinations,

i.e., radiopaques.

I have used radiopaques in my office for about three years. As experience broadens our knowledge we are constantly discovering new pictures and interpreting these pictures in terms of sinus pathology. The statement that a negative irrigation means a negative sinus is wrong. Not only do our radiopaques prove this, but cytological and bacteriological examination of the return flow also prove the statement to be incorrect.

Balmer showed that 76% of antrum washings which were objectively negative showed positive bacterial growths. Several investigations have substantiated the theory that normal antra are sterile.

We have seen radiographs of antra which showed extreme degrees of cloudiness, but were considered negative when irrigated and also apparently negative at operation. We have been puzzled by these findings.

The use of radiopaques has shown us that these cloudy pictures are caused by cedema of the mucus membrane lining the antrum cavity. On two occasions I have succeeded in penetrating the antrum wall with my trocar and aspirated fluid without injuring the lining membrane. On one occasion I removed the anterior wall and preserved the cedematous membrane. When this

^{*}Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., on May 25, 1932.

Given a case of maxillary sinusitis what shall we do to relieve the symptoms other than operative procedure? Many excellent results follow the simple use of cocaine either by applicator or tampons held in place for a short time in the inferior and middle meatus followed by ephedrine or adrenalin used as a spray or with applicators and These act to constrict swelling, allow drainage and relieve in many the pain so frequently complained of. Tampons of argyrol 25% to follow the above will be of value. measures are common office or bedside procedures for the attending doctor. The patient will get relief by using a warm saline spray or douche two or three times a day, during the intervals between calls.

The nasal mucous membrane is often very sensitive; use care in your medication. Some types of medication to certain membranes are very irritating and cause distinct pain. For the pain in all these sinus cases use codeine or the coal tar products, in some morphine is necessary.

An operative procedure frequently followed of puncturing the internal wall of the sinus with a Lichwitz or similar needle for better drainage or to wash out the sinus with warm saline is indicated in many cases. This can be done below anterior third of the inferior turbinate or under the middle turbinate near or about the normal ostium. My choice is the first procedure as it gives better drainage. In a few cases the wall is thick but even this can be overcome by using a chisel.

Mild suction is also of value in certain cases. If however, the discharge continues and with little change in amount or consistency believe it unwise to continue the above treatment over ten or twelve days if no marked improvement takes place. The case should now be considered an operative one and one of the many excellent operations decided on and followed. Time will not permit a discussion of these; they are all described in any standard text book; I will simply limit the operation procedure to what has been a successful one with the writer with, however, no lack of respect for the others.

In all cases of polypi, cyst or suspected tumor, foreign bodies, no time should be wasted. Consider surgically all these. In antrums filled with pus, and not seen until a considerable time has elapsed from the onset, operative procedure indicated at once.

First the usual intranasal operation that gives a good opening in the antrum nasal wall. For this under cocaine anaesthesia, a Halle, Coakley, Miles

or Story trocar can be used, followed by a rasp to enlarge the opening when many of these purulent cases will clear up by careful care and attention. My choice is the Caldwell-Luc operation for the radical operation. Have performed this under both local and general anaesthesia. In many a bilateral operation was necessary. The steps of the operation it would seem unnecessary to go over, but two things are important; make your opening large in the anterior wall. Portman of Bordeaux called my attention to the so-called four points. These he lays emphasis on and explores carefully the superior external, superior internal, near the angle of lower margin of the orbit and nasal wall. Here a septa or pockets will be found. These many times keep up trouble. The lower external and lower internal corner should be carefully explored for same reasons. opening in the nasal wall should be adequate and down to the floor if possible; save the nasal mucous membrane as much as possible but not the antrum. Polypi and old granulations can then be properly removed and the entire antrum inspected. Respect for these points will spell success in many an obstinate case.

One adjunct to this treatment is irrigation. I have used for some time instead of usual irrigation a DeVilbiss spray bottle with a curve tip that will enter the nasal or Caldwell-Luc opening. The air pressure needed for the above spray should be reduced to a minimum. It simplifies the irrigation causes less trouble and muss, it is easy to manipulate and not near as painful or annoying to the patient as the usual type of irrigation. Saline or boric solution used. Light packing advisable for short time. Do not allow the opening to close too early.

Change of climate very excellent in many of the cases. Constitutional treatment important as many of these follow grip, pneumonia, etc.

In all cases with a positive Wassermann approved treatment for this is necessary and no success will result if neglected.

Conclusions:—

Use every possible means to prevent these cases becoming chronic.

Make your openings large enough to give good drainage and make it easy to treat by irrigation, etc., with minimum of pain.

Proper light very important in operating. Don't put off operative work too long.

Have not attempted to go over any operative procedure where malignant conditions are found as they do not come I believe within the scope of a paper of this type.

Discussion: Dr. Austin G. Morris, Rochester, N. Y.—Dr. Sulzman has given a very thorough review of the treatment of maxillary sinusitis. and there is little of importance that I can add. I am impressed, however, that a note of conservatism

should be sounded in the treatment of this condition, and I believe cooperation with the pediatrician and internist is a very important factor in the recovery of our patients thus affected.

I am particularly conservative in the treatment

of children under twelve years of age, as I believe in this class of case, recovery is obtained by careful attention to drainage and ventilation of the nasal chambers by means of medication, proper hygiene, and attention to general health and treatment of constitutional symptoms. When it is necessary to resort to surgery, I believe the window operation in this class of case is usually all that is necessary.

In the treatment of the adult case, when irrigation has failed to bring proper results, and after careful diagnostic procedures have been used to ascertain the exact condition of the sinus cavity by x-ray, transillumination and injections of lipiodol, the window operation may be used with

Discussion: Dr. S. J. Parlato, Buffalo, N Y .-I wish to emphasize the part which allergy plays in the diagnosis and treatment of sinusitis. The allergic role has been mentioned several times during this meeting and it was particularly gratifying to me in listening to Dr. Jones's paper that he places considerable importance upon this question of allergy. It was Dean who stated that in all chronic sinusitis in children, the question of allergy must be considered before proper treatment can be outlined. After all, there is nothing in the practice of allergy that is conflicting with the usual practice of the Rhinologist. A consideration of protein hypersensitiveness serves to supplement our present day knowledge and guide us before too much or too radical surgery is done. Dr. Eggston gave us a splendid picture of the success if there is not too much swelling of the mucous membranes lining the antrum, or evidence of polypoid degeneration. In the more severe cases, the Caldwell-Luc operation is, in my judgment, the operation of choice. I wish to call attention at this time to a large group of cases in which the infection is not confined to the antrum of Highmore, but in the anterior group of sinuses, which may be diseased and draining into the antrum; the antrum in these cases acting as a reservoir for pus and secretion from the upper sinuses. In this group of cases, our attention should be directed to the sinuses primarily affected, and very little attention will be found necessary to the antrum itself.

pathological processes which occur in sinusitis. He spoke of extrinsic causes which induce these pathological changes. Among these factors one should consider that the inhalation of pollens, animal danders, emanations of caddis fly and such uncommon substances as glue or insecticides as well as the ingestion of foods and beverages can cause the edema of the mucous membrane of the sinuses, thus making it easy for bacterial invasion and resulting in repeated acute and then in chronic infections.

It is suggested that before a patient with a chronic nasal sinusitis be submitted to repeated or radical sinus operations, a search should be made for any protein hypersensitiveness such as taking a careful case history and making the necessary protein skin tests.

VALUE OF IMMUNE ADULT BLOOD IN THE TREATMENT OF MEASLES* By ALBERT D. KAISER, M.D., ROCHESTER, N. Y.

EASLES is not one of the serious diseases of childhood but nevertheless has a case fatality of 2 per cent. The largest number of deaths from measles occurs in children under two years of age, 55 per cent. After the third year, the number of deaths rapidly declines. Measles causes 2.4 per cent of all the deaths in children under 10 years of age and approximately 6 per cent. of all the deaths in children between one and three years of age. The 10,000 annual deaths from measles and its complications, as recorded in the registered area of the United States allow no optimism either on the part of the laity or on the part of the medical profession.

To combat the ravages of this disease many

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of New York, at Buffalo, N. Y., May 25, 1932.

able minds of Europe and America have long been mobilized to work out a means of controlling this infection. It now seems certain that various mechanical methods of disinfection and quarantine can never control the disease clinically or epidemiologically. The trend of modern research on measles has assumed the line of biologic methods which include bacteriology, experimental inoculation in man and animals and the prophylactic and therapeutic application of these results of study.

It would be interesting to review the research work that sought to identify a specific bacterium as an etiological factor in measles and the numerous experimental inoculations attempted in man and animals. In view of the inconclusive results in this field, the clinician is concerned chiefly with the methods that

may be utilized in immunizing a child against measles or influencing the severity of the in-The most interesting and valuable contribution of modern research in measles is undoubtedly the discovery of a method of prophylaxis by means of measles convalescent serum. The fundamental principle of this procedure is, of course, a production of passive immunity with the antibodies formed in the blood of the patients who have recovered from the disease, a fact well established in diphtheria and tetanus. The first use of measles convalescent serum was recorded by Weisbecker in 1896. He published a detailed account of its use for therapeutic purpose using large amounts of serum at the beginning of the disease. His results were favorable so he suggested that it might be used as a preventive measure. Cenci was the first to use the convalescent serum for purposes of passive immunization. His work begun in 1901 was published in 1907. He prepared the serum from a child who was one of the first in the epidemic to have the disease and injected this serum into a number of children but failed to inject other children of the same families who served as controls. He observed that measles was prevented in the protected children but in a later epidemic they contracted the disease indicating that the passive immunity conferred by convalescent serum is of short duration.

On account of the short duration of passive immunity conferred by an injection of convalescent serum a method of inducing a more permanent immunity was sought. The first attempt to obtain an active immunity was made by Herman, of New York, who in 1915 endeavored to induce a mild form of the disease in young infants. This was done by inoculating the mucous membrane of the nostrils with the diluted secretions from measles patients. Following the reaction or perhaps the attack of attenuated measles, the child was found to be immune when exposed to measles at a later date. This procedure, however successful, could never be applied in a general way for measles prophylaxis.

The beneficial use of measles convalescent serum was recognized after the successful results published by Park and Zingher in 1916 and two French physicians, Nicolle and Conseil, in 1918. The most intensive studies were made by Degkwitz in 1920-1922, published in his reports of more than 1,000 cases treated with convalescent serum. His results were on the whole quite favorable in that if the disease was not prevented in some, it was lessened in its severity. Among his own series, 85 per cent showed complete protection. His most important contribution to the subject was the recognition that when convalescent

serum was not available, the serum of adults with a positive history of measles could be substituted. Haas and Blum in 1926 reported the successful application of measles convalescent blood to institutional children. Reference must be made also to use of measles antitoxin developed by Tunnicliff and Ferry. Success at prophylaxis has been reported with these animal sera.

In spite of the statement made by Degkwitz in 1922, practically no attempt was made to use immune whole blood of adults for the development of passive immunity until recently, Reference must be made to the few published results on the use of immune adult blood either for prophylactic purpose or for producing an attenuated form of measles. Barenberg, Lewis and Messer reported 64 per cent of the children benefited who received immune adult whole blood and 96 per cent benefited who received 6 c.c. convalescent measles serum. Morales and Mandry carried on rather extensive studies in San Juan, Porto Rico, and reported in 1930 their results with immune adult serum and compared its value with convalescent serum. They found that 85 per cent of 120 children immunized with convalescent serum were completely protected, while 80 per cent of 132 children immunized with 20 to 40 c.c. immune adult serum were completely protected. When doses of 10 and 15 c.c. of adult serum were given, complete protection was offered to less than 50 per cent immunized, but the others developed the disease in an attenuated or mild form. Not all reports on immunization are favorable. Blaumer and Goldstein reported unfavorable results with immune adult blood in 117 susceptible children.

Owing to the difficulty of getting convalescent serum and the uncertainty of immune goat serum, more attention has been given recently to utilizing immune adult blood, which in private practice usually means parental blood. Such blood is always available, it involves no expense and the objection of using strangers' blood is removed. During the recent epidemic of measles that began in Rochester, May, 1931, ample opportunity has been given to observe the value of immune adult whole blood as a means of preventing or modifying measles.

It was apparent from the experience of other observers, as shown in Chart 1, that small amounts of immune adult blood would probably prevent measles in very few cases. Inasmuch as the cases treated were all in private homes it seemed desirable to strive for attenuated cases rather than complete protection. In the presence of a city-wide epidemic, protection that would last only three to six

CHART I

RESULTS OBTAINED BY VARIOUS AUTHORS WITH DIFFERENT SUBSTANCES IN AN EFFORT TO
IMMUNIES COLLDREY AGAINST MEASLES

Auther	Year	Material Used for Treatment	Amount	Time After Exposure	Kind of Exposure	Number Treated	Number Com- pletely Protected	Number Failed to he Protected	Per Cent Com- pletely Protected
Kaiser	1932	Immune whole Blood	10cc	4-6D	Family and Outside	214	79	135	36 7
Morales Mandry	1930	Immune whole Blood	10co		Tumly	138	56	82	40 6
Kniser	1932	Immune whole Blood	10cc	4-6D	Family	163	40	123	24 5
Kaiser	1932	Immune whole Blood	10cc	4-6D	Outside	52	39	13	75
Morales Mandry	1930	Immune whole Blood	15cc		Family	123	65	58	52 8
Morales Mandry	1930	Immune whole Bleed	20cc		Family	70	54	16	77 1
Morales Mandry	1930	Immune whele Blood	30cc		Family	34	28	6	82 4
Merales Mandry	1930	Immune whole Blood	40cc		Family	28	24	4	85 7
Barenberg	1930	Immune whele Blood	30cc		Family	50	13	43	23 2
Pasani Casi	1027	Immune whele Blood	30-40cc	· · · · · · · · · · · · · · · · · · ·	Hospital	33	15	18	45 4
Helsinger	1925	Immune whole Blood	20cc			60	10	50	16 6
Van Torday	1923	Convalescent Serum	20cc	2-6D		116	104	12	90
Bivings Dickens	1930	Convalescent Serum	6-10cc	1-9D		101	74	27	73 2
Siegel Ermann	1930	Convalescent Serum	5cc		Institution	55	55	0	100
Van Torday	1921	Convalescent Serum	2 5-3∞	2-6D		261	246	15	94
Zingher	1924	Convalescent Scrum	2 5-7cc	I-8D	ì	102	02	10	90
Kutter	1923	Convalescent Serum	3-400			400	268	32	67
Park Freeman	1926	Convalescent Serum	3-10cc	Under 5-D		979	750	229	76
Haas Blum	1926	Convalescent Serum	5-10cc	Under 7 D		269	182	87	69 9
Morales Mandry	1930	Convalescent Serum	6cc		Family	120	102	18	85
Degkwitz	1926	Goat Serum		7-11D		134	122	12	91
Halpern	1926	Tunnecliffo Serum				45	28	17	62 2
Munroe	1928	Ferry Horse Serum	20cc			26	25	1	96 1
Gerdon	1928	Ferry Horse Serum	10cc			38	31	7	81.5

weeks was not as important as a permanent immunity following an attack of modified measles. With this in view, relatively small doses of whole blood were injected

This study is based on a series of 214 children who presumably had a definite exposure to an active case of measles. An exposure as described by the parent does not always constitute a true exposure. In order to interpret the results more accurately the treated children were divided into two groups, those having family exposures, which are usually quite definite, and those who have outside ex-

posures such as with neighbors or school mates. Owing to the marked infectivity of measles it has been shown that approximately 80 per cent of family exposures result in the development of measles. Of the 214 children injected, 162 were in families where an active case of measles existed. Fifty-two children were exposed less definitely and therefore are grouped separately.

Children were injected between the third and seventh day after exposure. The fourth day was generally selected. In seven instances blood was given after the tenth day because exposures were not computed properly. The amount of blood injected was usually 10 c.c. In a few instances 15 c.c. was given, but never less than 10 c.c. In practically all instances the blood was injected into the gluteal muscles. Reactions developed in five children. They occurred on the fifth day and were characterized with swelling, local tenderness and fever. All recovered without any great discomfort. Where parental blood was utilized no Wasserman tests were made.

adult blood will completely protect only a small percentage of children against measles if they are definitely exposed.

Among the 162 treated children with known family exposures 75.5 per cent developed measles, while only 25 per cent of the 52 who had uncertain exposures contracted the disease. The effect of the blood injection could be easily evaluated in the 135 children who developed measles. One hundred and seventeen had what has been termed modified or

CHART II

RESULTS OBTAINED IN 214 CHILDREN INJECTED WITH ADULT IMMUNE WHOLE BLOOD
WHO HAD BEEN EXPOSED TO MEASLES

	Family Exposures (162)			Outside Exposures (52)		
	Completely Protected	Modified Measles	Failure to Influence Attack	Completely Protected	Modified Measles	Failure to Influence Attack
Under 2 years	13	15	1	6	1	
2-5 Years	18	69	7	17	4	1
6-10 Years	7	22	5	16	5	2
11-14 Years	1		2			
Over 14 Years	1	1				
TOTAL	40	107	15	39	10	3
PER CENT	24.5	66	9.5	75	19	6

Average Dose of Blood—10cc. Average Day of Injection—Fifth Day after Exposure. Usual Donor—Mother or Father. Five Failures Due to Injecting Blood after Tenth Day.

In seeking to interpret the effect of the blood injections in these children three kinds of results were noted. There was either complete protection against an attack of measles, a modified or attenuated attack of measles or an average uninfluenced attack of measles. Complete protection was not anticipated in a high percentage of the children, due to the small amount of blood injected. Among the 162 children, as shown on Chart 2, who had family exposures, 40, or 24.5 per cent, failed to develop the disease. It cannot be assumed that 24.5 per cent were passively immunized as a result of the injection of 10 c.c. of blood, for it is known in control studies, especially those of Morales and Mandry, that about 20 per cent of children with like exposures escape the disease either through failure to be infected or because of a natural immunity. Among the 52 who were reported to have had exposures other than those from a member of the family, 39, or 75 per cent, failed to develop measles. This high percentage of complete protection was undoubtedly due to the absence of a definite exposure. It seems probable, therefore, that the injection of 10 c.c. immune

attenuated measles and 17 had what might be considered an average attack of measles and only one case of severe measles developed among the children who were treated with whole blood. An attenuated or modified attack of measles presents a clinical picture much less severe than an average case; the prodromal symptoms are either absent entirely or so mild that they are hardly recognized; the cough is usually absent, the fever rarely over 102° F., or if higher, of short duration, the exanthem is atypical and the throat symptoms absent or less severe. The period of disability is usually three of four days instead of seven or eight days.

Failure of the blood injection to alter the course of the infection was noted in only 8.3 per cent of the children treated. These 18 children developed measles that was apparently no different from an average case. A number of the failures could be accounted for by the late injection of blood due to miscalculation on the time of exposure. Even in the so-called failures the attack of measles was in no instance worse than an average case.

It is well known that in an epidemic of

CHART III—COMPARATIVE STUDY OF 200 CASES OF MEASLES 100 CRILDREN RECEIVED BLOOD IN INCUBATION STAGE 100 CRILDREN IN SAME FAMILIES WERE NOT TREATED WITH BLOOD

		U	TREATED			•	TREATED	
	Mild	Average	Severe	Complications	Mild or Modified	Averago	Severe	Complications
Inder 2 Years		3		Adenitis (2 yrs.) Pneumonis (1 yr.)	15	2		Otitis Media (1½ yra.) Pneumonia (15 mos.)
-5 Years		10	3	Otitis Media (5 yrs.)	55	3	1	
6-10 Years		65	12	Otitis Media (6 yrs.) Pneumonia (8 yrs.) Bronchitis (10 yrs.) Otitis Media (8 yrs.) Otitis Media (8 yrs.)	16	5		
11-14 Years		0	1	Bronchitis (8 yrs.) Otitls Media (6 yrs.) Otitls Media (6 yrs.) Otitis Media (7 yrs.) Otitis Media (6 yrs.) Pneumonis (8 yrs.)		2		
Over 14 Years					1			
TOTAL		84	10	14	87	12	1	2

Average Dose of Intmune Blood Injected—10 cc. Average Period of Injection—Fifth Day after Exposure. Complications {Treated with Blood...... 2 per cent. 14 per cent. 14 per cent.

measles many mild cases occur. This is particularly true in the disease outside of institutions. One wonders, therefore, if many of these attenuated attacks might not have occurred even without the immune blood injection. The interpretation of a mild, average or severe case depends somewhat upon the observers. In order to appraise the value of the blood injection in a more tangible way, 100 children with measles treated with 10 c.c. immune adult blood were compared with 100 children in the same families who likewise had the disease but were not treated with blood. Chart 3 describes the results in this comparative study. The degree of measles was noted by the same observer among the 200 children of 100 different families. In each family two cases occurred; the first case usually was not treated and the exposed child was given 10 e.c. immune adult blood. It will be noted in the chart that the treated children were more likely to be the younger children under five years of age. It is in this age group that measles is most likely to be associated with sequelae. Among the 100 untreated children, 84 had an average attack of measles and 16 a severe attack. There were no mild or attenuated forms among these cases. The complications existed in fourteen children, consisting of pneumonia, bronchitis, otitis media and cervical adenitis. Only sixteen of these children were below five years of age. Among the 100 blood treated children, 87 had a modified form of measles, 12 an average attack and one a severe case. Similar complications existed in only two children. Seventy-six of the children in this group were below five years of age. Whatever uncertainty may exist in the interpretation of the degree of severity in an uncomplicated attack of measles, the sequelae or complications cannot be misjudged. In the untreated cases, 14 different children presented

serious complications, while among the treated only two children presented similar complications.

The value of injecting 10 c.c. immune adult blood to children exposed to measles is demonstrable in the modification of the disease. A mild case can usually be anticipated and the chances for complications are decidedly less-There is very little evidence at hand from this study to show that a passive immunity is obtained in many children. institutional and hospital practice protection against measles may be desirable in order to check the spread of the disease, but in family or private practice more can be accomplished by assuring the patient an attenuated attack with permanent immunity than a passive immunity of short duration which may be lost when another exposure comes.

Discussion: Dr. Camille Kereszturi, New York, N. Y.:

During the past eleven months, we have been carrying out a piece of research work in the Fifth Avenue Hospital, under the supervision of Dr. Park, on the prevention of common contagious diseases in our children's wards. We found in previous years that in spite of the rigid quarantine system of the Department of Health of New York City, we had numerous outbreaks of contagious diseases in our wards. The wards were therefore unavailable for admission for about one-third of the year.

Since July, 1931, we obtained permission from the Health Commissioner to keep our wards open irrespective of different outbreaks. Our procedure is as follows: If a case of communicable disease is diagnosed in our wards, we remove the patient, do not quarantine the ward, but divide the exposed children in two groups: 1. Those who have an acquired or natural immunity to the disease in question. 2. Those who are susceptible as demonstrated either by the Schick and Dick tests or by negative past history of diseases of which we have no susceptibility tests.

To half of the second group was given 5-7 c.c. homologous convalescent serum intra-

Conclusions

- 1. During a measles epidemic the use of immune adult whole blood may be effectively used in assuring that the patient will have an attenuated attack which confers a permanent immunity.
- 2. The use of 10 c.c. whole blood has been found sufficient to modify an attack of measles and materially reduce the incidence of complications.
- 3. The use of 10 c.c. immune whole blood will not completely protect children who have been definitely exposed to measles. Much larger amounts are necessary for complete protection.
- 4. The use of immune whole blood, usually parental, is simple, safe, inexpensive and effective in the treatment of measles, especially in private homes.

muscularly. The other half of the susceptibles

were kept as controls.

Among 643 admissions in the past eleven months, we had sixteen outbreaks of one of the following diseases: Pertussis, measles, German measles and scarlet fever. According to the present quarantine rules of the city, this would have meant nineteen weeks of closed hospital doors. We were exempt from quarantine and still did not see any second case of any of these communicable diseases but measles. In two outbreaks of measles, 12 per cent of the immunized and 41 per cent of the control children developed the disease. However, the immunized ones had a very much milder, modified form of measles.

Therefore, we are planning to carry out this research with the aim of finding out:

- 1. Whether the present rigid quarantine system is necessary.
- 2. How much good can be obtained in prophylaxis by the use of convalescent serum against not only measles, but pertussis, chickenpox, scarlet fever, mumps and German measles.

3. What is the proper dosage of serum for

prophylaxis.

4. When is the ideal time to bleed convalescent patients in order to obtain the most potent serum.

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CONDUCTIVE ANESTHESIA FOR THE ELECTROSURGICAL REMOVAL OF TONSILS

By EDGAR R. MAILLARD, MD, NEW YORK, N. Y

A NYONE who is forced to have his tonsils removed because of some local or general disturbance is today concerned with the choice of a method of surgical removal. If one may assume that a decision is mide in favor of the electrosurgical extripation invariably the first question asked is whether the method is, a painless one. On referring to the literature on the subject it would be very difficult to make a satisfactory reply because of the conflicting opinions in connection with the question of pain.

After several years of persistent effort, it has been possible to develop a technic' which results in the complete removal of tonsils. One is markedly impressed, however, with the fact that the treatments are not entirely free from pain, requiring an effort on the part of the patient to continue with the subsequent treatments. It was realized that if complete anesthesia of the tonsils could be effected, the patient would be spared the anxiety and fear which are experienced with each With this in mind various kinds of anestheties were used chiefly in the form of topical applications, since the injection of fluid into the tonsillar tissues is not advisable of the topical anestheties produced a greater degree of anesthesia than others, but at no time was the anesthesia complete although it was possible to administer the treatments

A careful study of the anatomy and nerve supply of the tonsil and adjacent structures suggested the idea of attempting a conductive anesthesia. Varying amounts of a 2% solution of procaine with epinephrine (1-2500) were injected at different points in the region of the tonsils. The results were very gratifying at times and quite discouraging at other times. Finally it was noted that an injection made in the region of the superior fossa of the tonsils infiltrating behind the capsule to a depth of about one inche caused complete anesthesia of the tonsil, soft palate and base of the tongue within five to ten minutes on the injected side. The loss of sensa-

tion in these regions is apparently due to an infiltration of the branches of the glossophiaryngeal nerve which supply this area. It was possible to repeat this condition at each weekly visit on the same patient for a series of treatments. I have given approximately fifty injections and have obtained the desired anesthesia in all instances. The post operative results have been the same as with the use of the various topical anesthetics.

The first indication of anesthesia is usually the presence of a nasal intonation of the patient's speech. One of the reactions noted in patients lias been the reguirgitation of liquid through the nasal orifices when attempting to drink water. This may be attributed to a disturbance of the normal reflex of swallowing caused by the loss of sensation. There were also a few instances of increased lacrymation and feeling of warmth on the side of the face due to involvement of the sympathetic nerve fibres. All of these reactions were of short duration and not alarming in character.

SUMMARY

A conductive anesthesia has been developed that produces loss of sensation in the region of the tonsil, soft palate and base of the tongue. This makes the electrosurgical extirpation of tonsils a painless procedure, consequently it allows for better cooperation on the part of the patient and makes the complete removal more assured. For this reason also the number of treatments is reduced to the minimum. It is exceptionally valuable in the removal of tonsillar remains which is usually more painful than the first treatments in the elimination of a whole tonsil. There are no apparent dangers and the administration is well tolerated by the patient

Conclusion

The electrosurgical removal of tonsils may now be accomplished without any pain whitever to the patient. This has been made possible by the introduction of a conductive anesthesia.

¹ Ma liard Edgar R Essential factors in the electrosurgical extirpation of tonsils Archives of Physical Therapy X Ray Volume 13 page 600

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THE ANNUAL MEETING IN RETROSPECT

The one hundred and twenty-seventh annual meeting of the Medical Society of the State of New York has become a record of achievements, and a memory of anticipations fulfilled. The meeting was a parade of the standing army of the medical profession demonstrating its preparedness to combat the forces of disease and death.

While the meeting preserved the ancient tactics which require each soldier to fight in the front line of battle, it also sought to enlist every citizen in the service of health by its radio broadcasts, its session open to the public, and its press publicity service. The meeting brought gratification to those who planned it, and satisfaction to those who attended it.

DR. FREDERICK H. FLAHERTY

To be chosen President of the Medical Society of the State of New York is a promotion to a wider field of activity given to a physician who has acquired experience, knowledge, and judgment in advancing through the services in his county medical society, and the hospitals and social service organizations.

The President is the exemplification of the medical profession during his year of office, and represents the ideals of the practice of medicine as he speaks before numerous organizations both medical and social. The members of the Medical Society of the State of New York have always exercised keen discernment and good judgment as they have surveyed the records of their presidential candidates, and assumed that those who have been faithful and efficient in the county societies and on State committees will carry on their good work in the highest office. The wisdom of this method of choice is demonstrated by the services which presidents give as chairmen and members of committees after they have served their terms as president. The honor and fame which the office has brought to the presidents have been incidental to their opportunities for constructive service.

These are the thoughts which the members of the Medical Society of the State of New York have in mind as they greet their new president, Dr. Frederick H. Flaherty. They are confident that in his new office he will continue the same efficient leadership that he has demonstrated in the medical circles of Syracuse.



Portrast by Carson Robert Draucker

FREDERICK H. FLAHERTS, M.D., President of the Medical Society of the State of New York.

COSTS OF MEDICAL CARE

A Special Committee of the Medical Society of the State of New York, appointed to consider the final report of the national committee on the Costs of Medical Care, expressed its opinion to the House of Delegates on the evening of Monday, April 3, 1933, in the report which is printed on page 499 of this Journal, and which the House adopted unanimously. The impression gained when listening to the reading of the report was that it was fair and judicial; and that impression has been confirmed by a careful study of the report, and a comparison of it with the report of the national committee.

Four months have gone by since the national report was made public, as was told in this Journal of December 15, 1932, page 1438; and during that time the medical journals of the State societies have printed extensive opinions varying

from violent condemnation to fulsome praise. The leaders of the Medical Society of the State of New York wisely decided that the opinion of the medical profession of the State should not be expressed until members had given consideration to every phase of the national report. A Special Committee of the Society was appointed to formulate that opinion, and make its report to the House of Delegates. This Committee has had the benefit of information regarding the background of the work of the national committee and the influences which led the Committee to formulate five reports insead of one united report. The report of the Special Committee is concerned principally with that part of the report of the National Committee called the "Majority" report.

A reviewer of the majority report may take either one of two attitudes:

- 1. He may take up the report, paragraph by paragraph, and consider each item separately, as one looks at the individual trees of a forest.
- 2. He may look at the report as a whole, as one would consider a forest in its general phases, such as its kind of trees, its location, and its likelihood of preservation and increase.

The State Committee has given careful consideration to the broader phases of the majority report and the trends of its recommendations.

In order to understand the comments of the Special Committee, it will be well to recall that the majority report contains five specific recommendations which are set forth in Chapter Five of the report, on pages 104 to 144 of the printed volume. These five recommendations are as follows:

- 1. Group practice to be adopted by physicians, page 109.
- 2. The extension of public health services, especially health departments, page 118.
- 3. Sickness insurance to be taken out by patients, on a basis that is either voluntary or compulsory, page 120.
- 4. Coordinating agencies, local, state, and national, to be formed to suggest the standards and methods of a complete medical service, page 134.
- 5. Medical education of physicians, dentists, pharmacists, nurses, nursing attendants, midwives, and administrators to be promoted, page 138.

These five recommendations of the national committee, and the form and manner of their presentation, must be kept in mind while reading the opinion of the New York State Committee expressed in its report to the House of Delegates. That report very properly takes into consideration the attitude of the members making the majority report, as well as the content of their report. It also calls attention to the silence of the national committee on the work of medical societies throughout New York State and the nation in initiating and demonstrating the value of many forms of medical service that are advocated in the Majority report of the national committee, some of which are found to be impractical.

The State Committee also calls attention to the need of considering the quality as well as the quantity of medical service; and to the fallacy of the belief that the people will accept only the best medical service. The same temperaments which lead men to neglect their financial and educational affairs will also lead them to neglect their health. As a matter of fact, men generally care for their property far better than they do for their health.

The Special Committee devotes the second half

of its report to seven recommendations, which are to be compared with the five recommendations of the National Committee. The recommendations of the State Committee are along the following lines:

- 1. Provisions for medical service to the indigent by methods to be evolved by the County Medical Societies.
- 2. The rational distribution and proper zoning of hospitals which care for the poor, with provisions for payment of attending physicians by the community for services rendered to the poor.
- 3. A system of insurance to provide for hospital charges, but not medical fees, to be developed in communities where practicable.
- 4. Disabled veterans to be treated in civilian hospitals and only for conditions incurred in the service, except that the Government continue the care of neuropsychic and tuberculosis cases of all classifications.
- 5. Wherever Workmen's Compensation cases are admitted to municipality owned hospitals, the medical fees to be paid to the attending Surgeon.
- 6. The care of crippled children should continue under the direction of the State Board of Health, but local physicians should be employed so far as possible.

7. The adoption of the principles of the Geib-Vaughn-Detroit Plan, whereby the Departments of Health utilize the services of family Doctors in place of public clinics.

The last recommendation conforms to the general principle announced in the first half of the report,—that the fundamental basis of medical service in every instance is the preservation of the contact of an individual physician with an individual patient. The report agrees with the common opinion of physicians that neither group practice nor sickness insurance is consistent with a high quality of medical service.

The whole report confirms the opinion expressed in its opening paragraph: "The Medical Society of the State of New York is the competent body to suggest measures and remedies for

medical services in this State."

The truth of this quotation has been amply demonstrated by the great progress in the civic and administrative forms of medical practice achieved by the medical societies of the nation, the states, and the counties during the last decade. Concrete evidence of that progress is the fact that the list of those activities recorded in the New York State Journal of Medicine in each year now fills six pages of the annual index.



MEDICAL PROGRESS



Do Cancer Houses Exist?-Chaton takes issue with certain French authors (Lumière and Vigne) who have recently asserted that there are no grounds for the belief that cancer houses exist, and that chance alone is responsible for the unusual numbers of cancer cases observed in certain houses. He denies that the rôle played by chance is demonstrated by the fact that the curves of statistical data coincide with those given by the calculation of probabilities. The alleged dissimilarity of "the primary factors in cancerization," which are held by these authors to be the soil, parasites, fauna, flora, water supply, etc., in Paris and Lyons, where the demographic curves are in agreement, is not a fact. On the contrary, in all great cities the pathogenic agents in the soil, water, dust, air, foodstuffs, etc., are exactly the same (Eberth's bacillus, streptococcus, staphylococcus, bacillus of tetanus, diphtheria, etc.). Hence the statistical method can prove nothing either for or against the cancer house. It is quite evident that in the most crowded houses, where the greatest numbers of tenants are to be found, there would normally be the greatest number of cases of cancer, of births, deaths, or other physiological and pathological phenomena, since a parallelism of this kind would naturally exist. curves were to be constructed for the numbers of cases of tuberculosis and syphilis in Lyons, after a house to house canvass, it is certain that they would be exactly similar to those erected for cancer or for births; yet tuberculosis and syphilis are known to have biologically determining causes of a very precise nature. This is only the secondary aspect of the question of etiology. But in the study of cancer houses it is not the indirect causes that we desire to know, but the determining and efficient cause: and there is one that is not governed by chance. This cause will not be found by drawing up statistics, but by observing particular cases from all angles, and, with reference to etiology, by a study of the environment of the patients, that is, of places or houses where an abnormal number of cancer cases have been observed. There is nothing surprising in the fact that mathematicians with the calculation of probabilities bring us to no positive results. Their proper field is that of inert science, such as physics and chemistry. In medicine they cannot intervene usefully except in very rare cases. They may amplify a principle, but they will never discover one. So far as cancer houses are concerned, it seems still more manifestly premature, at a time when mortality statistics are non-existent or insufficient with reference to a disease the declaration of which is not compulsory for the physician, to hope to reach any de-

pendable conclusion from a calculation which at present must rest on foundations that are certainly incomplete if they are not actually erroncous.—Bulletin de l'Académie de médecine, February 7, 1933.

The Doubtful Clinical Usefulness of Lederer's Cancer Reaction .- The failure of purely clinical methods to make an early diagnosis of cancer, especially of the internal organs, and the long and complicated nature of the current laboratory procedures proposed for this end led Zwerg and H. J. Lauber to make a trial of Lederer's method of colloidochemical examination of the scrum of cancer suspects. This method claims to be able to diagnose cancer within 48 hours without any special technical difficulties. Lederer thought that it would be more easily possible to recognize the constitution of the intermediate products of metabolism in the blood of cancer patients by their colloid properties than by their purely chemical constitution. He therefore examined the scrums with reference to their protective action upon suspensoids. In view of the lesser content in protein and the greater degree of acidity of the blood of cancer subjects, the result in the suspensoids would be that the blood of a cancerous individual has less protective power against flocculation than that of a healthy subject. He called a solution "protected" if it was still clear after 48 hours, but no longer "protected" if it showed a slight clouding; and he claimed that with a Berlin blue solution as a suspensoid and a saturated saline solution as an electrolyte, he obtained a positive finding in nearly 80 per cent of cancer patients. Zwerg and Lauber accordingly tried this method of diagnosis in 33 cases of clinically and histologically proved cancer, in 9 that were known not to be cancer, and in 2 doubtful cases. Lederer had termed as the "protection number" (Schutzzahl) the number of cubic centimeters of serum in that solution, which is just protected; he found this to be 0.11 or over in cancer subjects, and 0.10 or less in healthy persons. Between 0.10 and 0.11 the case is suspicious of cancer. The authors found at once in their first examinations that they never obtained so high a protection number as Lederer for a cancer, and they accordingly modified their method to the extent that they let themselves be guided not by the protection number but by the number of flocculated tubes. While their results were for a while somewhat contradictory, they found that later their findings agreed on the whole with those of Lederer, in that they obtained a positive result exclusively with cancer patients, while the negative result did not unconditionally exclude

cancer, but was found in about 30 per cent of cases known to be cancer. At this period they felt justified in recommending the wider use of the method, but they have more recently been having the experience that they obtain no positive results at all in either cancerous or noncancerous patients, notwithstanding they use a Berlin blue solution that is above suspicion, furnished by Lederer himself, and prolong their observations over 4-5 days in the hope of obtaining flocculation. In over 50 per cent of cases among their recent material they have had no clouding, while in the remainder they have had flocculation in only one or at most two tubes, which according to both their own and Lederer's standard had to be considered negative. are therefore compelled to regard the Lederer reaction as unreliable on the basis of their own observations.-Deutsche medizinische Wochenschrift, February 24, 1933.

Treatment of Nonvalvular Heart Disease of Middle and Old Age.—Henry Jackson writing in the New England Journal of Medicine, March 16, 1932, ccviii, 11, emphasizes the importance of the myocardium in diseases of the heart and states that a study of his cardiac cases shows that fully 75 per cent of them were not due directly to valvular disease. Clinically the difficulties of the heart of old age are apparent when the heart muscle has been impaired by overwork, by strain, often without the concurrence of any severe acute process and very often without a strain dependent upon high blood pressure. It is in such conditions that the electrocardiogram gives the most help. It explains auricular fibrillation, premature contractions and sinus arrhythmia, all questions of much importance from the clinical as well as the scientific point of view. Sinus arrhythmia and premature contractions become of importance to the individual only when the myocardium fails. There is no specific treatment of avail for premature contractions, though small doses of bromides may be given to patients who are particularly sensitive to the disordered action of the heart. Digitalis is of no avail nor is it indicated. The prevention of nonvalvular heart disease in middle and old age is of more importance than its treat-As men grow older they should avoid excess of muscular exertion, and they must not think that they are as strong as they ever were. It might be of advantage to the business world if men were obliged to cut down their activities at the age of sixty-two or sixty-five years, though in the individual case such an age is often too young. The myocardial heart of old age does not differ essentially from any other form of muscular heart failure. First and foremost, warn against all strain of the heart, as in running, walking up hill, etc., but continue mild exercise as in walking on the level and the "daily dozen" in homeopathic doses. The heart muscle must be exercised to keep it in proper condition. Suitable cases are helped by graded massage and perhaps by the baths at the various heart resorts. An important factor is the avoidance of too much food. This is more important than the moderate use of alcohol and tobacco. Jackson does not like the term or the method known as "digitalization." In chronic heart disturbance associated with the failing heart of old age the dose is one or two grains of powdered digitalis given every day, omitting the dose one day a week, a day when all strain must be avoided. Nitroglycerin is often of value as a preventive before any collapse occurs. Codeine is of value, but it is very doubtful whether strychnine is useful execept for the suggestion to the patient that one is giving something to help a hard situation.

Dyskinesia of the Biliary Tract (Cholepathia spastica) and Surgery.—Modern research, say V. Schmeiden and H. Niessen, writing in the Münchener medizinische Wochenschrift of February 17, 1933, has learned to recognize the extrahepatic biliary system as a functional unit, that is to say, the gall-bladder and the bile-ducts down to their anastomosis with the duodenum. It has been shown that there are many cases of biliary colic that are not due to mechanical obstructions but to disturbances of innervationcases that present the picture of pseudocholelithiasis. The chief seat of these disturbances is in the sphincter of Oddi, where a spasm of the motor nerves may arise under certain conditions, which results in obstruction of outflow of bile; this in turn causes a distention in the entire system of bile-ducts, which produces a typical clinical picture due to the ineffectual peristalsis of the gallbladder and bile ducts exerted against the closed sphincter. The colic-like pains without stone, icterus or fever, are due to an intermittent stasis in the extrahepatic bile-ducts. For surgery to enter the thankless field of these neuroses seemed at first unjustifiable. Certainly modern investigators are right in warning against reckless intervention in dyskinesia of the biliary tract. Modern knowledge must discountenance the universal use of cholecystectomy when these symptoms appear. There are, however, other surgical procedures which may come up for consideration: (1) The operative stretching of the sphincter of Oddi by cautious use of bougies, with strict avoidance of brusque or rough handling, which might result in cicatrices and recidives. (2) Derivation procedures to divert the outflow of bile around the sphincter, such as the joining of the common duct to the duodenum, or making an anastomosis between the top of the gall-bladder and the intestinal canal (stomach or duodenum). Attempts to relieve the spasm by cutting the nerves have not produced practical results. The placing of the indications for treatment of dyskinesia of the bileducts might perhaps be compared with that for

round ulcer of the stomach or duodenum, where the failure of conservative measures to bring relief points the way to the employment of surgery without delay. In cases where diagnosis is doubtful, exploratory laparotony is advisable. When the neurotic-functional nature of the pain has been demonstrated, medical means should first be tried. If, however, these measures fail, one should not hesitate to have recourse to one or other of the operations recommended above.

Glucose-Insulin Administration in Prolonged Narcosis.—J. H. Quastel and R. Ström-Olsen, writing in The Lancet, March 4, 1933, cexxiv, 5714, point out the fact that narcotic treatment in certain types of mental disease has been interfered with by the knowledge that prolonged narcosis is often accompanied by toxic symptoms. In the Cardiff City Mental Hospital about 50 cases have been treated with somnifaine during the past two years, with extremely encouraging results except for toxic symptoms. Laboratory investigations were carried out on the mode of action of narcotics. The results, briefly, were: (1) All narcotics have the property of inhibiting specifically, at low concentrations, the oxidation by the brain of substances important in carbohydrate metabolism, viz., glucose, lactic acid, and pyruvic acid; (2) of narcotics belonging to the same chemical type, those with the greater narcotic activity have the greater inhibitive action on brain oxidations. A frequent accompaniment of prolonged narcosis is the development of ketonuria. It was found that the simultaneous administration of glucose and insulin to narcotized animals brought about a decrease in toxicity of the narcotic.

This work led to a consideration of the possibility of administering insulin and glucose to patients undergoing narcotic treatment. group of 20 patients 2 c.c. of somnifaine was administered intramuscularly two to four times in twenty-four hours. As soon as definite ketonuria appeared 5 to 15 units of insulin were administered simultaneously with the next intramuscular injection of the narcotic. With each insulin injection the patient received by mouth 50 grams of glucose in water or milk. These doses were found to be sufficient to avoid hypoglycemia. The immediate result of the insulin-glucose modification of the narcotic treatment was the entire disappearance of ketonuria within forty-eight hours, and the patient showed no ketonuria during the remainder of the course of narcotic treatment which lasted from fourteen to sixteen days. It was also noted that cyanosis, alarming drowsiness and vomiting partially or entirely disappeared with this treatment. Though the number of patients who received the insulin-glucose is small, the results have been so satisfactory that the authors feel justified in publishing this preliminary report.

Mineral-Free Water Therapy.-The medical profession, says Karl Glaessner, which has from time untold been interested in the detoxication of the body, has gravely neglected one single field of treatment, namely that of internal hydrotherapy. The most important regulator of metabolism is water: intake and outgo of water must balance one another. Most attempts to study the water metabolism have been conducted with ordinary drinking water or the so-called mineral waters. Not until 25 years ago was any attempt made to test the effect of so-called distilled water which To those who introcontains no mineral salts. duced such studies it was evident that with the aid of an entirely salt-free or salt-poor substratum very different effects upon diuresis and flushing out of the tissues must be obtained than if the fluids introduced were practically the same in their salt and organic content as the body fluids themselves. Three general sources of energy are to be differentiated with reference to water movement: (1) the purely hydrodynamic, (2) the osmotic, and (3) the electric. Water that is in colloidal combination is dependent on the influences of the electrolytes and the actual tissue reaction. In this connection the alternate action of hemodynamic and colloido-osmotie pressure is of significance. Hence it is clear that water without electrolytes and without salts will produce a very different effect from water containing salts and acids. By means of electro-osmotic and heat distillation the so-called hyperdistillate has been obtained, which is absolutely salt free and acid free, contains only a very small amount of gases, and these, harmless, and has an osmotic value of pH7, so that it represents the purest water that has ever been manufactured. It is useful both as a prophylactic in a state of health, and also in a long series of affections including those of the kidney and urinary tract, the liver and biliary apparatus, and in those processes that enter into high blood pressurc; also in migraine, Menière's discase, affections of the joints (gout), and of the tongue (leucoplakia). In kidney affections the water is given in amounts of 1-11/2 liters per day for 10 days in the month, followed by a pause of 3 weeks, after which the same is repeated; so that in the course of a year the water is used for 4 months altogether. In gallstones the same method is used, but in combination with a suitable cholagogue, preferably glycocholate of sodium in doses of 0.2 gm. 3-5 times daily. Some patients are entirely free from atttacks during the water treatment. In cases accompanied by chronic gastric catarrh Glaessner spaces the treatment in such a way that in the course of 6 months the water is given for 3 periods of 3-4 weeks each, interrupted by periods of decreased dosage.—Schweizerische medizinische Wochenschrift, March 4, 1933.

The Effect of Cement Dust upon Workers.

-Albert E. Russell presents a study the purpose

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LEGAL



PROPERTY RIGHTS IN GIFTS GIVEN IN CONTEMPLATION OF MARRIAGE

By LORENZ J. BROSNAN, ESQ.
Counsel, Medical Society of the State of New York.

An unusual case involving a very human situation recently eame before one of the Appellate Courts of this state for decision. The court was called upon to solve the very interesting question as to the right of a jilted suitor to recover back an engagement ring given by him in anticipation of marriage. The facts briefly were these: According to the allegations of the plaintiff's complaint he had exchanged with the defendant mutual promises to marry and had given her an engagement ring of the value of \$350.00. claimed was given in anticipation of their marriage and conditioned upon the fulfillment by the defendant of her promise to marry him. Subsequently the defendant refused to marry him, although he stood ready to marry her, and she declined to return the ring. Upon a motion, the complaint was dismissed as failing to state facts sufficient to constitute a cause of action. An appeal was taken from that ruling thereby squarely presenting the question of whether a woman, having accepted her suitor, may keep an engagement ring, after she has refused without cause to marry him.

The Appellate Court reversed the ruling of the lower court holding that the complaint stated a good cause of action. The court summarized the rule as follows:

"It has been held that an engagement ring is in the nature of a pledge for the contract of marriage, and that if the recipient break the contract, she should return the ring. Such a ring is a symbol hallowed by social usage. That it is a conditional gift seems inherent in its very purpose. Possession should be retained during the engagement, which it symbolizes, and is changed into firm ownership upon marriage. When the engagement fails the symbol of its existence should be returned to him who gave it.

"Of course, an engagement ring differs from gifts made to secure a lady's favor or gain her affection, which are unconditional.

"The weight of authority seems to go further and hold that any gift to the lady to whom the donor is engaged to be married, made in contemplation of marriage, is conditional, and upon breach of the marriage engagement by the recipient the donor may recover the property."

The court in making its decision referred as authority to an old case which was decided in England nearly two hundred years ago in which an action was brought to recover the value of a and therefore must return the ring."

present that had been given to a lady who afterwards broke her engagement and married another. The Lord Chancellor laid down the law as follows in that case:

"I think, in cases of this nature, these rules may be laid down: That if a person has made his addresses to a lady for some time, upon a view of marriage, and upon reasonable expectation of success, makes presents to a considerable value, and she thinks proper to deceive him afterwards, it is very right that the presents themselves should be returned, or the value of them allowed to him; but, where presents are made only to introduce a person to a woman's acquaintance, and by means thereof to gain her favor, I look upon such person only in the light of an adventurer, especially where there is a disproportion between the lady's fortune and his, and therefore, like all other adventurers, if he will run risques, and loses by the attempt, he must take it for his pains."

In 1917 the question again rose in England in the Court of Kings Bench and the Court repeated the rule of the old case, and in support of the ruling made a study of the history of the engagement ring which is worthy of note and consideration. The court in the opinion said:

"The history of the engagement ring is interesting. We read in the Book of Genesis that Abraham presented earrings when Rebecca was betrothed to Isaac. And no doubt the story represents the ring in those days as a sign or symbol of an agreement to carry out a bargain and sale of the woman. When one comes to the time of civilized law the woman ceases to be a chattel, and one finds in Justinian the ring used as an 'arrhabo,' or a pledge for the contract of marriage or sponsalia. This found its way even into early English law. Times, however, are changed now; but though the origin of the engagement ring has been forgotten it still retains its character of a pledge or something to bind the bargain or contract to marry, and it is given on the understanding that a party who breaks the contract Whether the ring is a pledge must return it. or a conditional gift, the result is the same. The engagement ring given by the plaintiff to the defendant was given upon the implied condition that it should be returned if the defendant broke off the engagement. She did break the contract

The distinction drawn between gifts given a lady to gain her favor and gifts conditioned on the contemplated marriage is well illustrated in a case decided some time ago in one of the New England States. In that case the facts were that the plaintiff and the defendant had become engaged in Minneapolis and it was agreed that she was to come to Vermont to be married. He sent to her sums amounting to \$275.00 for the purpose of buying her wardrobe in preparation for the marriage, and \$55.00 for travelling expenses to come to Vermont. She bought the clothes but instead of coming East she broke the engagement and married another man. The plaintiff sued to get back the sums he had sent her. In ruling that the plaintiff was entitled to recover the money the court said:

"The \$275 stands differently from the \$55 in this respect that it was literally applied to the purpose for which it was given; yet it stands precisely like the \$55 in that it was to be applied by

the defendant towards the consummation of the marriage engagement. She received both sums for a specific purpose, and when she broke the engagement the law raised a promise on her part to refund them. The plaintiff did not given them to her 'as an adventurer,' to help him win her favor, but in consideration of the engagement and to enable him to perform it. When she broke it he was entitled to have his money refunded. We hold that the gifts were not absolute, but conditional and that when the condition failed a right of action accrued to the plaintiff to recover the money."

The propriety of the decisions seems clear. Good taste and fairness would seem to require the return of gifts that have been given by an accepted suitor who is later rejected through no fault of his own, when the gifts are given with the understanding whether expressed or not that they are given solely in contemplation of an impending marriage.

GAUZE SPONGE SWALLOWED BY CHILD

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vomited a piece of gauze. The parents exhibited the gauze and the doctor found that it resembled the piece of gauze which he had inserted in the boy's throat at the time of the operation. The string and adhesive tape were still attached to it. The doctor examined the child carefully and found that he was progressing normally in every way. The doctor saw the child again at his office a few days later and again his condition was excellent.

Suit was brought against the doctor to recover damages, charging him with negligence in the performance of the operation in that he permitted a foreign substance to remain lodged in plaintiff's throat and that due to his carelessness the same was not removed properly by the doctor and was swallowed by the child, causing him damages. It was alleged that the result to the child was that he suffered nausea, dizziness, loss of appetite and became weak and feeble.

The case came to trial and at the close of testimony introduced on behalf of the plaintiff a motion was made to dismiss the complaint on the ground that the plaintiff failed to make out a cause of action against the doctor. The court indicated that the motion would be granted and thereupon the attorney for the plaintiff moved for leave to discontinue the matter against the doctor. Said motion was granted, and the case was discontinued, thereby finally terminating the action in favor of the doctor.



NEWS NOTES



THE ANNUAL MEETING

The 127th annual meeting of the Medical So ciety of the State of New York, which was held April 3-5, 1933, in the Waldorf-Astoria Hotel, New York, was the most extensive and satisfactory in the lustory of the Society. This success is what one would naturally expect in view of the great progress that the medical profession of the State of New York has made in all lines of medical activity, many of which were in their formative stage only a decade ago.

Many factors contributed to the broad scope and high standard of the meeting, not the least being the Waldorf-Astoria Hotel, which provided abundant space and accommodations for every meeting and activity. Every feature of the meeting was easily approached and readily accommodated. The cooperation of the hotel management was all that could be desired, and only praise of it was expressed by the members.

The success of the annual meeting was the result of the judgment of those who planned it. The several officers and committeemen were men of imagination as well as experience, who were able to enact every feature of the program in their minds, so that the meetings and exhibits unfolded themselves like a well rehearsed play or pageant in a theatre.

The program of the annual meeting had been in the process of development for months and the completed plans were presented in the Journal of March first, with mere minor changes annunced in the Journals of March fitteenth and April first. The members of the State Society were fully informed of the good things they could see and hear, and their response was extremely gratifying, for 1,650 physicians recorded their presence, a registration that was by far a record-breaker.

HOUSE OF DELEGATES

The meeting of the House of Delegates on April 3 and 4 was conducted with harmony, and the business was transacted with speed and good judgment. The arguments on the propositions were made with good feeling, and the sersions were fruitful in confirming the plans and propositions submitted by the officers and committees in their annual reports.

The outstanding action was the report of the special committee appointed to consider the report of the National Committee on the Costs of Medical Care, which was briefly described in this Journal of December 15, 1932, page 1432. The members of the House of Delegates gave their undivided attention to the reading of the report by Dr Arthur W Booth, Chairman of the special committee, and voted unanimously for its adoption. This report is printed on page 499, and is the subject of an editorial comment on page 529 of this Journal

The mangural address of the mooning President of the State Society, Dr Frederick H Flaherty, of Syracuse, was given on Tuesdry morning, in accordance with Section 8 of Chapter 2 of the by-laws of the Society This address is published on page 497 of this Journal

A new feature of the Delegates' Dinner which was held between the afternoon and evening sessions on Monday, was four after dinner addresses on subjects of medical administration

Dr Emil Koffler, of New York City, described the workings of the compulsory health insurance systems in England and Continental Europe Dr Koffler outlined the same views which he had given in his leading article in this Journal of April 15, 1932, page 437

Dr Henry F Vaughan, Commissioner of Health of Detroit Michigan, described the methods by which the Department of Health of his city had developed a system of making every family doctor an agent of the Department in the distribution of preventive services, thereby abolishing Department Clinics, and making the office of each doctor a chine. The physicians were pud for their services and the cost to the city is less than the item which had formerly been paid for the hospital care of patients who became sick in the days before preventive medicine had become generally practiced

An outline of a similar address by Dr Vaughan before the Second District Branch was published in this Journal of December 1, 1932, page 1383

Dr Stuart Pritchard, of Battle Creek, Michigan, gave a brief outline of the preventive work done in rural schools of Michigan, under the auspices of the Kellogg Foundation
This work was largely preventive and educative

Dr G F McCleary, Medical Officer of the Ministry of Health of England, described the advantages of the panel system of medical care inder the State Insurance plan of giving medical treatments

The distinction drawn between gifts given a lady to gain her favor and gifts conditioned on the contemplated marriage is well illustrated in a case decided some time ago in one of the New England States. In that case the facts were that the plaintiff and the defendant had become engaged in Minneapolis and it was agreed that she was to come to Vermont to be married. He sent to her sums amounting to \$275.00 for the purpose of buying her wardrobe in preparation for the marriage, and \$55.00 for travelling expenses to come to Vermont. She bought the clothes but instead of coming East she broke the engagement and married another man. The plaintiff sued to get back the sums he had sent her. In ruling that the plaintiff was entitled to recover the money the court said:

"The \$275 stands differently from the \$55 in this respect that it was literally applied to the purpose for which it was given; yet it stands precisely like the \$55 in that it was to be applied by

the defendant fowards the consummation of the marriage engagement. She received both sums for a specific purpose, and when she broke the engagement the law raised a promise on her part to refund them. The plaintiff did not given them to her 'as an adventurer,' to help him win her favor, but in consideration of the engagement and to enable him to perform it. When she broke it he was entitled to have his money refunded. We hold that the gifts were not absolute, but conditional and that when the condition failed a right of action accrued to the plaintiff to recover the money."

The propriety of the decisions seems clear. Good taste and fairness would seem to require the return of gifts that have been given by an accepted suitor who is later rejected through no fault of his own, when the gifts are given with the understanding whether expressed or not that they are given solely in contemplation of an impending marriage.

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Supplying modern medical service is no longer confined to an individual doctor dealing with an individual sick person. The service of medicine is also a civic activity in which the people collectively have a part, and in which physicians as an organization must assume the leadership. The extent of the participation of organized physicians in the practice of civic medicine is indicated by the scope of the program of the annual meeting of the Medical Society of the State of New York. The newspapers are essential agents for spreading a knowledge of medical activities and responsibilities among the people.

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Vice-Presidents, Ralph R. Fitch, Rochester, Charles D. Kline, Nyack.

Speaker of the House of Delegates, Samuel J. Kopetzky, New York.

Vice-Speaker of the House of Delegates, Floyd S. Winslow, Rochester.

Trustee for Five Years, George W. Cottis, Jamestown.

Chairman of Committee on Economics, Frederick H. Elliott, Brooklyn.

The other officers were reelected. A full list of the officers appears on page 528.

It is expected that the minutes of the House of Delegates will be printed in full in the Journal of May first.

SCIENTIFIC SECTIONS AND SESSIONS

Following the precedent of last year, scientific papers of common interest to all the members of the Society were presented in two general sessions, held on the afternoons of Tuesday and Wednesday.

The mornings of those two days were devoted to the specialties which were organized in eight sections. A special session on radiology was conducted on Tuesday morning, and one on physical therapy on Wednesday morning.

The attendance at the scientific sections was unexpectedly large, and the meeting rooms were filled to overflowing.

The scientific papers were of unusual practical value and interest, and will be published in this Journal during the year.

SCIENTIFIC EXHIBITS

An extensive series of scientific exhibits was collected under the leadership of Dr. F. E. Sondern. This collection included pathological specimens, x-ray films, photographs, charts, models, and scientific apparatus. Fifty separate collections were listed in the program of the meeting, and altogether about two thousand specimens were shown. A valuable feature was the presence of lecturers and demonstrators, who explained the special features of the exhibits and their relation to the practice of scientific medicine.

The racks and tables used for the display of the exhibits were loaned by the New York Academy of Medicine from the extensive collection which it maintains for the use of its own exhibits. The exhibits were put up, supervised and removed under the direction of Mr. Harold Maddocks, Superintendent of the building of the Academy, and a staff of assistants experienced in the work.

The exhibit was popular with the physicians, and will doubtless be made a feature of every annual meeting.

THE FORMAL ANNUAL MEETING

The session which is formally called the annual meeting was conducted as the after-dinner part of the Annual Banquet, which was held on Tuesday evening in the Grand Ball Room. About one thousand physicians and their wives were present. The program was as follows:

Presidential address, "The Medical Society of the State of New York; Our Responsibilities and Our Obligations," by Dr. Chas. Gordon Heyd, New York. This address is printed as the leading article in this Journal.

Address: "Medical Science for the Nation,"

by Dr. Edward H. Cary, Dallas, Texas, President of the American Medical Association.

Address: "The Decline of Medicine as an Art," by Dr. Howard W. Haggard, Yale University, New Haven, Connecticut.

Address: "The Master in the House of Medical Paragraphy of Med

Address: "The Master in the House of Medicine," by Dr. Alphonse M. Schwitalla, Dean of the School of Medicine, St. Louis University, St. Louis, Missouri.

The addresses of Drs. Cary, Haggard, and Schwitalla will be published in an early issue of this Journal.

THE OPEN MEETING

A new feature of the Annual Meeting was what was called an "Open" meeting, because it was designed to inform laymen regarding medical subjects which they should understand. This meeting was held on Wednesday evening in the Grand Ballroom of the Waldorf-Astoria. Ad-

mission was free, but by ticket, and the room was filled to overflowing. Blocks of seats had been requested for students in educational institutions such as Columbia University, the Pratt Institute, and the Schools for Nursing. Addresses were given on what the community should know

about common conditions, the speakers being well known physicians, as follows:

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RADIO PROGRAM

A new feature of the annual meeting was the system of radio broadcasts which had been arranged by Dr. Iago Galdston, Director of the Medical Information Bureau under the joint auspices of the Medical Society of the County of New York and the New York Academy of Medicine. The program was carried out according to the program which was printed in the Journal of April first, page 466. Thirteen addresses were given by as many speakers from eight stations. The speakers were outstanding men in their subjects, as is shown by the first three men listed on the program, as follows:

Dr. C. F. McCleary, Medical Officer of the Ministry of Health, England, on "Recent Advances in Child Welfare."

Dr. Burton J. Lee, Cornell University, on "Cancer and the Community."

Dr. Chas. Gordon Heyd, President of the Medical Society of the State of New York, on "The Doctor—Fact and Fiction."

The talks had a two-fold value:

1. They were models of what practical physicians consider to be the best adapted for educating the people in medical and public health subjects.

2. They informed the people regarding the Medical Society of the State of New York and of the desire of the medical profession to instruct

the people regarding their health.

Evidences of the appreciation of the radio talks are the comments which listeners have made to the physicians after their return from the annual meeting, many saying "That must have been a great meeting which you attended. I heard the radio talk given by the State Medical Society."

PRIZE ESSAYS

Two prizes for the best essays on subjects of medical research submitted in a contest under the auspices of the Medical Society of the State of New York were awarded at the annual meeting by a Committee consisting of Dr. H. M. Lyle, Chairman; Dr. Martin Cohen, and Dr. Joshua E. Sweet.

The Merritt H. Cash prize was awarded to Dr. H. Hamilton Cooke, of the Lewis County General Hospital, Lowville, N. Y., for his essay entitled "A Pathological, Experimental, and Clinical Study of Lipoid Deposits in the Gall Bladder." This essay formed a bound volume of 250 typewritten pages, with photographs and tables. The volume took up the general study of the gall bladder, its embryology, anatomy and pathology; and then discussed the lipoids, especially cholesterol, and their relation to the chemistry and pathology

of the gall bladder, and the basic principles of the treatment of the conditions found in the gall bladder.

The second part of the essay consisted of a detailed study of five hundred cases found in human beings, and a report on experiments on animals.

The Lucien Howe prize was awarded to Dr. Julius Ferber, of New York, for his essay on "The present status of thromboangiitis obliterans, with special reference to its treatment by intravenous injections." Dr. Ferber first discussed the disease from the standpoint of pathology, diagnosis, and treatment; and then took up its treatment of the disease by the injections of considerable quantities of saline solutions. The research part of his paper consisted of a detailed record of the blood pressure before and after the injections.

DEMONSTRATION OF WORKMEN'S COMPENSATION ARBITRATION

The demonstration of arbitration of doctors' fees in Workmen's Compensation cases in connection with the Annual Meeting was conducted by Dr. Morris Rosenthal, Director of the Bureau of Compensation Arbitration of the Medical Society of the County of New York, as announced in this Journal of April first, page 467. This demonstration was attended by fifty visiting physicians, and was eminently satisfactory to them. The arbitration on ten compensation cases

were heard and each was judged by a jury of visiting physicians assigned with the consent of both the insurance company and the doctor who treated the case. The visitors were impressed with the rapid disposal of the cases by commonsense methods, and the fairness of the decisions. They felt that the method of arbitration followed by the New York County Medical Society might well be adopted by the other county societies of the State.

COMMITTEE ON PUBLIC RELATIONS

The Committee on Public Relations of the Medical Society of New York State met at the Queensbury Hotel in Glens Falls on March 17, 1933. All members of the Committee were present, also representatives of the counties of Essex, Rensselaer, Saratoga, Montgomery, Schenectady, Albany, and Warren.

Dr. Hoffman spoke for Warren County. He said that the Board of Supervisors has a Public Health Committee with a physician chairman. They are undertaking venereal disease control without holding clinics by having the county health nurse take the indigent venereal disease case to the nearest doctor able to treat the case, whose bill will be audited and paid by the county.

Maternity clinics and eye work are under the county Public Health Committee and are administered in the same way as the venereal disease control. No orthopedic clinics are now held.

Warren County has good working relations with the lay health organizations. "There are too many of them but all is going well enough," The doctors get no compensation from the Welfare Commissioner,

Dr. Hoffman said that they had established an Academy of Medicine for the purpose of advancing medical publicity and medical education by having prominent speakers from time to time. Some of them will be furnished by the Albany Medical College.

Dr. Mazlan, Chairman of the Public Health Committee of the Warren County Medical Society, said that they were trying to keep the practice of medicine in the County Medical Society, and still be fair to the taxpayers of the county. He said that they had no trouble with the Board of Supervisors in health matters.

Warren County has forty thousand population and spends sixty thousand dollars for public health in all of its features. The Supervisors' Public Health Committee is made up of three laymen, two Supervisors, and two doctors. Clinics are carried on by local men. Laboratory services are available for indigent cases when referred by the doctor. The County Medical Society is the leader in all health work.

Dr. Fraser, President of the Warren County Medical Society, said that its Committee on Public Relations had brought about a desirable relationship between the medical profession and lay organizations and that the Committee had done a great deal in establishing the Academy of Medicine which was essentially an educational project.

Dr. Cummins of Essex County said that they had one public health nurse and no Committee on Public Relations. They have had much unemployment. They had, however, taken care of the sickness of the unemployed. Dr. Cummins may have referred to the mining community in

which he is working on salary. There are clinics held by the State Health Department and people may go there without being sent by a doctor. They have no machinery for emergency work in Essex County. There are Red Cross town associations.

Dr. Hemstreet of Rensselaer County said that there are many people going to the clinics of each hospital now and that he was afraid that these people would always want to go. He said that the profession had made a plan to control the attendance and keep the service for the indigent. They have three eards—a plan proposed by the County Medicat Society. Hospitals will cooperate. The idea is to get those not deserving of free care away from clinics.

Dr. Conant of Montgomery County (seventy thousand population) read Dr. Charles Stover's report. Medical welfare is taken care of in the City of Amsterdam by two eity physicians, but they are trying to get these two men to resign and have the work done by the family physicians. Physicians are not paid for their work for the indigent. Cooperation of the medical profession and the lay organizations is good. There is no friction anywhere.

Dr. Goodfellow of Saratoga Springs said that the indigent are cared for at the Saratoga Hospital. Clinics are run by the hospital. Maternity elinics are run by the State. Tuberculosis clinics are run by the Tuberculosis Sanatorium. They have cordial relations with the Health Committee. There is a county laboratory. There are four County Medical Society meetings a year. Staff meetings are held once a month. Hydrotherapy is advancing in this section.

Dr. Treder of Schenectady County said that the Board of Supervisors had asked the profession to help it in the administration of medical welfare. He said that there was much objectionable administration of clinics; that the profession was endeavoring to have the indigent go to doctors' offices; that the County Society objected to the fees established by the Public Welfare Department of the State. The city has three physicians at \$800 a year, whose work amounts to 27 cents a call. He said that they saw no solution of their problems in Schenectady County except to have a county health unit. Dr. Treder favored a county health unit and the County Society favored it.

No one was present to report for the counties of Fulton, Washington, Franklin, and Clinton.

Dr. Lawrence presented for the Committee on Public Relations of Albany County a survey of about one hundred fifty pages which was a study of the relations of physicians, dentists, and nurses; and of the health activities of all groups, including various societies, churches and insurance agencies. The report consisted of correspondence and replies, telling what they were doing and how. It contained a study of forty-nine social agencies and forty-nine health programs, and the amount of money income of each. The report

said that there was an expenditure of \$2,468,764,

for many activities touching upon health and welfare, such as crippled children, community chests, and feeding and clothing the hungry. No conclusions were reached.

W. H. Ross, Secretary.

LEGISLATION

The Legislature of New York State adjourned on Monday, April 10, 1933, at 4:30 P. M., after defeating the bills on osteopathy, chiropractic,

antivivisection, and physical therapy.

The last week of a session of the Legislature is always crowded with rapid changes of events. The Legislative Bureau of the Medical Society of the State of New York sent out the regular bulletins, numbers 11 and 12, and three special bulletins, and kept the Chairmen of the County committees fully informed of the course of the bills. A supplementary bulletin will be issued and printed in the Journal of May first, outlining the history of the principal bills in which physicians are interested.

Temporary Emergency Relief Administration: Legislative bulletin number 12 carried the following advice to physicians in regard to the medical relief of the indigent:

Dr. James Vander Veer's special committee which has been working with representatives of the Temporary Emergency Relief Administration in an effort to perfect a way by which that organization can assist county and town commissioners of public welfare in providing medical care for the indigent, has received a number of letters from physicians in the state asking for further information regarding certain phases of the matter. These are:

First, the manner of securing authorization. One physician wrote that his commissioner has no telephone and lives quite a distance from him and that if he were obliged to secure authorization for every case, it would mean that his mileage to and from the commissioner might be greater than that expended in reaching the patient. The committee recommends that authorization for treatment should be secured by the patient. He is obliged to secure authorization for the purchase of food and clothing and present such authorization to the merchant, and there is no reason why the same procedure should not be followed when he desires medical service. Of course, the first call by the physician can be made without authori-

zation, but at that time the patient should be informed that before further service is rendered, signed authorization should be secured from the welfare officer.

Second, whether mileage should be charged and who should pay it, is the subject for discussion in certain districts. Dr. Vander Veer's committee and the T.E.R.A. made no mention of mileage, because conditions vary so greatly in the different counties that they thought it impossible to make any general statement that would apply more or less fairly to all sections of the state. The best solution of this problem, it seems, would be that the custom which now prevails among the physi cians with regard to mileage should maintain when the case is one authorized by the commis sioner. If the local physicians feel that in cases of this character they might make a reduction of certain amount from the regular mileage fee, tha is a matter for local arrangement between the physicians and the welfare officer. The T.E.R.A has said, however, that if there are many instance where there is much mileage connected with th welfare work, it would make an effort to devis a plan by which it could compensate the welfar officer in a measure for such expenditures. It order to have some knowledge of this, it is sug gested that physicians who are obliged to trave great distances in their welfare work, send to Di Vander Veer statements of their mileage for pe riods of a week, two weeks or a month, and i any number of such statements are receive demonstrating that many long trips are necessary a basis may be reached by which the T.E.R.A can offer to refund to the welfare officer a cer tain portion of such expenses.

Third, in rural districts where the physicia does not write prescriptions, but dispenses his ow drugs, he should be compensated for those drugs their cost should not be included in the house vis fee, and the welfare officer will receive a refun from the T.E.R.A. for such cost in the same mar ner as he would if he were paying the bill to the

druggist.



THE DAILY PRESS



SPEED LIMITS

The possible speed attainable by an automobile is limited by the human capacity of the driver, as is shown in the following editorial in the New York Times of February 24:

"It was almost a superhuman performance that Sir Malcolm Campbell gave when he made his world's record of 272.108 miles an hour. Fame or death was the reward of two runs of about thirteen seconds each. In the white mist that hung over the sands he could see but two seconds ahead. Brakes were almost comical accessories at this fearful pace, useless at speeds of over 100 miles an hour.

"It takes about four-tenths of a second for the trained brain of so skilled a driver as Sir Mal-

colm to tell his muscles what to do. In that time the Blue Bird can cover 398 feet. Marking flags 100 yards apart flicker past like pickets in a fence. Instinct rather than sight guides the hand. Campbell expresses disappointment at not having attained 285 miles an hour because of the poor condition of the beach. Others have hinted at 400. The Blue Bird's steady improvement since 1924, after four rebuildings, shows that the engineering limit to speed is not yet in sight. But what of the human limit? One cannot help wondering whether Sir Malcolm has not almost reached it, and whether a car faster and more powerful than the Blue Bird can be controlled at its maximum speed."

FRANKLIN'S INSCRIPTION FOR THE PENNSYLVANIA HOSPITAL

The New York Times of February 28 has the following comment on Franklin's inscription for the cornerstone of the Pennsylvania Hospital:

"Benjamin Franklin is so much the sage and statesman that people are apt to forget what a first-rate literary draftsman he was. No man, said Dr. Johnson, is on his oath in a lapidary inscription, and certainly few men are at their ease in composing any kind of inscription. But the legend which Franklin composed for the cornerstone of the Pennsylvania Hospital—the original manuscript turned up recently in Germany—shows how feeling, grace and decorum may dwell together in one who is a master of style.

"It is as follows:

In the Year of Christ 1755

George the Second happily reigning
(For he sought the Happiness of his People)
Philadelphia flourishing
(For its Inhabitants were publick-spirited)

(For its Inhabitants were publick-spirited)

This Building,

By the Boyerty of the Covernment

By the Bounty of the Government And of many private Persons, Was piously founded,

For the Relief of the Sick and Miserable.

May the God of Mercies

Bless the Undertaking!"

COINING NEW WORDS

Medical authors are prone to use words strange and new that have not yet achieved a place in dictionaries. The question sometimes arises as to when new words become a part of the English language. This problem was discussed editorially in the New York Times of March 25, commenting on a law suit growing out of a contest in coining words out of a given set of letters. The Times said:

"Plaintiffs submitted longer word lists than the winning one's, but were ruled out by the contest judges because many of their words were not 'correct,' in the sense of being moderately familiar. They were highly abstruse technical terms. How would the reader like to meet one dark night on a lonely road a desma, which is 'a stout, irregular spicule, formed by precipitation of silica on a spicular nucleus'?

"All over this wide land the dictionary hounds, stimulated by large money offers from the business world, are running down strange quarry like the desma. And yet where shall the line be drawn? Even when we have eliminated the scientific terms and have brought down the contents of the English language to one-fifth the amount contained in the big dictionaries, say 50,000 words, we shall still have left things like acatalectic pentameter, which on a dark night on a lonely road would be almost as bad as a desma."

The editors of the New York State Journal or Medicine hope that the plaintiffs lose their

suit

COLD WINTERS

The New York *Times* of March 28 discusses cold winters as follows:

"There are two topics of universal and inexhaustible interest to the human race: Why are Winters and Summers not what they used to be? Why are the prices charged by the grocer and the butcher not what they used to be? A composite picture of the past, as memory fondly enshrines it in the average man, would show a little boy going out into 30-below-zero weather to fetch his mother some butter from the store at 5 cents a pound or thereabouts.

"Take note of the announcement by the Weather Bureau at Washington that we are now passing through the warmest Winter cycle since 1776. The Winter of 1931-32 was the warmest Winter in one hundred years in the territory east of the

Rocky Mountains.

"Plainly an apology is due the average citizen from the meteorological pundits. Whenever Jones suggests that our Winters do not seem to be so cold as they used to be he is promptly put in his place by the weather scientists. They tell him it is just like an ignorant layman to argue from personal impressions and one or two accidents or coincidents. Ignorant laymen never give close attention to the long-time record of nature's behavior.

"Well, it turns out that the average man is right about the weather, though the expert, too, is right. It depends on how long a record we consult. If we go back to 1776, the Winters are no warmer than they were then. But in between there have been colder Winters. A warm-Winter curve appears about every fifty to seventy-five years, but that is much further back than most of us can remember. For the average man it is mathematically determined that he shall be living in a period when Winters are either warmer or colder than they used to be."

STATISTICS

Statistics are as puzzling to many of us as they are to James J. Montague, who expresses himself

"I often wish I had the nerve
To plot my future with a curve;
I wish my pathway I could mark
By working out an upward arc,
Or with a graph a spot could find
Where gold and silver might be mined.
If I were just an engineer
I'd face the future minus fear.
A pair of compasses I'd ply
To map the road to by and by,
And over books of tables bend
To ascertain the forward trend,

in a form that is "More Truth Than Poetry" in the New York Herald Tribune of February 20:

By following which my load of care Would shortly be dissolved in air. With instruments I'd calculate The proper time to deviate, What operations to perform In order to reveal my norm, And to envision, as a seer, The things that must occur next year. But figures only puzzle me, And so no future I can see. I'll have to use experience, And, if I've got it, common sense."

JUSTICE HOLMES AS A CHILD

The 92nd birthday of Justice Oliver Wendell Holmes of the United States Supreme Court on March 8, was the occasion for the New York

"The fearless soldier who has faced The serried bayonets' gleam appalling, For nothing save a pin misplaced The peaceful nursery has disgraced With hours of unheroic howling. Sun of that date to quote a poem written by the jurist's father, when the son first became a judge, which says:

The justice who in gown and cap Condemns a wretch to strangulation Has thrashed his nurse and spilled his pap And sprawled across his mother's lap For wholesome law's administration."

B

BOOKS RECEIVED



- Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as distated by their merits, or in the interests of our readers.
- A DECADE OF DISTRICT HEALTH CENTER PHONEERING A Ten-Year Report of the East Harlem Health Center Report prepared under the direction of Kenneth D WINDEMFR, Executive Officer Octavo of 148 pages, illustrated New York, The East Harlem Health Center, Inc., 1932 Paper, \$100
- THE MEDICAL CLINICS OF NORTH AMERICA Vol 16 No 4 January, 1933 (Boston Number) Published every other month by W B Saunders Company, Philadelphia and London Per Clime Year (6 issues) Cloth, \$16 00 net, paper, \$12 00 net
- CASE STUDIES IN THE PSYCHOPATHOLOGY OF CRIME BY BEN KARPYAN, M D Vol 1 Large octave of 1042 pages, Illustrated Washington, Minneoform Press, [c. 1933] Cloth, \$1200 (The sale of this book is restricted to members of the medical, legal, scientific and other professions having a direct and definite interest in medical and social problems)
- ORGANIZED MEDICAL SERVICE AT FORT BENNING, GEORGIA By I S FALL, Ph D Octavo of 119 pages Clincago, The University of Chicago Press, [c 1932] Paper, 90c (Publications of the Committee on the Costs of Medical Carc No 21)
- SURVEYS OF THE MEDICAL FACILITIES IN THREE REPRESENTATIVE SOUTHERN COUNTIES B; C ST C GUILD M D Octavo of 173 pages Chicago, The University of Chicago Press, [c. 1932] Paper, \$100 (Publications of the Committee on the Costs of Medical Care No 23)
- The Incomes of Physicians By Maurice Levey Ph D Octavo of 135 pages Chicago The University of Chicago Press, [e 1932] Cloth, \$2.00 (Publica tions of the Committee on the Costs of Medical Care No 24)
- DISEASES OF THE EYE BY HOFRAT ERNST FUCHS M D
 The 15th German Edition of the Lehrbuch der Augenheilkunde as Revised by Maximilian Salzmann 10th
 English Edition authorized translation by E V L
 BROWN, M D Octavo of 641 pages, illustrated Priladelphia, J B Lippincott Company, [c 1933] Cloth,
 \$700
- THE PUNDAMENTALS OF GOOD MEDICAL CARE. BY ROGER I LEE M D and Lewis W JONES, Ph D Octavo of 302 pages Chicago The University of Chicago Press, [c 1933] Cloth, \$2 50 (Publications of the Committee on the Costs of Medical Care No 22)
- THE PRACTICAL MEDICINE SERIES Comprising Eight Volumes on the Year's Progress in Medicine and Surgery Series 1932 Chicago The Year Book Publishers, [c 1933] Pediatrics Edited by ISAAC A ART, M D, 12mo of 564 pages illustrated Cloth \$225
- PSYCHO-ANALYSIS TODA1 Its Scope and Function Edited by SANOOR LORAND, M.D. Octavo of 370 pages, New York, Covici Friede 1933 Cloth \$425

- THE PELLIS IN OOSTETRICS BY JULIUS JARCHO, M D Octavo of 365 pages, illustrated New York, Paul B Hoeber, Inc., 1933 Cloth, \$6.00
- The Principles and Practice of Obstetrics By Joseph B DeLee, M D Sixth Edition Large octave of 1165 pages, illustrated Philadelphia, W B Saun ders Company, 1933 Cloth, \$1200
- Neuropariiology The Anatomical Foundation of Nervous Diseases By Walter Freeman, M D Octavo of 349 pages, illustrated Philadelphia, W B Saunders Company, 1933 Cloth, \$4 00
- SURGICAL CLINICS OF NORTH AMERICA Vol 13, No 1, February, 1933 (Pacific Coast Surgical Association Number) Published every other month by the W B Sunders Company, Philadelphia and London Per Clime Year (6 issues) Cloth, \$1600, Paper, \$1200
- Correction of Defective Speech By Lowin Burket Twitmyer, Ph D and Yale Samuel, Nathanson, Ph D Octado of 413 pages, illustrated Philadelphia, P Blakiston's Son & Co [c 1932] Cloth \$350
- An Inoex of Treatment by Varions Writers Edited by Robert Hutchison, M.D. Tenth Edition Rojal octivo of 1027 pages, illustrated Baltimore Williams & Wilkins Company (William Wood & Company), 1932 Cloth, \$1200
- An Index of Prognosis and End-Results of Treatment Edited by A Rendle Short MD Fourth Edition Royal octave of 599 pages illustrated Balti more, Wilhams & Wilkins Company (William Wood & Company) Cloth, \$1200
- DISEASES OF THE NOSF THROAT AND LAR FOR PRACTITIONERS AND STUDENTS Edited by A LOGAN TURNER, M D Third Edition Octavo of 465 pages, illustrated Baltimore, Wilham & Wilkins Company, (Wilham Wood & Company), 1932 Cloth, \$600
- PRACTICAL OBSTETRICS FOR STUDENTS AND PRACTITIONERS BY P BROOKF BLAND M D Octavo of 730 pages, illustrated Philadelphia F A Davis Company, 1932 Cloth, \$800
- THE ART OF ANESTHESIA BY PALUEL J PLACE, M D Fifth Edition Octivo of 416 pages, illustrated Phuladelphia, J B Lippincott Company [c 1932] Cloth, \$500
- Your Hearing and How to Preserve and A10 It By Wendell C Phillips, M D., and Hugh G Rowell M D 12mo of 232 pages illustrated New York D Appleton and Company, 1932 Cloth, \$2.00
- OUNLINE OF PREVENTIVE MEDICINE Prepared Under the Auspices of the Committee on Public Health Relations New York Academy of Medicine Second Edition 12mo of 462 pages New York, Paul B Hoeber, Inc., 1932 Cloth, \$500



OUR NEIGHBORS



ANNUAL MEETING IN PHILIPPINE ISLANDS

The Ianuary number of the *Journal* of the Philippine Islands Medical Association discusses the annual meeting editorially as follows:

"On December 13-16, 1932, Manila, the Philippine City of conventions, once again had the privilege of witnessing an important medical reunion—the annual meeting of the Philippine Islands Medical Association, held at the end of its thir-

tieth year of existence.

"As in the past, and despite the present economic depression, the program of this year's meeting was replete with original and noteworthy contributions in the various branches of medicine, especially clinical medicine and public health. It was gratifying to see that several clinico-experimental studies of some of our medicinal plants and important problems of psychopathological nature were included. It was no less a source of satisfaction to see that the program included also a goodly number of research papers contributed by the medical officers of the United States Army, who cordially cooperated in making the meeting a success. Moreover, Dr. Victor G. Heiser of the Rockefeller Foundation, who was invited to the convention as special guest of the association, contributed illuminating facts regarding worldwide medical problems.

"Above all, however, the members of this convention were particularly fortunate in having had the rare opportunity of listening to the inspiring message of Senate President Manuel L. Quezon and to the significant and encouraging words of

Governor General Theodore Roosevelt.

"Dr. Heiser has emphasized our large death rate and unnecessarily high morbidity. We should not forget that our provincial and rural communities are mostly in need of the blessings of a good water supply and of modern hygienic facilities that will insure protection against intestinal infections. Our tuberculosis rate is entirely too high, and the general undernourishment of our people undoubtedly predisposes them to all sorts of diseases. These are some of the vital

problems that require our collective and united endeavors.

"With our determination to build an independent nation, it is our duty to bring about the improvement of the health and physique of our people. We all know that our sturdy race is the best asset of a nation, and that disease is a decided

liability

"Today, 'education' is the fascinating word that holds the confidence and hopes of all nations. We are among those who have an unflinching faith in it. We blindly believed and still believe that the welfare of humankind, and of our people in particular, lies in the education of the masses; yet, as the years go by and as we observe the slow process and uncertain results of education, we are inclined today to modify our former view, especially on matters concerning public health, in the sense that education alone, without the strict enforcement of the rules and laws governing public health and sanitation, can not eradicate many of the endemic diseases prevalent in our country. The force of habit is strong, and assimilationby which is meant the transforming of a foreign idea or institution into something indigenous truly expressing the native genius of the people -takes time.

"It is not derogatory to our people to state that the majority of the laws and rules of health and sanitation are new in our country. They are also

new in many countries.

"If we will depend, then, only on the slow and uncertain results of education we shall endanger the safety of the present and also that of future generations. Many of the habits and traditions of our people that are not in accord with present scientific knowledge will continue to prevail and will hinder the physical and mental development of our people and country.

"Therefore, if we want to get immediate results we must insert strong teeth into our rules and laws on hygiene and sanitation to make them

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ECONOMICS IN WISCONSIN

The February number of the Wisconsin Medical Journal has the following editorial comment on the economic upheaval which affects doctors as well as other classes of citizens.

"A year ago we had occasion to visit our log cabin in the woods about the first of May. To

and the frame that were as large as two inches in some corners. We called the carpenter post haste that this destruction caused by Mother Nature in the winter months might be remedied even though the bill obviously would be a high one.

"Why man alive! If I were to saw all those



FOR THE NERVOUS PATIENT WHO CAN'T SLEEP

THE ordinary type of nervous insomnia as it affects the neurasthenic, the convalescent or the physically run-down individual, can often be corrected without the use of habit-forming, hypnotic drugs.

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Ovaltine is the Swiss food concentrate

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The Swiss Food - Drinks

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widely recommended by physicians as a food for invalids and convalescents, for nervous and run-down patients, for growing children, for nursing and expectant mothers and for the aged.

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physicians, dentists and nurses
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charge, and full literature

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"Why man alive! If I were to saw all those windows down to fit now it would be all out of

(Continued on page 550-adv. xiv)



DURING PREGNANCY AND THE POSTPARTUM PERIOD

supporting treatment is essential. Fellows' Syrup is the most logically prepared tonic at the disposal of the physician.

It contains all the required minerals in correct proportion and in an easily assimilable form. These are Manganese and Iron to renew the blood stream impoverished by continued loss; Calcium to replenish the constant calcium depletion; Potassium, Sodium, and Phosphorus to overcome the neural depression: Strychnine as a tonic to cell metabolism; and Quinine as a gastric stimulant.

There is no better tonic than Fellows' Syrup to the parturient and post-parturient patient. During these trying periods, the suggested dose is one teaspoonful three times daily well mixed with water.

OF THE HYPOPHOSPHITES

SAMPLES ON REQUEST

FELLOWS MEDICAL MFG. CO., INC. 26 Christopher Street, New York, N.Y.



(Continued from page 550—adv. xiv) adversity, we cannot reduce them without correspondingly reducing space available for reading matter.

"We are, therefore, urging all member physicians to read the advertising pages of the Journal and to give their patronage, wherever and when-

ever practicable, to the dealers and manufacturers who have so generously supported our publication. It is only through such patronage of our advertisers by members of the profession that we can hope to continue the Journal in its present size and so be able to take care of all the worthwhile material submitted for publication."

CONFERENCE OF COUNTY OFFICERS IN COLORADO

The February issue of *Colorado Medicine* contains the following account of a conference of County Presidents and Secretaries:

"The meeting was held in the auditorium of the Capitol Life Insurance Company Building, Denver, at 7:30 p. m. Thursday, January 19, with Dr. Frank B. Stephenson, State President, presiding. While attendance might have been greater, nine of the county societies were represented by their presidents, secretaries, or by both president and secretary, four state officers were present, and state committees were generously represented.

"Those attending felt that the meeting would produce more of concrete results in county studies of economic problems, particularly through the 'Iowa Plan' of caring for indigency, than any meeting that has been held in the state. Discussion of the four papers was to the point in each case, and many valuable ideas for improvement of county society activities were exchanged. A buffet supper was served with the compliments of the Walgreen Company at the close of the conference.

"It was voted that an analysis of the 'Iowa Plan' as presented by Dr. Cooper be mimeographed and supplied to all county officers, so that those not present at the conference may study what were considered the most important points brought forth. This will be in the hands of county officers about the time this issue of Colorado Medicine reaches them.

"Following is the program as followed at the conference: (Continued on page 553—adv. xvii)

You Can Recommend This TOMATO JUICE with Confidence

Kemp's SUN-RAYED Tomato Juice has the distinction of being the FIRST tomato Juice accepted by the American Medical Association, Committee on Foods—and the FIRST tomato Juice to submit PROVED VITAMIN POTENCY, verified by scientific feeding tests. This rich, full-bodied, pure tomato Juice is obtainable at nearly all chain food stores and most independent stores in the New York district.



Write for copy of Steenbock report, showing nutritional importance of full-bodied, whole tomato juice over thin juices containing only a portion of the tomato solids

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of Diabetic Patients

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(Starch-Free)

is necessary. Your diabetic patients will do well and enjoy these easily made starch-free muffins, biscuits, bread.

LISTER BROS., INC., 41 East 42nd Street, New York, N. Y.

(Continued from page 552-adv, xvi)

"Actions of the National Conference of State Secretaries and Journal Editors—Douglas W. Macomber, M.D., Scientific Editor, Colorado Medicine.

Discussion opened by Mr. Harvey T. Sethman, Executive Scoretary.

"Caring for the Indigent by County Society Contract; The "Iowa Plan"—Claude E. Cooper, M.D., President, Medical Society of the City and County of Denver,

Discussion opened by Tracy D. Peppers, M.D., Secretary, Weld County Medical Society.

"Building Attractive Scientific Programs—C. E. Honstein, M.D., President, Larimer County Medical Society.

Discussion opened by M. W. Cooke, M.D.,

President, Bonider County Medical Society.
"State Society Committees; Their Relation to the County Organization—Mr. Harvey T. Seth-

man, Executive Secretary.
Discussion opened by Carl S. Gydesen, M.D.,
Secretary, El Paso County Medical Society.

"Round Table Discussion of Individual County Problems."

TUBERCULOSIS SANATORIUM IN MINNESOTA

The February number of The Journal-Lancet, of Minnesota contains the following editorial on the changing attitude of the managers of the State Tuberculosis Sanatorium toward family doctors:

"Physicians to the private practice of medicine will hail with delight the announcement in this issue of the program of the Minnesota State Sanatorium. For nearly two decades the private general practitioner conscientiously and honestly diagnosed tuberculosis but the cases were hurried away from him, rarely to be returned. Law organizations and others convinced the public, and even the physician, that he was not capable of treating tuberculosis patients.

"The following statement of Dr. Burns (superintendent of the Sanatorium), is most significant:

"'It is the plan of the Minnesota State Sanatorium to co-operate to the fullest extent with the family doctor, realizing that he is the only successful case-finder and that the responsibility and : " continue to rest with :. " plan outlined, every physician's office becomes a tuberculosis clinic and with this should come the abolition of the so-called free tuberculosis clinic, except for those few operated in our teaching and charitable institutions, where cognizance is given to eligibility; in other words, those operated for the poor. In sparsely populated parts of our state, where physicians' offices are far apart, an occasional tuberculosis clinic of the oldtime type might be justified.

(Continued on page 554-adv. xvni)

Please meetion if a IAHRWAI alant als.



Prescribe

Maltcao

In Treating Neurasthenia

For patients in that nervous or "tundown" condition or for those easily fatigued we suggest the

use of Maltcao. It is also helpful in the treatment of nutritional failure and low-ered calcium metabolism, as well as for the re-enforcement of the anti-neuritic and anti-pellagric factor of diet.

Sample on request

A product of Merckens-Buffalo, N. Y.

PHYLLICIN

Theophyllme-calcium salicylate

In Cardiac Disease

A new theophylline salt for oral medication. A well tolerated diuretic and myocardial stimulant.



USUAL DOSE: 4 grains (or 1 tablet) two to four times a day.

Literature and samples upon request.

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Anesthetist Available — Anesthetist dentist would like connection with husy surgeon or hospital. Post-Graduate of the Lakeside Hospital School of Anesthetics, Cleveland, Ohio. Sixteen years' experience and familiar with the different make machines used for the administration of gas, ether, etc. Would devote entire time to the administration and instruction of general anesthesia. Address Box 2, Care N. Y. State Journal of Medicine.

Urologic Nurse (Male) desires ethical position, private or institutional. Fourteen years specialized experience in all phases of Cystoscopic, G. V. and G. C. procedures, Salary nominal. Available June 1st. Highest references. Address Box 6, Care New York State Journal of Medicine.

EDITOR WANTED

Editor, experienced in literature of medicine and surgery; doctor preferred. Position per-Address GHT, New York State Journal of Medicine.

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Current data supplied to physicians from one of the great medical libraries. English and foreign sources. Manuscripts prepared for publication; typing, editing, proofreading, hibliographies. LITERARY RESEARCH BUREAU, 111 East Tenth Street, New York.

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THE DECLINE OF MEDICINE AS AN ART

By HOWARD W HAGGARD, MD, NEW HAVEN, CONN

From the Department of Physiology Ante University, New Haven Connecticut Delivered at the Annual Meeting of the Medical Society of the State of New York after the Banquel on the evening of Tuesday April 4 1933 in the Hotel Waldorf Astoria New York City

7HEN you did me the honor to ask me to speak here it was intimated by your Conimittee that I should choose for a topic one that covers some of the reasons why the medical profession of today appears to have lost prestige in the eyes of the public. That is a difficult subject to deal with, especially as I am not convinced that it has lost prestige. Rather the contrary

If by prestige you mean influence, and that is the definition that the dictionary gives for the word prestige-if you mean influence in matters pertaining to health in public affairs, in the actual shaping of the lives of people today, then the medical profession has not lost prestige forces of modern medicine are influencing the lives of every man, and woman and cluld-our whole public—to an extent far greater than at any other time in all listory and I can safely say to a greater extent than any other force operating in modern civilization

Present day civilization is made possible only by medical knowledge. This very city is able to exist only because of the influence of modern medicine Remove from New York or any other city the support provided by medicine and de moralization would follow

The public thinks of medicine as limited to the doctor, the hospital, and the dispensary, but medicine includes as well all the precantions that make the city of today the healthnest place that has ever been known, it includes such matters as food inspection, sewage disposal, water purification, health supervision, quarantine, and all the measures directed toward controlling and pre venting disease, as well as the doctor and the hos Urban civilization as we know it depends upon medical influence. That is prestige

But if you mean by prestige the acknowledged recognition, the kudos, that you feel and I feel should be accorded and shown to the men of a profession that has everted and is exerting the greatest force on the betterment of human life that the world has ever known, then, if that is what you mean by prestige, it has perhaps declined

And I fully appreciate the need for this very kind of prestige-not for the satisfaction of mere personal pride and personal gratification but as desirable in smoothing the way for medical progress and allowing the fuller display of medical benefits, with the correspondingly greater advantage to the public. If the art and science and practice of medicine are to continue to be of their full and enormous benefit, then the public must come to a realization of their responsibility for the contiminance of medicine, must acknowledge its prestige and give cooperation

If still further you have in mind as an ideal of the way the physician and his profession should be treated and revered, that attitude once extended to the cherished character of medicine, now growing obsolete and about whom wishful myths are developing-the old family doctor-a man who exerted a great influence on town life, who appeared as a paragon in medical matters, as an oracle on all subjects social and political, who was a father-confessor, who was a man after whom grateful mothers proudly named their offspring, and whose limitations were known only to his wife and the town druggist-if that is an ideal of prestige then it is a prestige of person ality and not of profession

If the modern physician is held in a regard less warm than that accorded to the old family doctor, if he is less revered as the leading citizen, then either the physician has changes, or the public, or And I believe it is both The reasons for the change in the public we can discuss in a mo ment, the reason for the change in the physician is, I believe, to be found in the subject which I have chosen for this talk-"The decline of medicine as an art "

A decline, a change, is always indicative of a past, some previous state Let us then examine the regard in which medicine has been held in the past, examine also the attitudes of the public, and likewise the benefits that, at each period, medicine has conferred upon the public

The definitions of the practice of nicdienie as given from the public's viewpoint are few and indefinite. But about 200 years ago a certain Mr. Ballow of London, a lawyer, made a now classic formulation of the practice of the past and of his day. It expresses the public regard of medicine in the early 18th century and its corresponding

prestige.

The story involves a certain Dr. Aikenside whose sole claim to distinction lies in the fact that he was the butt of Ballow's rancor. incident is included in Hawkins' Life of Jonson. Dr. Aikenside was an habitué of bar-rooms and of coffee houses. It was in Tom's Coffee House that he met Ballow. The two argued over the relative demerits of law and medicine, each holding the other's profession in the mutual disregard which is fairly common at all periods. The result of the discussion was a challenge to a duel. Both promptly repented of their impetuosity. The outcome was that Aikenside refused to meet Ballow in the morning; Ballow refused to meet Aikenside in the afternoon. A reconciliation eventually followed and on the occasion of the meeting at Tom's Coffee House, Ballow delivered his famous dictum of medicine. He coarsely inveighed against the profession of physic, laboring to prove it all an imposture. Aikenside protested. Ballow finally cut him short with, "Doctor, after all you have said, my opinion of the profession of physic is this—the ancients endeavored to make it a science and failed; the moderns to make it a trade and have succeeded."

But, let me say, that before the ancients endeavored to make it a science, medicine was a

religion. And always it has been an art.

Religion, trade, science, art, all of these things have had their influences in shaping medical practice. Elements of each one of them are found in the profession today. But throughout the span of history one has predominated, then another and another, each in turn coloring the practice of a period and each in turn arising as a product of the public of the time.

The average level of medical practice never gets far from the level of its public.

We talk of the public's regard of medicine, but in doing so we forget that the physician himself in any period is a product, is a part, of that same public. He has grown from it, his ideas and his ideals are colored by it. The state of the practice of medicine at any period reflects the state of the public; the public's attitude toward medicine reflects in turn precisely the regard in which the physician himself holds his own calling. When he regards it as an art or a religion he is venerated. When he holds it as a trade he is treated as a tradesman. When he holds it as a science he is treated as a scientist.

It would appear from the facts of history that the regard in which medicine is held at any period has nothing whatever to do with the benefits to be derived from it. Medicine has been held in highest veneration when it has had little or nothing of actual physical benefit to offer to the people; it has been held in the very lowest regard at a time when it has had more to offer. And today when it is not only offering, but is giving a vast amount, when it has become a very mainstay of modern civilization, it is received in some quarters if not with hostility at least with great indifference.

The regard in which medicine is held is an emotional state. Religion and art appeal to the emotions, trade and science do not. Modern scientific medicine appeals to reason; the public while admitting that medicine should be furthered, disease eliminated, life prolonged, remain aloof in the matter, for in the more or less sapient human beings that make up our public and our medical profession emotions are not yet dictated by reason.

Let us take a wide span of history and deal specifically with some periods in which one or another of the elements of medical practice has predominated. In each case let us see what the physician was like, what his profession gave to the public and what the public in return offered as social cooperation. I repeat to you that the regard, emotional regard, in which the physician held his own calling is precisely the regard in which the public held it and it is furthermore a gauge of the degree of public cooperation.

If we were to include quackery and cultism, and charlatanism in this discussion we should need to go clear back to the time of the primitive savage medicine man pounding a tom-tom to frighten away the spirits of disease, performing incantations to recall a wandering soul, and reciting charms to overcome the malign influences of an enemy. In short carrying out in various guises what we know today as faith-healing.

Quackery, or charlatanism, or cultism, is always medicine out of date. All the cultism of today is the discarded medical practice of the past and most of it is so far in the past that it goes into the primitive or savage state. If we brought from some South Sea Island or from the forests of Africa a native medicine man and allowed him to practice according to his native rites in our more or less civilized midst-and 1 have no doubt that he would be allowed so to practice in many of our states, if his foster and more up-to-date brethren in the legitimate profession of medicine could retain their cherished and exclusive privilege of signing the death certificates for his patients—such a man, a savage medicine man, would differ not at all in principles of practice, only in form, from the various cults of charlatanism already supported in our midst, whether they be metaphysical healing, back slapping, foot twisting, or patent medicine. Charlatanism is as atavistic as war-its existence proclaims the fact that civilization is only a veneer.

Scratch even the most cultured skin and you draw the blood of a savage. The charlatan does no actual physical good to his patients yet many people of our public hold him in veneration, the veneration of personal prestige. Those who submit to his ministrations have a stronger emotional feeling for him than for the scientific but frankly less artful physician.

Yet if education can contribute anything to man it should be in the control of the emotions by reason. Education as I conceive it is the training of the intellect to appreciate reason. Culture is the training of the emotions to respond in appreciation of art. The best educated man in only one generation removed from savagery and many cultured gentlemen who patronize charlatans are in reality only cultured savages who have an atavistic appreciation of primitive medicine.

Today the public is a generally cultured public and it has an influence on public affairs and upon medical affairs greater than at any other time in history. But the actions of a public are always destructive, never constructive. People tend to pull down everything to their average level. Advancement, construction is not made by great numbers, but by great individuals.

The primitive medicine man was a priest. The only element of primitive medicine that the medical profession has retained is the religious element still inculcated in our ethics and is found especially in the feelings of those men sincere in their love of their profession who believe that medicine today is the religion of man's salvation on earth, the most practical and the most humane philosophy that has ever been evolved.

As I said the primitive medicine man was a priest. And so when we come to those Grecian days prior to Hippocrates we find medicine in the hands of a religious organization, the priests of Æsculapius, the Grecian God of Healing who with his daughters Hygiea and Panacea were the idols of the ill. The profession was venerated. Its prestige was great. But what did medicine have to offer? Were the people healthy, did they live long, was infant mortality low, was there freedom from suffering, freedom from devastating epidemics? By no means. By modern standards those days which were the glory of Greece were pitifully disease-ridden, in comparison with modern conditions the people suffered frightfully, infant mortality was high, life was short. And what did those venerated doctors do to find the cause of disease, learn how to treat it, learn how They did very little. And why to control it? should they? They assumed no responsibility. The Gods brought disease. The Gods took it away. They might intercede with the Gods, but the responsibility was beyond their hands. they were venerated, respected, they had kudos. It cost the people very little to obtain medical

service and that service was worth precisely what they paid for it.

I may say parenthetically that this pre-Hippocratic medicine was subsidized medicine, strictly institutional and supported by the public, a variety that has been strongly advocated in recent years by the reports on the Cost of Medical Carc. It is peculiar how by the whirligig of time the old continually comes back as the new—we are now offered subsidized medicine with the will of the Gods replaced by the dictates of a board of lay executives.

Subsidized, institutionalized, medicine is based upon the conception that medicine is either an omnipotent religion or an exact science. Among the Greeks it was such a religion; among the moderns it is neither an omnipotent religion, nor an exact science.

It is unlikely that medicine will again become such a religion; when and if it does become an exact science then the highly trained and skilled physician will no longer be needed, but merely medical technicians such as now can carry out those aspects of medicine which have been reduced to a nearly exact science and are hence wholly impersonal as are some phases of sanitation.

The subsidized medicine of the ancient Greeks was broken down by a man whom we revere as the father of modern medicine, Hippoerates. He opened the way for the individual practicing physician.

His great contribution to medicine as a science was to take the burden of the responsibility for disease off the shoulders of the Gods and put it squarely upon the shoulders of man where it belongs. He said in effect that the Gods are not responsible for disease, but ignorance is. Man can learn to control disease only by gaining knowledge and putting that knowledge into force against disease. He thus supplied an incentive, a responsibility for bettering man's condition. And by whom was this responsibility assumed? Was it eagerly seized upon by the public who were to benefit? It was not. Did the public hail Hippocrates as the Messiah of man's salvation on earth? They did not. His simple, logical, honest principles appealed to reason, not to emotion. And furthermore did the physicians of the days of Hippocrates and in the subsequent centuries follow his rational procedure? They did not. Within the century medicine was a matter of contending theories and schools and dogmas. The physicians of those days, as of today, were a product of the public. In the six centuries following Hippocrates there was once or twice a flickering revival of true Hippocratic medicine. But civilization was declining, and as is always the case medicine declined with it. In the period following the fall of the Roman Empire, medicine reverted essentially to religious healing, but under the Christian regime it lacked the dignity that it had had under the pagan Grecian cult of Æsculapius.

It was not until the Renaissance and later with the revival of learning and the advancement of civilization that the responsibility enunciated by Hippocrates was finally assumed. And by whom then was it assumed? By the public to be benefited? No. It was carried on as it is now by the men of the medical profession who as a result are today giving to the public the healthiest period that the world has ever known. And this great end has been attained despite indifference or even opposition by a public who have refused to assume their share of responsibility for their own betterment.

Medical science has become the controlling influence in modern civilization, a fact recognized by a few lay historians of note but they are the The situation exceptions rather than the rule. was precisely defined by President A. Lawrence Lowell of Harvard in these words: He said: "It is hardly an exaggeration to summarize the history of 400 years by saying that the leading idea of a conquering nation in relation to the conguered was in 1600 to change their religion; in 1700 to change their laws; in 1800 to change their trade; in 1900 to change their drainage." And he continues, "May we not then say that on the prow of the conquering ship in these 400 years first stood the priest, then the lawyer, then the merchant, and finally the physician?"

A very pleasing tribute indeed to the medical profession, but if it be true that there stands to-day the physician on the prow of the ship of civilization, if it be true, and it is, that medicine of today is leading the people of the world to healthier and longer and better life, then why do not the public rejoice, and pay tribute with earnest cooperation to this great civilizing force?

There are two reasons. First, the public by and large do not know the facts—the history in the matter. Second the public do not feel the thrill of emotion that is necessary to bring into being a united and determined movement whether it be religious crusading, or patriotism of war, or a conquest to abolish disease. The public do not know; the public do not feel. And why? The first is a fault of our historians; the second a fault of our physicians.

Let us consider the histories first. The public obtain their knowledge of history in our schools and from general reading. Few of the men that write general histories have more than an inkling of the vastly important part that medicine has played in shaping civilization. Nevertheless medical history is world history. Some phase of medicine has been involved in every great historical event, but usually these medical aspects have been ignored or overlooked. Yet for everyone, medical history is probably more important than any other phase of history, for medical his-

tory discloses the forces which have made modern civilization possible. Few if any general historians tell of the actual health conditions of the people of any period; some touch upon the great epidemics such as the black death, but sanitation, health conditions, the diseases of the individual, they fail to record.

There is a whole history just in the statement of average lengths of life through the centuries—400 years ago the average length of life was about 8 years; 200 years ago it was 18 years; today it is 58 years. That is an aspect of medical advancement. Behind those figures for short length of life, of untimely death in the past, there is a story of suffering, sorrow, frustration, pathos that pales to insignificance all tales of war and politics, intrigue, and trade that fill the pages of our histories.

Let me make my charge against the general historian more specific. I shall deal with the physician in a moment. A few years ago H. G. Wells brought out his "Outline of History." Whether it was good history or bad I don't know, but it was widely read. I went through the book for any mention of medicine. I found one.one,—pertaining to the days of Hippocrates. The author said that the size of the Grecian cities was limited because of lack of knowledge of sanitation. In that one statement he raised the influence of medicine to a par with that of war, and politics, for the small size of the Athenian cities was the cause of their political and martial difficulties, in fact of their type of civilization. But having enunciated the fundamental truth almost parenthetically he at once reverted to the customary story of intrigues, and martial triumphs, and his general scolding of the great men of his story. Neither in that history nor in any other do the public have brought before them the great humanitarians and most humanitarians have been physicians. Before such men as Jenner with his vaccination, Pasteur and Koch who gave us sanitation, Lister who gave us asepsis and antisepsis, Walter Reed who gave us control of yellow fever, and Ross who led the way to wipe out malaria, and Long and Wells and Morton who gave us anesthesia—humanitarians all and before them I say Napoleon and Alexander, and Caesar sink to the insignificance of troublesome bullies.

The public of today do not know the conditions of life before medical science exerted its profound influence upon civilization. The average man is oblivious of the fact that pestilential diseases were once rampant, that suffering was vastly greater than today, and life infinitely shorter. He is oblivious of the fact that within a single generation all these unpleasant conditions could recur. He is concerned solely with the earnest desires for the elimination of the aches and pains and diseases which still afflict mankind. His atti-

tude too often is scornful, uncooperative. His attention is fixed not upon the triumples of medi-

cine, but instead upon its limitations

As I said the public does not know the facts and will only learn them when our histories have been altered. Furthermore even if they had the knowledge the public would not feel the emotional thrill that would engender a united effort, would lead to cooperation. And as I said before the emotion felt by the public is precisely the emotion felt by the physician. When he loves his profession gives his life and soul to it in faith, then and then only do the public feel the warmth of sympathy that makes for veneration of the profession. Only when medicine is a religion or an art is this feeling engendered. It is not called or a cold science.

Very briefly, just in passing, let us glance at medical practice in those days when it was preemmently a trade I should choose the time of There were some honorable, fine men of medicine in those days, there was the great Sydenham, but the general level of the profession was what lawyer Ballow defined it, a trade and a trade in ill repute. The common run of physicians were those whom Molicre satired in his plays when he took his needle from his tailor's trade and with it pricked the bubbles of human conceit Braggarts, empirics, formalists, trades Men without prestige The European physician ranked somewhere between the per-fumer and the hair dresser. There were exceptions as I said But surgery was essentially a calling of menials, medicine a resort of pompous impostures. Ten men indeed had any true love of their profession

And in the period in which the general his torian deals with the finances of Colbert, the politics of Richelien and Mazaran, the affairs of La Valliere and Montespin and the glorics of court life—what were the conditions of health of the people?

Let us choose one figure to show the prestige the influence, the benefits derived from the medicine of that period Take not a common citizen but a great king, the grand monarch, Louis XIV, renowned for his health and freedom from dis ease The medical complaints of royalty are al ways a commentary on the medical successes of any period, for a ruler commands the best medical attention. It King George of England today let us say developed smallpox or bubonic plague (the disease that kalled Petrarch's Laura) or diphtheria (George Washington died of that) or typhoid fever, or typhiis or malaria, or rabies or dysentery, or tuberculosis or even a toothache -diseases all preventable by modern medical knowledge-it would be a medical scandal. And set here are the more important diseases from which Louis XIV suffered

He was born with two teeth, so we are told, much to the discomfort of his wet nurse, he had smallpox when nine years old, a venereal infection a few years later, and then typhoid fever When 25 he contracted measles from the queen He was troubled with intestinal parasites, and certain courtiers in deference to his station have endowed him with a tapeworm of proportions to suit his royal mignificance and his royal appetite His teeth were bad and he was troubled continually with abscesses about them. He had overrhea At 44 he developed gout, and the following year dislocated his elbow by falling from his horse Three years later he developed a most personal complaint which interfered considerably with his royal magnificance and kept him for a time from sitting with comfort upon the royal He likewise had mularia, then a series of carbuncles His gout became worse, he was troubled with gravel. His arteries hardened. His legs became gangrenous He died

This is not the morbidity decord of a whole court that I have enumerated but of one individual the Grand Monarch. His successor Louis XV died of smallpox—one of the last important personages to succumb to this disease. This period of the time of Louis XIV was one, as I said, when the physicians, although able to give much more than did the priest of Assoulapius or even the doctors of Salerno, or yet the physicians at the brilliant heights of Arabic civilization, were looked down upon with contempt as pompous, shallow tradesmen, to be caricatured lampooned It is not a pleasant period of medical practice

I et us turn to the more pleasant one, to those days when medicine was supremely an art as an mocation of love I should choose the period of our own Revolutionary War and the years fol We could name such men as Shippen, lowing Rush, and Morgan as our examples The period in which they fixed was one when men's minds were turned to serious matters Devotion to principle was a characteristic of that day Pubhe minded, socially minded men devoted their services to the needs of their fellow men with an almost religious fervor, one of self-sacrifice Rush loved medicine, he believed in it with a patriotic fervor He was a product of the public of his time, a time when six medical men were signers of the Declaration of Independence Socially-minded men followed medicine as an outlet to give expression to their desire to help their fellow men They made an art of medicine They were great physicians The art of their profession was the ability to establish a confidence between physician and patient-an identification of common interest. They understood that the ill man or woman or child was for the time being not of normal mind was not a homo sapiens, and was not able to assume responsibility Sick people often care less for science than for

sympathy and human understanding. They want the physician to do something for them, something kindly. So long as the human mind in its full ramifications remains beyond an evaluation by scientific precision then medicine must remain an art. So long as medical practice involves the personal contact of physician and patient then it is the art of the physician that must establish the necessary bond of sympathy. And if in the interest of science rather than humanity this identification, this contact between patient and physician is lost then the public will in revolt turn to the charlatans who while doing nothing of physical benefit for their patients give them mental comfort. The patients of the charlatan may die, but they will die happier, supported to the last by confidence unfortunately born of ignorance.

The physician must be an artist; and an artist is a man whose talent, whose personality is suited to his calling. Benjamin Rush, Osler, all of our great practitioners have been men of outstanding personality. Few great scientists have been great physicians. Harvey who described the circulation of the blood was a bad therapist; Koch to whom we owe the conception of the bacterial cause of disease, gave up practice, Pasteur was not even a physician.

Yet the physician, realizing the inestimable value of these discoveries of science to the physical welfare of his patient, has too often tried to

make the sick room a laboratory.

During the last 80 years medical science has made amazing discoveries for betterment of health and for the prolongation of life. Preventive medicine has developed. The world has become healthier. No men have ever labored as hard to work themselves out of employment as have the physicians, for it has been the men of the medical profession who have used every effort to further preventive medicine,—the prevention rather than treatment of disease.

In the first flush of the triumphs of the application of science to medicine, it appeared that all the problems of medicine were to be answered and that medicine at last was destined to become as exact and impersonal as engineering. Our medical education changed; it adopted the precise methods of science. It built its structure on the laboratory as a foundation. Pre-medical education changed. For our medical schools we selected men who excelled in the laboratory sciences. We did not select men to go into medicine because of a driving desire to help mankind, socially minded men. In the medical schools the students were trained too often by great scientists and not by great practitioners. Attention centered almost exclusively upon the physical manifestations of disease. Consequently we have developed many bedside pathologists, interested in diagnosis for the sake of diagnosis but whose only contact with the patient is through the foot of rubber tubing on the end of a stethoscope.

Benjamin Rush was a great practitioner; to him his patients had both a body and a mind. He loved mankind. He loved medicine. It was he who said, "Medicine is my wife and science my mistress." And you may recall Oliver Wendell Holmes' comment. "Medicine may be his wife and science his mistress but it cannot be shown that the breach of the Seventh Commandment was of any advantage to the legitimate re-

cipient of his affections."

The physician of today is too often wedded to science. An artist is appreciated by the public he is revered; the scientist is not. Science to the American public for all that has been said of it is not a God; it is a servant; in becoming a scientist the physician has taken his stand with the chemist, the physicist, the engineer. And the chemist and the physicist, and the engineer for all of the great good they have done, and are doing to our civilization are not revered; they do not have the prestige which is so essential in medicine. The physician in becoming a scientist loses his prestige even though he does more for the actual benefit of his patients than would a man less scientific.

One can paraphrase the remark of the Frenchman who stood at Balaclava during the Crimean War and saw the heroic charge of the Light Brigade: "This is glorious but it is not war." Science is glorious, but it is not medicine.

THE MASTER IN THE HOUSE OF MEDICINE

By ALPHONSE M. SCHWITALLA, S.J., Ph.D.

Dean, St. Louis University School of Medicine

Delivered at the Annual Meeting of the Medical Society of the State of New York after the Annual Banquet on the evening of April 4, 1933, in the Hotel Waldorf-Astoria, New York City.

I.

Y title makes two assumptions, the first, that medicine still has a house and the second, that there is a master in the house whoever that master might be; assumptions both, which in the minds of some people, are rather violent and require some form of vindication.

For there are not a few, who priding themselves on their genius for the obvious, insist that medicine has long since forsaken its house and has walked perhaps in amnesic somnambulance into unaccustomed bypaths trespassing unconsciously upon the domain of the pure scientist, or the sociologist, or the economist, or the legal expert. There are those too, who insist somewhat equically, to be sure, and with not a little irony, that medicine, in its decadent senescence needs the stimulation of new ideas. They think it needs to be galvanized out of its over-stuffed settee where it has sunken in contented mediocrity watching some of its recent progeny flock about, possessing the house that was medicine's, somewhat like Sir Walter Vivian's visitors in Tennyson's "Princess." For Sir Walter

"All a summer's day
Gave his broad lawns until the set of sun
Up to the people; thither flock'd at noon
His tenants, wife and child, and thither half
The neighboring borough with their Institute,
Of which he was the patron."

"And there we saw Sir Walter where he stood, Before a tower of crimson holly-oaks,

A patron of some thirty charities, A pamphleteer on guano and on grain, A quarter-sessions chairman, abler noue;"

Of course this is a strange picture for those of us who still regard our mythological patron, Æsculapius, as the traditional personification of medicine; a splendid personification, for Æsculapius was the son of Apollo, the god of light and beauty and fertility and manly strength. Today, if we had to choose from the galaxy of gods, the one whom our present trends might best inspire us to choose as our patron, he would probably be the fleet-footed, wingéd-heeled and wingédcapped Hermes, Æsculapius' uncle, for his were the characteristics of inventiveness and versatility with fascination, trickery and cunning, a god, strange to say, not only of thieves, tradesmen and agriculturists but also of the pharmacologists and perhaps the biochemists if they liad them in those early mythological days.

Who now is the master in the house of medicine? The question is today rather interesting because it has been recently answered. answer has come as the Report of the Committee on the Costs of Medical Care. In its very first dictum under the section entitled "The Philosophy and the Intent of the Recommendations," the Committee tells us that the solution of the problem "of providing satisfactory medical service . will be of immense economic and social significance." Economics and sociology are here apparently nominated as masters in the house of medicine. In its first recommendation, the Committee nominates another candidate for this mastership "organization." Physicians, dentists, nurses, pharmacists, hospital officials, should all be organized. In the second recommendation, there occurs still another nomination for master of the house of medicine, the official health department around which, as a hub, so one may

casily understand the recommendation, the medical profession will wheel us all in our course to universal health. And in the third recommendation, there is still another nomination for this master of the house of medicine, the great god of Finance, through whom the purchase of medieal care on a group payment basis, on insurance plans and on taxation schemes is to be made more effective. And I regret to say, in recommendation four, another nominee appears, a weighty one, a dignified and ponderous one, the god of Centralized Control, for we are told that "the study, evaluation and coordination of medical services should be considered important functions for every state and local community." Surely, the recommendations of the Committee have put forth enough nominees for the master of the house of medicine. Each has a platform upon which to base his claim; each has a program which is to form a panacea for some, if not for all the ills from which the old master of the house is suffering; each is prepared to wage a campaigu. vigorous and virulent in vindication of his claim to dominance. A formidable array of worthy candidates-economics, sociology, organization, finance, official health agencies, public control. Where among all these is medicine itself? Who owns the house of medicine? And to whom has the house of medicine for centuries upon centuries belonged? Are we to forget the good old adage that "possession is nine-tenths of the law" and that other adage that "a man's home is his stronghold"? To vindicate the rights of medicine, just a tiny voice called the Minority Report was raised. And the Minority Report dared insist that perhaps the master in the house of medicine should still be considered medicine itself.

11.

In making these comments, I would not be understood as under-valuing in any sense the enormous contributions which the Committee on the Costs of Medical Care has made not only to medical economics but even more specifically to many other phases of medical practice; to our understanding of the social relations in medicine and of the public health significance of medical practice, to the inter-relationships between voluntary and official health agencies, to our grasp of the intricate inter-relationships between medicine and many and diverse public interests. On all of these classes of questions and perhaps on many others, the work of the Committee has accumulated vast masses of data which probably could have been assembled so effectively and completely by no other group possessing similar facilities in an equally short length of time. That all of this information is of enormous value in the cultural history of our nation can hardly be successfully denied by any thinking man. If, therefore, the final results of the Committee's activities have failed to commend themselves universally and particularly, if they have failed in impressing the medical profession as a whole, my explanation is only this that the Committee members were carried away by an overwhelming sense of responsibility to the public at large, a sense of responsibility which obscured the clear vision of the means by which the health betterment of that public could be best safe-guarded, namely, the progressive and ever-accelerated development of the one profession to which is entrusted in our scheme of things, the maintenance of the public's health and its restoration to health after sickness.

The Committee understood too well its sociological, its economic, its organizational, its financial and similar problems, but understood too little the character of its medical problem. It saw the masses and forgot the individual who makes up the masses. It saw the distant vision but it saw not the single man who stood close at hand. Enamoured of the future vision, it was blind to the near reality. Carried away by long distance planning, it forgot that such planning is conditioned upon the satisfaction of immediate needs. The far-off mountain seemed so near that the chasm in the foreground was completely overlooked. All this is my view of the Committee's work. It made nominations for the dominance of the house of medicine and forgot that medicine is still and must continue ever to be master in its own house.

III.

Let me single out for special discussion the strategies and sorties of three separate challengers of medicine to the ownership of its house. All three challengers are generals in the socio-economic-political army each leading his separate division to lend force to his challenge.

The first of these challengers might be called Efficient Mass Production. It must be admitted that he has many seemingly convincing claims to the ownership of medicine's house. The statistical data amassed by the Committee proves perhaps to demonstration that the people need a substantially larger volume of medical service than they now utilize; that modern public health service needs to be extended to a greater percentage of the people and to hitherto uncared for areas; that a geographical redistribution of practitioners and agencies must be effected.

How does the Committee propose to meet these needs? The majority of the Committee recommends that medical service should be furnished by organized groups, these groups to be organized around a hospital for rendering complete home, office and hospital care. This being effected, the community possesses what the Committee itself calls its "most fundamental specific proposal" (page 110), its own community medical center. The Committee suggests the intensive develop-

ment of medical service, the more effective utilization of subsidiary personnel, the expansion of the private group clinic, of the pay clinic and of middle rate hospital service, organized nursing service, and of clinics controlled by county medical societies.

Are these recommendations a real answer to the needs? They rest, they seem to me, upon a false assumption that mass production can be effected in medical practice just as it can in indus-They lose sight of the differences between human beings and machines, between the physician and the mechanic. We may teach a mechanic to assemble with ever-increasing efficient speed the parts of an automobile and to fit each such part into a pre-destined and pre-planned place; we cannot teach the physician to treat the diseased organs of one human being as he would the corresponding parts of another human being even under what are ostensibly the same conditions. Symptomatology was at one time thought to be indicative of a disease; today it has become indicative of an individual's characteristics and constitution. No matter how many patients he has, if the individual doctor fails to treat each of these cases with as much care approximately and with as strong a sense of responsibility as he would have if this were the only patient under his care, the physician has fallen short of the legitimate expectancy of his clientele.

The fundamental reason why the individual patient cannot and must not be treated as a member of a large group is because of his uniqueness. Let us not forget our fundamental biology. Biochemistry, genetics, physiology, pharmacology, the science of immunity, all these and many others of the fundamental and the clinical sciences are insisting with constantly increasing emphasis and with reliance upon rapidly amassing evidence not upon what used to be called the clinical disease entities but rather upon the individuality of each We have learnt to lay less stress upon similarities and more stress upon dissimilarities. In medical practice the laisser-faire adage that "exceptions prove the rule" finds no application; rather does medicine say, when there are exceptions there is no rule. Many a page of biological history has been turned since the day when Huxley could insist that the protoplasm of the cow and the protoplasm of the grass devoured by the cow are the same protoplasm. Our research laboratories have shown us that we can no longer think of one uniform basis of life but that we must look for individual differences in protoplasm when genus is compared with genus, species with species, sex with sex, individual with individual, organs of one individual with the corresponding organs of another individual, yes even, not to labor the point too much, when one cell is compared with its contiguous cell in the same tissues. Medicine has derived from this viewpoint

the principles for its greatest conquests. We have learnt to understand constitution, allergy, heredity, hormonal control, the so-called idiosyncracies, all these and other phases of medicine too numerous to mention are each an emphatic insistence upon the differentiation of each of us among our kind.

How then in the face of all of this can we still insist upon mass production and efficiency in medical practice? All that we have learnt recently is a plea for the individual care of the individual patient by the individual physician. Only the latter can synthesize effectively and to the patient's best interests the pieces of the complicated jig-saw puzzle that are supplied to him through his stethoscope and microscope, through his test tube and stop watch, through his eye and ear and To be sure, there are limitations to this insistence upon individual practice but when the exigencies of modern medicine and the public's needs demand, let us grudgingly rather than gladly yield to the hurry and scurry, the scramble and scuttle of wholesale practice. It is one thing to practice wholesale medicine through need and pressure with regrets for one's neglected ideals, and it is quite a different thing to convert wholesale medicine into a routine which progressively metamorphoses into an established objective. can also understand that under certain carefully controlled conditions with broadly trained, widely visioned leadership and in an environment of cautious and scientific clinical thinking, the mass practice of medicine can be made to yield results of outstanding value. But I submit that even then those results are achieved not so much through mass practice but rather through the superior leadership in such a group as well as to its superior facilities. The Romans had a proverb which can readily be misunderstood but which nevertheless contained many a germ of many a great thought "quod licet Jovi non licet bovi." We know that the same words in the mouth of poet and peasant have a different meaning, the same action of banker and baker a different significance. The efficacy of medical centers does not rest in the institution as a medical center but it rests in the mental and material soil in which it is planted, in the administrative offices where presides the controlling mind and heart, in the laboratory where the chemist, the pathologist and the clinical microscopist sees or sees not the facts that are revealed to the understanding eye. To recommend the development of medical centers and to ignore a recommendation for the installation of those within the medical centers who alone can give them meaning and life, is to me nothing more than to build caskets for our defunct ideals.

There are many other considerations which might well enter into the story of mass production's onslaught upon the mastery of the house of medicine. Let me pass them over with but a

brief mention. I can think of mass practice of medicine as advocated by the Committee for general adoption as nothing else than merely yielding to the present needs at the sacrifice of future good. I can think of it only as offering a prognosis of progressive deterioration in ideals, as a shield for the less able, the less industrious, the more mercenary in medicine, so that they might hide behind the men of solid achievement, of continued application and unselfish dedication. us not lose sight of human nature. Of all the professions, medicine is perhaps the one in which insincerity is most promptly uncovered; perhaps the one in which the blackness of incompetence and quackery is most easily dispelled by the bright light of science; perhaps the one in which the stumbling of the stupid is made more easily apparent. Yet with all this, medical men are still human and as long as humans are, the easiest way will be for all too many the way of choice.

Mass practice must never dispossess medicine

from its ownership of its house.

IV.

The second of these challengers to the ownership of the house of medicine is Organization. All through the Report and the many other studies which lead up to its final formulations. thoughts are stressed that our difficulty is not so much with the number of individuals concerned directly or indirectly with practice of medicine, but rather with the lack of coordination of effort in this vast personnel of more than a million. All through the keynote is sounded that it is not so much inadequate expenditure as it is ill-advised expenditure which has brought our needs to unbearable urgency. And so the shibboleth echoes through the recommendations. "Organize everybody and everything; organize the doctors, the dentists, the nurses, the social workers, the pharmacists, the hospital officials, the midwives, the hygienists; organize resources—the buildings and grounds, the laboratories and admission offices, the hospital and social centers, the outpatient cubicles and the in-patient beds; organize the funds-donations and dues, patients' payments and community contributions. Organize the community itself for better health care. Break down the barriers of race and creed of national and political affiliation.'

Now it cannot be denied that if the voice of some great dictator were to ring with the force of Gabriel's trumpet through the hills and vales and plains of the land, much might be accomplished through organization. And yet, like the faint trilling of the cardinal on a late spring sunny day above the roar of Niagara's falls comes the plea of the Minority, whispered 'through the thunderous boom of the Majority for the restoration of the general practitioner to the central place in medical practice. With what timidity the

poor Minority must have written its fourth recommendation. Surely, they must have felt as sheepish and apologetic as if they were recommending the substitution of a horse and buggy for the modern palace on rubber tires. They could not but have felt as timid as if they had called for side burns, Prince Albert and silk hat as substitutes for the dapper toggery of the just doctorated medico. And yet, the general practitioner owned and some of us think still owns, the house of medicine.

First of all, I cannot bend my good Catholic knees before the god of Organization. It is true we have long since celebrated his apotheosis, but something must have happened when he reached Today, like Vulcan when he was shown the door and came tumbling down, organization limps. Somehow we have lost confidence in his omnipotence and perhaps some of us are even sacrilegious enough to deny him divine honors. The catastrophes of the last few months have made scoffing skeptics of us all. And now we want to organize medicine and to organize it not as biology teaches. All true organization must be effected through the pressure of internal forces through which the organism is maintained and not through the coercive pressure of external forces which molds inert matter alone into forms and shapes. I contend that the profession of medicine is not as yet inert matter; it is still a living, vibrant group of men who know their own minds and hearts, their own ambitions and longings, their own capacities and achievements. Yes, I too desire the more efficient organization of medicine but I want that organization to come not from without but from within the profession. I want the profession to differentiate itself to progress to ever more refined forms of specialism ut all this in response to the superior needs of the profession working out its own destiny for the betterment of its own service to a community standing in need of that service and not through the pressure of alien forces that would mold it like passive clay into mere caricatures of the sublime form which it has set as the goal of its own development. Again, I say, let us not forget our biology. Organization from within never destroys the morphological and physiological traits of the developing organism but brings them rather to their termination. Organization from without restricts, contracts or expands here and there in response to pressure variations and the resultant may be a misshapen mass. Medicine as we have it today in our country has fulfilled a reat destiny. It is all but unintelligible that totay when medicine is celebrating day after day rogressively greater triumphs and is giving proressively more convincing evidence of its inteor life and is even in the face of the restrictions id privations of the last few years, humbly orying in the fact that it alone among the mainr

forces and human society has preserved the he record of the nation at a level of excellence n before achieved, we should be clamoring for r organization. It seems little short of blind to facts that just when medicine has best st that it can use its liberty and depends to a d equalled perhaps in terms of service by no of the professions dealing with man's ph life, we should attempt to shackle its freed

The question clearly is this, shall the mof the house of medicine be entrusted to a dividual practitioner or to a sort of house mittee which might be called for convergence of the Majority and the Minority group to satisfiedly endorse the maintenance of the personal field of the personal material what different meanings the groups have discovered in this personal reship. Old Aesop was right when he said great deal depends whether the song, the may be the same, comes from the throat o ing or of crow. Somewhere in the definit a satisfactory medical program the Repc us that (page 39)

"preservation of a personal relations! tween patient and physician is an essent ment in safeguarding the quality of sh practice."

Aentele.

Then the Committee goes on to my the inc cal practice and suggests two precise and practice as essentially embodying this prelationship. First, the safeguarding as in the privileged communications between and physician and secondly, the continued responsibility between patient and physicistates expressly

"the business relation between physicipatient is not considered a necessary j the personal relation."

As if to strengthen this position a few para further down the Committee again comes the question

"there is nothing in any way mysterious relation between a patient and a physicia the therapeutic side it is capable of comp jective analysis. As to those phase and not strictly medical, it is of plasm. C satisfactory human relations us that w do mutual patience, symposis of and confidence." (Page 4 dual different with

The Minority seems to take a with sex, in view (page 169) one individually one individually of sympathy and interest int too much fare on the part of the physiontiguous of the ability integrity and a derived f

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physician on the part of the patient, and mutual regard on the part of each for the other which cause the patient to disclose for the purpose of diagnosis and treatment the most private and confidential information concerning himself and his surroundings when necessary for proper diagnosis and treatment. The character and personality of the physician is a major factor in its development and in process of time and continued contact as patient and physician a friendship and intimacy develop that assumes priestly characteristics on the part of the physician-the characteristics of the confidant and adviser in the most intimate personal and family relationships. All phases of personal and family life are at times closely related to the diagnosis and care of an individual's condition, and economic and financial conditions are often as important in diagnosis and care as physical or mental abnormalities. It is an individual relationship, the product of character and personality and cannot be transferred to a group or fostered by group practice."

Again let us remember our fundamentals in Biology. We have heard it stressed ever so often in the days of our undergraduate courses that the organism's reactions at any one time are the product of internal and external forces. Not one added to the other nor one multiplied by the other but one set of forces integrated into the other in the sense in which calculus perhaps teaches us to integrate. There is this strange fact in the interplay between organic and environmental forces, that, as the organism reacts to an extrinsic force, it itself changes and forms not the same old, but in many respects a completely new source of new reactions in the second instant of an extrinsic force's influence. There is progressive change in the organism during the separate and separable instants of the organism's reactions. If we have learned to view disease and illness from this viewpoint we see the fundamental correctness of the analogy I am here suggesting. It is not enough for the physician or the social worker assisting the physician to have once determined the external environment of the patient, to have tabulated these and classified those conditions, but all through the patient's illness the progressive changes under the stimulation of the new environmental factors must be studied, not only with relation to the pre-siekness condition of the patient but also with relation to the gradual organie modifications. If I should eare to admit, for the sake of argument, that much of this is largely theoretical and difficult to reduce to practice, I still maintain that it is a fundamentally sound conception and one which consciously or uneonsciously the physician who is in close, intimate touch with his ease not only understands but actually uses. The modifiability of the patient's

behavior under medication, the antagonistic or synergistic action of drugs, the psychological interplay between patient and physician, between nurse and physician, between patient-nurse-hospital personnel and physician, all these, and many other examples that may be offered, illustrate the principle that during the therapcutic processes not only environmental conditions, but the organism itself is changing and is being made the center of a constantly shifting and changing set of reactions. To my mind the Minority has more closely grasped this very fundamental thought when it

"that all phases of personal and family life are at times significant in therapeutics"

and I believe the Majority has profoundly failed in its formulation when it insists that on the therapeutic side the relationship between patient and physician is susceptible of completely objective analysis. There are more intangibles in sickness than there are in health and these intangibles become progressively multiplied the more serious the patient's condition becomes, to reach a climax of complexity as the final moments of life are approached, even after the physician has explicitly or implicitly pronounced his inability to cope with the disease. I for one should not want to be responsible for the effect on the nation if this phase of medical practice is minimized nor should I desire to be responsible for the blurring of that idealism in the life of the physician or in darkening of the public's attitude towards it which would result from making light in any way of the sanctity, and if need be even the mysteriousness of that relationship between the sick man and his doctor.

If some one wishes to tell me that I am confusing two ideas in this presentation, namely, that I am assuming that personal relationship can be maintained only in the face of the general practitioner's place in medical practice, I have many reasons ready for my position, some debatable and, to my way of thinking, some entirely undebatable. Only one do I wish here to single out and that is the testimony of the Report itself. have called attention to the fact that both the Majority and the Minority insist upon the maintenance of personal relationship. The Minority draws from that principle the conclusion that, therefore, the general practitioner must be returned to his central place in medical practice. The Majority was able to use the principle in its advocacy of some form of group practice only by attenuating the meaning of that relationship and giving it a definition which, while not invalidating the logic of the argument, still negatives, as I see it, all that we have been accustomed to think of when we insist upon the importance of the personal relationship between physician and patient.

If now we insist that it is impossible under the present conditions in the practice of medicine to restore the general practitioner to his place of honor even if we wish to do so, my answer is plainly this, that unless we do so we must be prepared for a re-definition of the practice of medicine from sources that are not medical. We must be prepared to give up what we have hitherto understood by the term medicine and we must accept in its place all the inferences and correlaries that will grow from the conception of group prac-The Minority has suggested that the general practitioner can be restored to his place even in the face of the present complexities of diagnosis and therapeutics. It recommends not only intensively better preparation for the medical man and a growing sense of responsibility among medical educators for supplying the needs of the nation, but particularly does it call attention to the fact that in our medical curricula the stress must be laid rather upon the practice of medicine than upon the practice of specialty, rather upon the organism as a whole than upon its histological, or physiological, or biochemical or bacteriological This does not deny the validity and dignity and the deep significance to the nation's health of progressive specialization but, as I have already said, it is one thing for specialization to emerge from medicine's epigenetic self-determination, one thing for specialization to be the outgrowth of recognized needs in practice, and quite a different thing for specialization to be the resultant of extrinsic coercive forces or merely the pro forma denomination adopted to make the letterhead of group clinics more impressive to the public.

Who is master in the house of medicine? I hope and pray that the general practitioner with all his faults and all his shortcomings and all his limitations may still continue as the central dominating figure in the house of medicine.

V.

Ringing through the Committee's discussions like an obligato in a minor key runs the motif that builds itself up slowly but surely into a haunting spectre and that haunting spectre is the tremendous charge that the practice of medicine as heretofore in use is out of date. And oh, what more terrible thing could be said of any social factor today than that it is hoary haired and senescent. And against the background of this charge there emerges the third claimant to the mastery of the house of medicine, sprightly, spruced-up, spick and span, the claimant of professional evolution. Commentators on the Majority Report have stressed so often the thought, that they advocate, to be sure, not radical revolution but only progressive evolution. Perhaps our sympathies go out more to these claims for the mastery of the house of medicine than to

the others because our sympathies go out to youth but perhaps also wisdom of age might speak just a word of caution, even in this day when we are living in the age of the young man.

The argument, I suppose, should run something like this. We have passed from an age of superindividualistic to an age of sociological thinking. We have by dint of common effort succeeded in bringing the sociological viewpoint into legislation, into commerce, into international relations into labor and trades, into school and churches Through extensive propaganda, we have succeeded in all of these human endeavors to substitute a consideration for the masses instead of the old considerations for the individual. Why should we leave the profession of medicine out of this universal social flood, why should medicine stay behind in this forward movement?

On the face of it there is something intensely attractive in such a formulation. I submit, however, that there are considerations which will show that medicine cannot wholeheartedly and completely participate in such a drift if it desires to remain true to itself. I cannot accept the principle that a something is desirable just because it is new. I am still enamored of the Coliseum and of the pyramids and of the monuments of Assyrian culture and even of the art of the cave man in the Pyrenees. I have a suspicion that some of the things of life which I most value were just as valuable to primitive man, and so I am not over-impressed by the claim that medicine must have a new viewpoint, an eye to the future. Of course, neither am I blind to the fact that we are living in the year 1933 and that we are expecting to plan for at least a year or two more in our educational program in medicine, but it is one thing to say this and quite a different thing to plan for 1980 when between then and now there still intervene a few years. Haven't we become just a little fed up on this long distance planning and on directing the nation's course for half a century? We have even become a little skeptical about the five-year programs both on the international as well as upon national levels.

Now of course we all want to be modern but are we going to forget that the future is a child of the past, are we going to forget that the true view of history teaches us that history is a prophecy rather than merely a record? There prophecy rather than merely a record? are certain phases of life that must run on continuously and uninterruptedly through human experience, and fundamental principles cannot in any true evolution be completely ignored. I know we are living in a sociological era, in an era when economic factors and sociological factors have developed a significance which perhaps they have never had before. I know, too, that sociological and economic thinking have found their way into medicine. With all of this I am in complete and hearty accord. I hope all this may continue.

Let us again examine the situation briefly from

the viewpoint of what seems to be incontrovertible principles. A profession like an organism must adapt itself to progressive changes. Let us note however, that the first and foremost requirement for adaptation is the organism's or the profes sion's self preservation. Change is significant buly if the organism remuns If the organism does not adapt itself to changing environment it will destroy itself. But note too, and here is the point upon which I am throwing the cuiphasis, if the organism over adapts itself it will also destroy itself. Adaptation does not mean a merging of the organism with its environment Essentially it means the maintenance of a measure of isolation the maintenance of individualizing traits and characteristics, the maintenance of internal factors which must not so yield to extrinsic factors that they are completely neutralized. On the basis of this analysis I insist that medicine is not sociology and medicine is not economics and medicine is not organizational efficiency and that the future of medicine, the real progressive evolution of medicine, demands that medicine be allowed to develop as medicine and not as merely an adminet to social science I am not one of those who insist upon pigeon holing into separate compartments the diverse and varied interests of mankind Human interests must not be kept in hermetically sealed compartments. But recognizing all of this we must still insist that neither are we furthering progress by obliterating the individuality and the differentiating characteristics of the many voca tions and avocations which concern themselves with the contrasting phases of life

Pursuing this thought a little farther I should like to insist that medicine must become progres sively conscious if necessary emphatically conscious in the face of popular clamor of its own intrinsic dignity. It has a character to maintain If "noblese oblige" is still the watchword it was then the medical man had better not make himself the tool of an insurance agency, liad better not make himself an under paid servant of a policy holder had better not make himself merely the scribe to whom a financial power dictates what he is to write into the blank spaces of an accident Not in that direction lies progress no matter how much we clamor that this day is the dry of social thinking and financial remedies and corporate relief I might add paragraph upon paragraph on this point. Let me briefly summar ize a few of the views which have grown out of the principles advocated by the Minority some of them clearly expressed, others barely implied An insurance plan which takes away the freedom of the physician in his practice of medicine and substitutes financial expediency for medical policy is not good medicine and I helieve, is not even good insurance An insurance policy which takes medicine out of the central place in relation to the patient and relegates the medical practitioner

to the periphery of interest leaving the premium collector at the hub of the wheel is bound, I think sooner or later to throw the medical man nff of the which altogether and leave the financial agent in charge. Plans for part or deferred payments which substitute financial need for the patient's medical need, which elevate financial administratinn to the commanding position in place of medical care, are to me not signs of progressive evolution and thinking in terms of un to the-minute values but they are to me symptoms of medical When such plans and schemes are devolution in force you may be purchasing something for your policy holder but you are not purchasing adequate medical care. I can concede that under certain rather well defined circumstances some form of corporate practice in medicine or corporate payment for medical service is clearly indicated. It is one thing to let such plans develop in response to local or general needs is a different thing to elevate such a situation to the dignity of national policies

And anyway, is economics after all so much of a god to be worshipped? There are other values in life besides the dollar sign and I have a suspieion that they are just as much up to date. Money after all is only a symbol of barter We may barter away through money exchange some of the things which even money later on cannot buy Let the idealism the self-respect of the medical profession its quasi sacred character, the passion for excellence be traitorously sold for silver and you may well find yourself the insti gator of a crucifixion not merely of the profession but also of the public's welfare not of those who must by virtue of our depend ence upon public opinion allow themselves to be wafted hither and thither by the ever veering We are rather the breath of public opinion leaders and teachers of public opinion. It is not for us to yield but to lead to educate to idealize. our eyes are not to be cast down on the ground our feet, it is true, must rest on solid ground lest we drift away into aethereal regions of impracticality but our eyes must be up-lifted and our hands must be raised not to point out the paths where the masses will tread without us but those paths of higher achievement which mean progresswelv higher and nobler things in life

VI

And so gentlemen I have put before you the claims of three pretenders I believe personally that their claims are weak. I believe that their following is half hearted that the resources be hind them are inadequate to cope with the responsibility which they foolishly and ignorantly desire to assume. And I for one am prepared to vote them out of the mastery of the house of medicine and to leave medicine in control of its house.

THE X-RAY AS AN AID IN THE EARLY RECOGNITION OF SERIOUS DISEASE. OF THE COLON*

By WM. H. STEWART, M.D., AND H. EARL ILLICK, M.D., NEW YORK, N. Y.

IFFERENTIAL diagnosis in organic disease of the colon has always been hazardous when based upon the clinical history and physical findings alone. In recent years the x-ray has made a distinct contribution in the field of diagnostic endeavor enabling one to demonstrate the exact lesion which is responsible for the symptoms.

The study of pathology in the colon by means of the x-ray may be accomplished by several different methods, the most familiar being the gastro-intestinal series following a barium meal. In this type of examination the diagnostic emphasis is placed upon the stomach, which is generally examined serially, the colon being visualized only incompletely at the various hour examinations.

When colon pathology is suspected, the lesion is usually best demonstrated by means of a barium clysma. The entire colon is thus outlined and may be studied as it fills, at full distention and after evacuation. Each stage yields important informa-

tion and requires separate study.

- (1) Filling the colon: sigmoid lesions can best be observed when only the pelvic colon contains barium and before loops of the ileum fill by backflow overshadowing the sigmoid. By turning the patient, the most favorable oblique angle to view the sigmoid may be obtained during fluoroscopy and radiographs made. About one pint of the barium solution is necessary so that the rectum, sigmoid and lower descending only are filled.
- (2) At full distention: the lesion may be better demonstrated especially if in the upper colon. Fully distended loops of colon may overlie and cover up the lesion unless carefully palpated under the fluoroscopic screen.
- (3) After evacuation: is many times a decisive part of the examination. The retained barium scattered through the colon in a definite mucosal pattern renders detection of any infiltration of the wall quite easy. If the colon remains well filled after the first defecation, only the rectum and sigmoid emptying, repeated examinations must be made after several attempts at evacuation; the final roentgenogram should demonstrate the mucosal pattern of the colonic wall, especially in any areas suggestive of disease on the other roentgenograms.

Insufflation of the partially filled colon after defecation of all but traces of barium is of value in outlying polypi, tumors and other filling defects of the lumen of the colon.

A helpful manner of examining the colon in selected cases is to have a pint of barium solution given on the ward and expelled before the patient comes for x-ray. The mucosal folds of the colonic wall are often well outlined on the roentgenograms by this procedure and then a routine clysma with full distention or insufflation performed as indicated.

When the sigmoid is especially redundant, distending the urinary bladder with sterile physiological salt solution may aid in outlining a lesion of the sigmoid by displacing the loops into a more

advantageous position.

As can be readily understood from the above brief consideration of the technical procedures, successful roentgenographic examination of the colon dare not be standardized but requires individual and varied procedure to best demonstrate the lesion.

Cancer and other serious disease of the colon may give slight if any clinical findings and this is true in about half of the cases. The history is Any change in bowel vague and misleading. habit, any colonic dysfunction which persists and becomes progressively worse for a period of a few weeks deserves careful roentgen study before it is to be treated as due to functional causes. The difficulty in early diagnosis of cancer of the colon is summarized by the fact that three-fourths of the cases are already inoperable when the diagnosis is made. More than two-thirds of cases of cancer of the colon involve the recto-sigmoid which is the next most common site for cancer of the intestinal tract to that of the pylorus.

A routine clysma may fail to clearly outline a very definite lesion of the colon especially in the sigmoid. There is more misinterpretation in lesions of the sigmoid than anywhere else in the intestinal tract due to a number of factors—the lower colon is freely movable; it is usually redundant; generally coils on itself; is deeply situated just in front of the sacrum and surrounded by the pelvic walls so that it is difficult to directly palpate or even satisfactorily visualize. The back flow of the clysma into the terminal ileum produces overlapping shadows which cover up the sigmoid and makes detection of incompletely obstructive lesions almost impossible.

In our experience the most satisfactory solution of these difficulties depends upon a special examination when only the pelvic colon contains barium, a procedure which will be explained again in connection with the lantern slides.

Finally, some observations concerning differentiation of serious lesions of the colon will be attempted.

Tuberculous involvement of the intestinal tract is best demonstrated with the meal by mouth and is characterized by a filling defect and retention of the barium in the distal small intestine and

^{*}Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., on May 24, 1932,

with hypermotility in the proximal colon so that the ileo cecal region fills poorly if it becomes filled

Diverticuli produce sacculated outpouchings from the lumen of the colon which retains barrum and are best demonstrated in the 24-hour films after the meal by mouth. If a clysma is given, the greatest number of diverticuli are usually shown the day following the administration of the clysma. In an early or acute stage of diverticulitis, the colon outline may only be seriated with narrowing of the lumen and spasm, this involvement being most common in the sigmoid and with no pouches or only one or two distinguishable At times the sacculations may occur between the layers of the wall of the colon and not be visible outside the lumen, rupture of the diverticuli may take place into the wall of the colon and a palpable tumor be produced. The filling defect may occasionally be indistinguishable from malignant mvolvement

Benign tumors are sometimes found—lipoma, adeno fibroma and others, the essential characteristics being a filling defect within the lumen of the colon which is constant on all examinations, the shadow often being rounded and having slightly movability if pedunculated

Polypi produce a sago-like or lcopard-skin appearance, being lest demonstrated after insufflation of the colon following defectation. These cases are potentially malignant and the diagnosis is of importance for that reason.

Granuloma may produce narrowing and deformity of a long section of the bowel. We have had two proven eases recently, one of the eccum and one of the sigmoid. The filling defect is enormous and the tumor may appear imoperable when exposed, however, no cancer or other specific disease is found nucroscopically. Roentgen treatment is musually efficacious, the tumor completely disappearing very quickly.

In malignant involvement of the typical "nap-kin-ring" type there is an annular construction deforming both sides of the wall of the colon. There is a central canal with out micosal folds being distinguishable which is worm-like as a rule and has irregular edges. This canalization is typical of malignant involvement. There may be dilatation of the colon proximal to this lesson. Other types of malignancy produce narrowing of the outline of the colon, encroachment of the walf on only one side, or finger-printing. If micosal folds can be distinguished in the involved area malignancy is very unlikely.

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OPPORTUNITIES IN MEDICAL ECONOMICS

Physicians now have an unprecedented opportunity to develop a practical system of medical economics; in fact it is forced upon them by statutes of New York State. law and the decisions of the courts have recognized four necessities of life,-food, clothing, shelter, and health. The first three can be produced and distributed by amateurs; but health service and medical treatment can be given by physicians only.

The State has assumed the burden of supplving medical service to the destitute; but the State must purchase it from those who The doctor who donates his have it to sell. services to the destitute, makes a gift to the taxpayers rather than to the poor. It is for the doctors to agree with the government officials as to what shall be a fair price for their services to the destitute. The doctors will be generous, and the State just and fair.

TEMPORARY EMERGENCY RELIEF ADMINISTRATION

The committee Dr James N Vinder Veer, Dr Albert G Swift, Dr Hyzer W Jones, and Dr Joseph S Lawrence, appointed to consider with the Temporary Emergency Relief Administration may promote health work among those receiving home relief, has received some reports from county societies indicating that the committee's work has been helpful

Quite a number of questions have been asked regarding certain details of the Administration which have been answered by correspondence, or by members of the committee attending confer-

ences of the county societies

It is to be hoped that all physicians will take scriously the effort that is being inade and assist the committee by keeping it informed as to how the law is being administered in their particular counties. It is of first importance that every county society should have appointed a Special Committee for this purpose, others have designated the Public Relations Committee which seems to be a logical designation, and again others have authorized their Committee on Medical Economics. A satisfactory administration of this law can only be accomplished by whole-hearted cooperation of physicians and social workers.

The commissioner of public welfare whether of the town or the county, is under the law responsible for the welfare which includes medi-

cil service of those persons who cannot supply the same service for themselves. The quality and quantity of service he may determine according to the amount of money at his disposal. The physicians, however, have but one quality of service to render, and during this present condition, which may be considered a period of emergency, it is recommended in making the charges for their service they offer, temporarily, a reduction up to thirty three and one-third per cent from their regular fees.

The Temporary Emergency Relief Administration has established a working basis with the several commissioners upon which it will refund to commissioners who work according to its program forty per cent of the amount expended in providing incdical service for home relief. A statement of that appeared in the Health News of the State Department of Health some time ago and in some instances was misinterpreted as being a statement of a schedule of fees which the welfare commissioner should employ in paying for inedical service. A correction of this impression has later appeared in the Health News

If your county society has not already taken active steps to bring about a satisfactory administration of this law in your county we hope that it will do so in the very near future. If the State Society Committee can be of any assistance, please

make use of its advice

PREDERICK II PLANERTY President

LOOKING BACKWARD

This Journal Twenty five Years Ago

Health Endowments This Journal of May, 1908 discussed the prospects of obtaining endowments for the promotion of health in the following editorial comment on the prospect that Mr Carnegie will give \$400,000,000 for public health work.

'While thus far there have been but comparatively small beginnings in the way of donations from wealthy men for the advancement of medical science, there is no doubt but that the immense value of such work will soon be so widely appreciated that endowments for its aid will rival

those which for a quarter of a century past have been bestowed upon colleges and hospitals. Not withstanding the high position to which medical knowledge and its application have attained, there is at the present time, as never before a need for financial aid in the advancement of this work. The great possibilities of medical science and the mediculable benefits which he all but within the grasp of humanity, wanting only adequate aid for their accomplishment and full realization should appeal to every philanthropist who can be confronted with the facts."



MEDICAL PROGRESS



Forcible Nasal Inspiration.—Having been called to see a patient because of bleeding on the sixth day after a tonsillectomy had been performed James Dundas-Grant found that the bleeding was not coming from the tonsillar bed, but from the left half of the nasopharynx, from which a small amount of adenoid tissue had been removed. After cleansing the nose and throat with peroxide of hydrogen, he instructed the patient to make several forcible nasal inspirations, each followed by the gentlest expiration through The hemorrhage diminished very the mouth. perceptibly. The blood-stilling action of the forcible inspiration depends on the fact that the powerful expansion of the chest leads to a dilatation of the hollow organs in proportion to the degree of their softness. The right cavities of the heart are the most dilated, but the general dilatation leads to the blood being sucked into the thorax and a consequent lowering of pressure in the peripheral vessels, including those of the nose and nasopharynx. Among other means of checking hemorrhage from the nose or throat, one which will be found most useful is the clinical application of J. Müller's experiment, dating from 1838. This consists of the deepest possible expiration with the glottis closed, followed by a great inspiratory effort. The procedure as applied to hemostasis is recommended by G. Krebs (1903) who gives the instruction to inspire deeply with the mouth closed and to expire gently with it open. This may lead to syncope from a lowering of the cerebral blood pressure, and Sir Dundas-Grant believes it is the predominant factor in the production of what was formerly called "laryngeal vertigo," an error corrected by Peter Mc-Bride, who pointed out that it was really a "laryngeal syncope." Care should be exercised not to advise the practice of nasal inspiration when the nose is obstructed. The result of abuse of nasal inspiration is illustrated by the case of a middle-aged man who showed signs of dilatation of the heart. He stated that in order to keep up his muscularity he indulged in exercises which required forcible inhalation through the nose. Examination showed that both nasal cavities were almost completely occluded by the inferior tur-binated bodies. The restoration of free nasal breathing was followed by relief of the heart symptoms.—British Medical Journal, February 4, 1933, i, 3761.

Acne Vulgaris, a Symptom, Not a Disease.

—P. B. Mumford states that a number of very different etiological factors for acne vulgaris are cited in the literature. The commoner causes

would appear to be certain changes at pubertyparticularly menstrual disorders, seborrhea, constipation, incorrect diet, unhygienic physical life, and lack of local cleanliness. A careful study of 100 cases yielded the following findings: Fiftyfive per cent of the patients examined showed a general increase of sebaceous activity on the face, chest, back and scalp apart from any true comedones or pustules. Constipation of a degree sufficient to demand the regular taking of aperients was complained of in 60 per cent. Follicular perniosis was found on the palmar arcas and posterior upper arms. Peripheral cyanosis of greater or less degree was found in 28 per cent of the cases. A marked clamminess of the hands was found in about one-third of the cases. A palpable moisture on the hands, however, does not necessarily imply any increased secretion of moisture; it may be merely the result of a lowered peripheral temperature and consequent lessened evaporation. Peripheral temperature was raised very rarely indeed. In 40 per cent of the cases the amount of clothing appeared excessive, and many patients stated that they had always had a poor circulation. In 52 per cent of the cases more than six teeth showed decay, but the author is unable to find whether this is high for the average age of 21 years. Menstrual irregularity-variations of five days or more-was complained of as occurring at the onset of acne in 40 per cent of the cases. This variation was more commonly found in brunettes than in blondes. Acne appeared to have a later onset in brunettes than in blondes, but this may be due to the fact that comedones and excessive grease formation are less likely to be regarded as pathological in those of dark complexion. Mumford does not attempt an explanation of these findings, but thinks it is clear that acne cannot be regarded as a local disease of the skin with a single etiological factor. It is an expression of malfunction elsewhere in a certain group of susceptible individuals.—British Medical Journal, January 28, 1933, i, 3760.

A Simple Method for Accomplishing a Conservative Disinvagination in Intestinal Intussusception.—In operations on the intestine of the dog, says E. v. Redwitz, writing in the Deutsche medizinische Wochenschrift of January 13, 1933, such strong contractions of the intestinal tube are sometimes observed as to reduce it to the consistency of a hard cartilaginous cord. In order to make suture possible, the author's master, Enderlen, has often in such cases succeeded in relaxing the spasms by brushing the intestine lightly with tinctura opii simplex. It was astonishing to

see how the intussuscepting portion of the gut re fixed and how easily the intussuscepted portion could be freed frum its grasp, in some instances without the intervention of my kind of mechanical action. Redwitz has used the method in his own human cases, applying the medicament by means of a small swab. The first thing observed was a strong contraction, followed at once by a far-reaching relaxation of the wall of the gut, so that disinvagination took place either of itself or upon very slight pressure from below Caution is necessary, however, in the use of the procedure First, one must make sure that the tincture of opium is sterile, by keeping always at hand in the operating room a bottle whose contents have been tested and found sterile. In small children one must also be on guard against overdosage, since the sensitivity of these to laudanum is well known The opium is very rapidly resorbed by the serosa, and therefore produces its effect quickly Experience has shown that the best swab is one weighing 0.05 gm, which after saturation with fincture of opium contains 0012 gm thereof Estimating that only a small part of the opium applied will adhere to the gut, it appears that hardly more than 0006-001 gm opium will be effective, so that the danger of overdosage seems slight essential feature of the entire procedure lies in the fact that the spasmodic condition of the intussuscepting muscle can be relieved by application of antispasmodie drugs in minute quantities, and disinvagination thus accomplished without injury to the gut Naturally, the gut must be examined carefully with reference to its viability

Menstrual Changes in Intestinal Motility -Gustav Halter and Rudolf Pape say that the in fluence of the menstrual cycle upon the function of the digestive organs has hitherto been less clear than that of the genital cycle, and that statements about it in the literature have been contradictory Thus certain authors have spoken of menstrual hypomotility of the stomach while others have claimed to observe an opposite tendency authors have collected from a large number of patients an exact personal history in this regard and have at the same time carried out roentgen examinations of the menstrual and intermenstrual motility of the intestine in a series of cases. Of 481 women with a normal genital cycle only 12 per cent reported a tendency to constipation, and 91 per cent a tendency to diarrhea, at the time of menstruction But in 191 cases of chronic constipation 198 per cent reported normal action at this period. Thus it is seen that while only a small proportion of women with regular intestinal activity note a change in intestinal function, one fifth of all the women with habitual constipation observe a normal state of elimination at the time of menstruation Roentgen examinations were car ried out in 15 cases during the first three days of

the period, and were controlled twice daily by full evacuation of the barmin. In eight cases, that is more than half, an increase of intestinal motility was demnistrated but in only one case did this exceed the normal degree,—a circumstance which inay explain the difference between the respective results of the subjectively and the objectively conducted examinations. In five cases there was no change, and in two there was a decrease of intestinal activity. In four of five cases which exhibited habitual constipation between periods, the intestinal function was normal during the periods; in one case its activity was increased. The mechanism of the increased motility differed considerably in individual cases. Thus in some cases, along with an acceleration of transportation there was a decreased tonus of the circular musculature, in others, there was an increase of tonus, or normal transportation, but increased urge to defecation These phenomena might be due to the increased influence of several hormones upon the intestine. Against this stands the fact that men strual increase of motility was observable only in a small number of those cases which were habitunlly regular Probably several eauses combined to produce the results. It is possible that the es sential factor in these observations consists in an improved correlation of the different processes concerned in intestinal movement, which are dis sociated in habitual constipation. This reflex association is promoted by the menstrual increase of irritability of the entire autonomic nervous six If, conversely, the threshold of irritability rises during the intermenstruum, the various pathologic forms of intestinal activity return -Deutsche medizinische Wochenschrift, February 10 1933

The Effect of Tonsillectomy on the Occur-rence and Course of Acute Polyarthritis -Maxwell Finland, William B Robey and Harry Heinmann present an analysis of the records of 654 consecutive cases of acute migratory polyarthritis for the purpose of determining whether or not tonsillectomy had altered the course of the attack or had affected the frequency of recurrence Of the 654 patients 335 were admitted for an in itial atack, and the remaining 319 were admitted for recurrences Of the 335 admitted for an initial attack 42 or 13 per cent, had previously had a tonsillectomy, whereas 72, or 23 per cent of the 319 admitted for recurrences previously had had tonsillectomy Thus twice the percentage of cases previously subjected to operation were admitted for a recurrence as were admitted for an initial attack The proportion was quite simi hr m each of the age groups Rheumatic heart disease was about twice as frequent in the group of patients admitted for recurrent attacks as among those admitted for an initial attack seems that previous tonsillectomy had no striking

effect in reducing the incidence of cardiac lesions in this series of cases. The cases previously subjected to tonsillectomy were quite comparable with those having no operation with respect to the total duration of the joint symptoms. The tabulated figures show that with respect to the duration of fever in the hospital there was very little difference between those patients having had no tonsillectomy, those subjected to this operation before entry, and those operated upon in the hospital. With reference to the duration of hospitalization, the patients who had had no tonsillectomy had, on the whole, the shortest stay in the hospital, and those subjected to tonsillectomy before entry had a somewhat longer period, but not so long as those who were operated upon during their stay. Approximately one-half of the patients who were operated upon while apparently quiescent showed evidence of activity following the operation, but in only six were there serious The average number of recurcomplications. rences in the patients admitted following tonsillectomy was about the same as in those not previously operated upon. The attacks, however, were much closer together in the cases previously tonsillectomized. The authors suggest that in private practice where patients can be studied with greater care and an operator of experience can be selected, the results are often far more satisfactory.—The American Heart Journal, February, 1933, vii, 3.

The Initial Symptoms of Acute Articular Rheumatism and Their Pathogenetic Significance.—According to Gustav Singer, acute articular rheumatism, or rather, the nucleus of this complex, acute infectious arthritis, exhibits. as do most infectious diseases, certain prodromal manifestations of a regular character. In the forefront of these stand affections of the throat and pharynx, which are regarded as the commonest portal of entry of the exciting agent of the disease. The overwhelming predominance of the streptococcus as the exciter of important anginas served as a strong support clinically for upholding the etiologic significance of this microorganism for infectious arthritis. Since this concept gained ground, other streptococcus affections have been recognized as forerunners of rheumatism, among them sinus affections, certain forms of otitis. alveolar pyorrhea and peridental foci of infection. While these are the most frequent states leading up to rheumatism, it happens not infrequently that a longer or shorter time before the outbreak of the joint symptoms, there is a general feverish condition, which sets in either suddenly with a chill, or slowly with tumor of the spleen and diarrhea, presenting a clinical picture which resembles that of typhoid. The transient joint eruption is well known to be a frequent phenomenon, but one that does not constitute an essential part of the di

picture. In the hyperpyretic form of rheumatism there are often severe general nervous symptoms (cerebral rheumatism), which must be regarded as the result of toxic changes. The not unusual combination of acute rheumatism with chorea. which may precede the process, must be considered the sign of a pyogenic infection. The purpura, peliosis and erythema multiforme are regular symptoms of definite bacterial invasions. which have also been demonstrated in embolic form in the skin. But the most fundamental and characteristic mark of the infectious nature of acute rheumatic infections is the localization of the manifestations in the heart, as endocarditis, pericarditis, pancarditis, which are present in over 80 per cent of cases. Frequently the subendocardial nodules described by Aschoff-Tawara, resembling giant cell complexes, have been found existing for years as the seat of the rheumatic in-Of special significance is the development of typical Aschoff's nodules in arterio- and arteriolo-sclerosis, and in periarteritis nodosa. A complete study of the subject teaches that the invasion of this stubborn infection occurs through the blood stream, from which all the clinical manifestations develop. One should never forget that it is through the blood that the rheumatic affection is carried to the most important organ, namely the heart. As Lasègue has so aptly put it: "Acute rheumatism licks the joints, the pleura, even the meninges, but it bites the heart." Münchener medizinische Wochenschrift, December 16, 1932.

Paradoxical Breathing.—Ephriam Korol defines paradoxical breathing as the deflation of the lung or a portion of the lung during the phase of inspiration and the inflation of the lung during the phase of expiration. This type of breathing occurs in all air-breathing vertebrates. It depends on the same anatomical factors as the residual air and seems to serve the same purpose. It is caused by narrowing or closing of the glottis during certain respiratory acts and on the unequal pressure conditions in the different portions of the respiratory tract. In the amphibians and birds, paradoxical breathing, like the maintenance of residual air, serves a useful function in moistening and diluting the atmospheric air. In mammals, owing to the oxygenation of the blood in all portions of the lungs, paradoxical breathing impairs the respiratory function by diminishing the vital capacity and by causing breathing of stale air. With an intact thoracic wall, the paradoxical breathing is limited to the apical and mediastinal portions of the lungs, these regions of the chest being poorly provided with muscle. In congenital and acquired defects of the chest wall, the vicarious breathing is conspicuous in the areas of the lungs adjacent to the defects. During the activities of workers such as glass blowers, singers, dancers, and runners, the paradoxical breathing produces acute emphysema and materially curtails

the efficiency of the performers. This type of breathing is an important factor in the development of pulmonary edema and is largely responsible for the dyspnea and cyanosis observed in emphysema and asthma. Paradoxical breathing has been described repeatedly in open pneumothorax, both in the human subject and in the experimental animal. It occurs in hernia of the lung, in tuberculosis and other pulmonary infections, and after extensive operations on the wall of the chest. The prognosis in tuberculosis and bronchiectasis is better for persons of sedentary occupation, for the reason that these persons do not engage in strenuous muscular effort, with the concomitant paradoxical breathing. By causing an interchange of material between the lungs, paradoxical breathing is a common cause of the interbronchial spread of infection in tuberculosis and all other diseases of the lungs,-Archives of Internal Medicine, February, 1933, li, 2.

The Significance of the Porphyrins in the Pathology of Digestion.-Under physiologic conditions, says I. Boas, in the Deutsche medizinische Wochenschrift of January 27, 1933, small amounts of porphyrin are found in the blood, gallbladder, meconium, urine and feces. author's investigations were concerned with the behavior of the stercoporphyrins in ulcers and tumors of the intestinal tract. Here 3 kinds of porphyrin are especially to be differentiated: (1) koproporphyrin, (2) protoporphyrin and (3) deuteroporphyrin. Physiologically, and even in hemorrhage, koproporphyrin appears only in very small traces in the intestinal canal. If there is more than a trace, its differentiation from the other 2 porphyrins is urgently necessary for avoidance of error. Between the 2 latter, fundamental differences exist. Protoporphyrin is found in the stools of both healthy and sick individuals, especially in gastric ulcer; Boas regards it as impossible to distinguish physiological from pathological, that is hematogenous, protoporphyrin. With deuteroporphyrin, however, the case is different. These substances are not met under normal conditions. Every possible precaution must be taken with reference to the demonstration of occult bleeding. If this is done, the demonstration of the presence of denteroporphyrin has a clinical diagnostic significance, as follows: (1) In ulcers with positive blood reactions, it is not the disappearance of these but that of deuteroporphyrin which shows that the ulcer has reached the stage of cicatrization, or nearly so. (2) In ulcers with negative blood reaction and with unequivocal findings roentgenologically and clinically, the repeated demonstration of deuteroporphyrin shows that a peptic defect has not yet cicatrized. (3) A persistent negative deuteroporphyrin finding (with negative blood reactions) shows, despite a reliable Roentgen picture and

elinical symptoms resembling ulcer, that a cicatrized ulcer must be assumed, possibly along with chronic gastritis. (4) From the standpoint of therapy, it is important that an ulcer shall not be regarded as cured until examinations for deuteroporphyrin give repeated negative results. Of even greater importance than examinations for stereoporphyrin are those for uroporphyrin. All urine with exerction of bile pigments is strongly suspicious of increased porphyrinuria. Boas has observed porphyrinuria in diseases of the liver and gallbladder, when in a stage of acute inflammation. He has seen it appearing periodically at the close of a severe hematemesis or melena. In internal bleeding, its presence may be an important sign that bleeding has been renewed. A careful distinction should be made between periodic and chronic porphyrinuria. A striking chronic porphyrinuria has been observed in metastatic careinoma of the liver, where the primary growth was in the stomach or colon. Up to the present time no simple and exact method of quantitative determination of either stercoporphyrin or uroporphyrin, suitable for clinical use, has been devised.

Intestinal Obstruction Caused by Food .-- In a search of the literature on intestinal obstruction caused by food Elliott (1932) found 39 cases of this type since 1910, to which he added a case in which the obstruction was caused by orange pulp. Frank B. Block, writing in the American Journal of the Medical Sciences, March, 1933, clxxxv, 3, reports a similar case due to the same cause. The patient, a woman aged 57 years, was admitted to the hospital with the diagnosis of intestinal obstruction of undetermined origin, although on account of her age a carcinoma of the bowel was suspected. At operation the lower ileum was found to contain a mass between two and three inches long which felt boggy and completely obstructed the bowel at this point. As the mass was within the lumen of the bowel, an enterostomy was performed. Examination of the specimen removed showed that it was composed of two sections of orange which had become impacted side by side. Positive identification was made by the finding of a few orange seeds inside the mass, and the patient stated that she had eaten oranges about twelve hours before the onset of pain. Because she had no teeth she swallowed the orange without eareful mastication. After operation all of the abdominal symptoms subsided very promptly, but a bilateral pneumonia developed from which she died ten days later. This case presents most of the features which Elliott found in his review, such as an edentulous patient, short interval between the ingestion of the orange and the onset of obstruction, the site of the obstruction in the lower ileum, failure of accurate diagnosis of the eause of the obstruction, and a fatal termination.

May 1, 1933



LEGAL



THE MEDICAL GRIEVANCE COMMITTEE DECIDES AN IMPORTANT CASE

By Lorenz J. Brosnan, Esq.

Counsel, Medical Society of the State of New York,

The public generally, we believe, is not aware of the splendid work done by the members of the Medical Grievance Committee of the State Department of Education. This Committee, under the able leadership of its Chairman, Dr. Orrin Sage Wightman, has rendered distinguished service not only to the medical profession, but to every citizen of the State.

The attention of the public has been focused upon this Committee by reason of a recent case before it which was reported in the public prints and commented upon editorially by some of the leading newspapers in the State. Dr. Wightman feels, and your Counsel agrees with him, that by virtue of the importance of the questions involved, this case should be called to the attention of the members of your Society through the medium of this column. The facts, briefly, are these:

Last summer proceedings were started under Section 1265 of the Education Law, by the Executive Director of the City Affairs Committee of New York against five duly licensed physicians for the purpose of revoking their licenses. The petitioner charged these physicians with fraud and deceit in the practice of medicine which, under Section 1264 of the Education Law, is one of the grounds for disciplinary action. The charges were that four of the doctors had been appointed by the Corporation Counsel of the City of New York to handle the treatment of compensation cases, and that each of the said four doctors had split their fees with the fifth, Dr. Walker, the brother of ex-Mayor Walker. It was further charged that the splitting of fees with a doctor who had rendered no service to the City in return therefor, was prima facie evidence that the motive was to obtain political influence. There were also charges that the four doctors had received excessive compensation for the services that they actually rendered and that their bills had been padded.

A preliminary hearing was held and evidence was submitted by the petitioner in support of the charges. After deliberation, the Committee on Grievances determined to hold a formal trial to hear the evidence and to pass upon the guilt of the doctors, who were referred to in the proceedings as the respondents. A sub-committee was appointed for that purpose. The respondents appeared in person and by counsel. A number of hearings were held and after the petitioner had

submitted his case, counsel on behalf of the physicians-respondents moved to dismiss the charges on the ground that no proof had been adduced before the sub-committee sufficient to sustain the charges made. These motions were taken under advisement by the sub-committee, and after due deliberation it reported to the Grievance Committee and recommended to it that, upon the record before the sub-committee, the charges should be dismissed and the respondents exonerated from the charge of fraud and deceit in the practice of medicine. The report and recommendations of the sub-committee were unanimously adopted by the Grievance Committee.

In its report the sub-committee, although it found that the charges should be dismissed, voiced its disapproval of the manner in which the City had been accustomed to handle the medical treatment of compensation cases. The report stated in this regard in part as follows:

"Before proceeding with our consideration of the charges themselves, we feel it our duty to comment on the system adopted by the City in these matters, for same is repugnant to good government and leads to manifest abuses. We deplore the method pursued in the selection of the designated physicians as disclosed here. Though there was some testimony as to qualifications taken into consideration by Mr. Strauss when the physicians were designated or continued, we believe that their qualifications were subordinated to political favoritism. The record is devoid of any semblance of a careful investigation into the ability and standing of these physicians, nor did it appear that any recommendation had been sought by the Corporation Counsel of any recognized medical body. We do not intend by this to cast any reflection upon the ability of respondents, but criticize the method of their selection. We believe that in matters of a public nature, when it is sought by a municipality to engage physicians who are to be paid out of the taxpayers' money, that such physicians should be selected either from a competitive Civil Service list or from a list furnished by a board of physicians of conspicuous standing, or through other channels of organized medicine.

"It also appeared before us that in cases in which the injured were treated by their family physicians or in hospitals, they were frequently turned over to the designated physicians for medical attention. This was sought to be justified either because of objections of those connected with the city's compensation bureau, or because of demands made by labor organizations for private treatment of their members who were in hospitals. We are not satisfied with the explanation. Unless the City's interests otherwise require, we believe that when an injured employee is receiving proper medical attention by a physician of his own selection or at a hospital, there should be no substitution of another physician.

"Except for a casual statement that when a bill was thought to be unreasonable, it was referred to the Labor

Department, there was no proof of any system whereby the reasonableness of the bills was passed upon. Even as to the casual statement to which we have referred, there was no proof as to how it was deemed unreasonable, nor was there a single case indicated in which that had been done. It was conceded that the check-up consisted merely of the calculations, that is, whether the totals were correct, for the bureau had no facilities to check same otherwise. The employees were permitted to visit the physician ad libitum without any supervision whatsoever. At times they were told to return to the bureau after a specified period had clapsed, but no record was kept as to when they were to return or whether they did return. This loose manner of spending City money is appalling. Ordinary business methods require the maintenance of records by which the interests of the City are guarded. A single procedure would be to have all bills accompanied by a sworn statement setting forth the name of the injured, where employed, date of accident, nature of injury, dates and nature of treatments and fees therefor."

In considering the evidence of fce-splitting between the various doctors and Dr. Walker, the report of the committee was to the effect that under the law and the decided authorities proof of fee-splitting would not in and of itself constitute fraud or deceit in the practice of medicine. The sub-committee found that the Legislature in enacting the Medical Practice Act had not intended to provide for discipline on charges of unprofessional or unethical conduct or fee-splitting. As the report said:

"We have ruled that fee-splitting her se does not constitute fraud or deceit in the practice of medicine for the fact that one physician has paid to another physician a part of a fee does not necessarily prove any fraudulent act on the part of either one of them. We must construe the words, 'fraud or deceit' in their ordinary meaning, guided by the provision of the staunte that our findings must be based on 'sufficient legal evidence.' Fraud and deceit in the practice of medicine cannot be spelled out from the acts of those of the respondents who paid and received the moneys under consideration, for, as we will later point out, no fraudulent or deceitful act or deed was established."

However, although it ruled that fee-splitting did not justify action on the part of the Grievance Committee, the report made clear its opinion of the practice as follows:

"We do not intend to hold that fee-splitting in any case, even though frand and deceit are absent, is pro-

fessional. Quite the contrary, we frown upon such practices and condemn sanc as being obnoxious and against the best interests of the community, in view of the gravabuses which result therefrom. Nevertheless, we cannot lay down a general rule in this statutory proceeding that fee-splitting fer se constitutes fraud or deceit despite the absence of any act constituting fraud or deceit. That would be presuming fraud which we may not do. We may not guess or conjecture but rather must have definite evidence from a legal standpoint, showing wilful fraud committed for the purpose of deception."

In connection with the charge that the physicians involved had padded their bills, the subcommittee held that no proof had been adduced by the petitioner sufficient to sustain this charge. On this point the sub-committee said:

"Without any proof that the treatments were innecessary, we cannot hold that the physicians' bills were padded. It would be indulging in speculation if from the fact that the treatments and visits were numerous, we should infer that they were not wholly necessary. This Committee might suspect that in one case or another the length of treatment was not commensurate with the severity of the injury; but on what could we base the further inference that those of the doctors here on trial, who had first-hand knowledge of the condition of the injured as shown by the reports, who examined the employees, who diagnosed their conditions, and who treated them, knew that the treatments were nunceessary, and that by their hills they intended to defraud the City? To draw that inference would be unreasonable, and would be basing an inference on an inference, which would be unjust and improper. To bring an inference mithin the 'sufficient legal evidence' rule, the inference must be based on fact. Furthermore, as indicative of treatments, but the Labor Department directed that they continue.

"The amounts paid by the City for medical expense in the treatment of injured City employees do not indicate any fraudulent acts."

The sub-committee concluded its report with the following recommendation:

"We also recommend that Section 1264 of the Educational Law be amended so as to include unprofessional and dishonorable conduct as ground for disciplinary proceedings against physicians."

We trust that this amendment will find favor with the Legislature. It is a most salutary and necessary recommendation and one that should be adopted without delay.

BROKEN NEEDLE EMBEDDED IN JAW

A middle-aged woman was being given local anesthesia for the purpose of extracting a tooth when the needle broke. The dentist sent her to a hospital and recommended that a certain surgeon be called into the case to attempt to remove the needle. The said doctor caused an x-ray picture to be taken which showed that a piece of the needle, about one-half inch long, was lodged in the patient's mandible, lying parallel with the

bone and in the periosteum. Under a general anesthesia the doctor made an incision over the region where the needle was located. He exposed the bone but could not observe the needle. After attempting to find the needle by probing and failing to locate the same he concluded that the needle had been pushed into the foramen of the bone and that it was causing no annoyance or harm. He believed that it would be necessary

to chisel into the bone to remove it and decided against such procedure for fear that a condition of osteomyelitis might develop. He then sutured the incision and turned the case over to another doctor.

Subsequently an action was commenced against the surgeon, charging him with malpractice in failing in his attempt to remove a portion of the needle from the plaintiff's jaw. The complaint charged that as a result of the defendant's negligence the plaintiff suffered a paralysis of the muscles of her mouth and jaw and that she had sustained repeated abscesses, swellings, infection of the mouth and jaw, and that she had been unable to eat normally since the performance of the operation.

The answer interposed on behalf of the defendant denied all allegations of negligence contained in the complaint. The case was never noticed for trial on behalf of the plaintiff. After considerable time had elapsed and no steps had been taken by the plaintiff to bring the matter on for trial, a motion was made to dismiss the summons and complaint for lack of prosecution. Said motion was granted, terminating the matter in favor of the doctor.

ERRONEOUS DIAGNOSIS OF TUMOR

A general practitioner referred to a physician who specialized in general surgery, a woman about 42 years of age, for examination, diagnosis and operation, if necessary. The tentative diagnosis which had been made by the general practitioner was that of abdominal tumor. The surgeon five years previously had performed an operation upon the patient for the removal of gall stones. At the time of that operation he had detected the presence of an ovarian cyst about the size of a lemon. At that time the cyst seemed to be causing no particular harm to the patient and as it was in a different field from that involving the gall stone operation, he did not undertake to remove the cyst.

The surgeon examined the patient and took her She had been married about twentyfive years and had never been pregnant. menstrual history was very much confused. For long periods of time she had not menstruated although she had never been pregnant. At the time of the examination the surgeon was informed that she had not menstruated for some months. His examination showed the presence of a mass which was not quite located in the center of the abdomen. In view of the various circumstances the surgeon concluded that the woman was not pregnant but that her old ovarian cyst had suddenly enlarged and was now causing her trouble. No x-ray was taken to confirm the diagnosis. The question of pregnancy was considered but was ruled out in the light of all the circumstances. Operation was suggested and a day later the patient entered the hospital and the doctor operated upon her. Upon opening the abdomen he immediately detected the pregnancy about the size of a grapefruit which was probably in about the The doctor observed certain adfifth month. hesions in the region of the gall bladder and the left ovary and after liberating the said adhesions he closed the wound without further operation. He did not do anything which in any way interrupted the pregnancy. After the operation the doctor frankly told the husband of the patient that his diagnosis had been erroneous and that the patient was pregnant and that in all probability in due course she would give birth to a child. The patient recovered from the effects of the operation very satisfactorily and left the hospital in good condition, returning to the care of the general practitioner who had referred the case for examination and operation.

About four months after the operation the woman was delivered of a normal living child by cesarian section. According to the doctor who performed the cesarian operation the reason for delivery by that method was that the age of the patient indicated such procedure.

Some time later an action was started against the surgeon who had operated upon the patient for a supposed tumor, charging him with malpractice. The case came on for trial and the plaintiff attempted to charge the surgeon with negligence in the diagnosis which he had made. It should be noted that during the trial the woman, a robust person, sat in the courtroom with her baby, an obviously strong healthy in-The plaintiff's attorney atfant, in her arms. tempted to adduce evidence to the effect that x-rays should have been taken but no doctor testified that it was customary procedure for x-rays to be used under the circumstances. A further attempt was made to bring out testimony to the effect that the Asheim-Zondek test for pregnancy should have been used, but the testimony clearly showed that the said test was not in use in the community at the time that the examination was made.

The case was submitted to the jury and a verdict was rendered in favor of the doctor of no cause of action, thereby exonerating him of all charges of malpractice.

HOUSE OF DELEGATES



MINUTES OF THE ANNUAL MEETING, APRIL 3 AND 4, 1933

The 127th Annual Meeting of the House of Delegates of the Medical Society of the State of New York was held at the Waldorf-Astoria, New York City, New York, on Monday, April 3, 1933, at 2 P. M.

Dr. George W. Cottis, Vice-Speaker; Dr. Daniel S. Dougherty, Secretary.

The Vice-Speaker: The House of Delegates will please come to order.

1. COMMITTEE ON CREDENTIALS

The Vice-Speaker: The first order of business is the

report of the Committee on Credentials.

The Secretary: The Committee on Credentials finds no disputed delegations and all those whose names are

on our roll are entitled to vote.

The Vice-Speaker: The next order of business is calling the roll.

The Secretary called the roll by counties.

The Vice-Speaker: A quorum being present, we will proceed with the business of the House.

2. APPROVAL OF THE MINUTES

The Vice-Speaker: The first order of business is the reading of the minutes of the previous meeting.

The Secretary: As these minutes have been published, I move that the reading be dispensed with and that they be adopted as published in the June 15th, 1932 issue of the New York State Journal of Medicine, page 732.

Motion seconded and carried.

3. Reference Committees

The Secretary: Mr. Speaker, I move that the President's report and the reports of all the Officers and Conmittees, having been printed and sent to the Delegates, be referred to the respective Reference Committees without further reading.

Motion seconded and carried.

The Vice-Speaker: I will ask the Secretary to read the list of Reference Committees.

The Secretary read the following Reference Com-

REFERENCE COMMITTEE ON REPORT OF THE PRESIDENT:

Luther F. Warren, Chairman, Kings Louis A. Friedman, Bronx William P. Howard, Albany George M. Fisher, Oneida Herbert A. Smith, Eric

REFERENCE COMMITTEE ON REPORT OF SECRETARY. COUNCIL AND COUNCILORS:

Harrison Betts, Chairman, Westchester Walter T. Dannreuther, New York William A. Krieger, Dutchess-Putnam Albert L. Voltz, Queens, Albert G. Swift, Onondaga

REPERENCE COMMITTEE ON REPORT OF TREASURER AND TRUSTEES:

Edward R. Cunniffe, Chairman, Bronx John J. Masterson, Kings Franklin Walker, New York William T. Shauahan, Livingston W. Grant Cooper, St. Lawrence

REFERENCI: COMMITTEE ON REPORT OF LEGAL COUNSEL:

Augustus J. Hambrook, Chairman, Rensselaer Charles C. Trembley, Franklin Edward C. Podvin, Bronx Carl Boettiger, Queens Willard H. Veeder, Monroe

REFERENCE COMMITTEE ON REPORT OF COMMITTEE ON PUBLIC RELATIONS:

Reeve B. Howland, Chairman, Cheming John J. Buettner, Ouondaga Arthur F. Heyl, Westchester Leon M. Kysor, Steuben Luther C. Payne, Sullivan

REPERENCE COMMITTEE ON REPORT OF COMMITTEE ON PUBLIC HEALTH AND MEDICAL EDUCATION:

George S. Towne, Chairman, Saratoga Thomas M. Breman, Kings Edgar A. Vander Veer, Albany Richard H. Sherwood, Niagara Herbert B. Smith, Steuben

COMMITTEE ON REPORT COMMITTEE ON LEGISLATION: OF THE

Walter D. Ludlum, Chairman, Kings Moses A. Stivers, Orange B. Wallace Hamilton, New York Ployd J. Atwell. Otsego Denver M. Vickers, Washington

REFERENCE COMMITTEE ON REPORT OF COMMITTEE ON SCIENTIFIC WORK AND ARRANGEMENTS:

George W. Kostnak, Chairman, New York David W. Beard, Schoharie Sylvester C. Clentens, Fulton Albert E. Payne, Suffolk Morris Maslon, Warren

REFERENCE COMMITTEE ON REPORT OF COMMITTEE ON MEDICAL ECONOMICS:

James F. Rooney, Chairman, Albany James M. Flynn, Monroe DelVitt Stetten, New York Andrew Stoan, Oneida Mary J. Kazmieremak, Erie

REFERENCE COMMITTEE ON NEW BUSINESS A: Aaron Sobel, Chairman, Dutchess-Putnam

Terry M. Townsend, New York Edgar Bieber, Chautauqua Allen W. Holmes, Schuyler Homer J. Knickerbocker, Ontario

REFERENCE COMMITTEE ON NEW BUSINESS B:

John E. Jetnings, Chairman, Kings Adolph C. DeSauctis, New York George R. Critchlow, Eric Charles J. Kelley, Cortland George A. Leitner, Rockland

REFERENCE COMMITTEE ON NEW BUSINESS C:

Floyd S. Winslow, Chairman, Monroe Frederic E. Ellion Harry Aranow, Bronx DeForest W. Buckmaster, Chantauqua Peter J. DiNatale, Genesce

CREDENTIALS:

D. S. Dougherty Peter Irving

4. REPORT OF SPECIAL COMMITTEE ON THE COSTS OF MEDICAL CARE

Dr. Kopetzky: Mr. Speaker, I move that this House establish a special order of business this evening and that the first order of business after we re-convene from our dinner shall be the consideration of report of the Special Committee on the Report of the Committee on the Costs of Medical Care and that there be allowed at least one hour for its consideration.

Motion seconded and unanimously carried.

5. New Business

The Vice-Speaker: We will now proceed to new business. Is there anything to come up before the House under new business?

6. RACIAL DISCRIMINATION

Dr. Colie of New York presented the following reso-

The Medical Society of the State of New York believes that there should not be nationality in science or medical progress and it views with concern any policies at any time or in any place that tend to discriminate between professional men in terms of race or creed.

The Vice-Speaker: This resolution will be referred

to Reference Committee on New Business A. (Rep.

Sec. 50.)

7. Nurse Anesthetist

Dr. Kaliski of New York, presented the following resolution:

Whereas, at the time of the passage of the Medical Practice Act, and for many years thereafter, it was the accepted interpretation that the administering of an anesthetic by any one except a licensed physician or dentist was illegal, and this also was evidenced by the ban on the administering of anesthetics by duly licensed osteopaths;

Whereas, during the past ten years or so there has been an insidious usurping of the duties and rights of duly licensed physicians by lay technicians and nurses who administer anesthesia despite the fact that there has been no change in the Medical Practice Act; and

Whereas, during this same period there have been marked advances in the physiological, chemical, mechanical, and therapeutic problems involved in anesthesia to none of which non-medical technicians have made any

contribution; and Whereas, these advances have reached a stage where they require a medical education for their proper inter-

pretation and safe utilization; and

WHEREAS, the present custom in many hospitals of having non-medical technicians administer anesthetics deprives the residents or internes of opportunities for instruction in this important branch of medicine, yet these same doctors, untrained in anesthesia, will subsequently be the ones the law assumes to be qualified to give, supervise, and to accept full responsibility for the administration of the anesthesia; and

VHEREAS, the inroads of these technicians have tended to discourage medical graduates from entering this field of medicine, and have decreased the likelihood of qualified medical successors to those who have been so instrumental in advancing the art and science of anesthesia; and

WHEREAS, the giving of an anesthetic involves on the part of the operator the exercise of judgment, discretion and skill, and is not merely a mechanical performance which can be routinely performed by any untrained individual without jeopardy to the patient; and

Whereas, the successful administration of anesthesia requires the exercise of proper medical care during the procedure, involves an examination of a patient to determine his physical ability to undergo the process and a careful watching of the patient during the administration of the anesthesia to determine its effects and the quantity administered; and

WHEREAS, the prevalent custom of evasion of the spirit of the law by the technical assumption of responsibility by the operating surgeon is a mere subterfuge, as the surgeon in most hospitals rarely selects or inquires into the technician's qualifications, does not usually supervise the administration of the anesthetic at its most critical period, namely the induction, and even though present during its maintenance the surgeon, because of his interest in the operative procedure, cannot always promptly detect the necessity for therapeutic intervention, which determination must be left to the judgment of the anesthet-

WHEREAS, many hospitals and private sanitaria advertise to the public and the profession that an anesthetist will be available; this being a misrepresentation when such anesthetist is only a technician, while the general assumption is that the term anesthetist implies a physi-

cian; and

WHEREAS, since the surgeon is by law responsible for the act of an agent, if in fact the lay anesthetist is the doctor's agent when administering an anesthetic, the surgeon assumes a responsibility and liability which under certain circumstances may nullify the effect of his malpractice coverage if it can be proved that such lay anesthetist is performing an unlawful or illegal act; and

WHEREAS, our acquiesence to the encroachment by nonmedical technicians in the field of anesthesia, on the prerogatives of the physician, will make it increasingly difficult to exclude the osteopaths and others from these same privileges, for if any division of medicine desires to nullify any section of the Medical Practice Act it can do so by the subterfuge of assuming the responsibility, then other divisions of medicine must, in justice, be accorded the same privilege and the whole Act be thus THEREFORE BE IT weakened.

RESOLVED: That the Medical Society of the State of New York affirm that the giving of an anesthetic constitutes the practice of medicine and insists on the strict observance of the provisions of the Medical Practice Act, without subterfuge or evasion; and BE IT FURTHER RE-

That if it is the opinion of the Attorney-General that non-medical technicians practicing anesthesia are not violating the law under present conditions, that the proper procedure be instituted to obtain legislation which will include anesthesia in the practice of medicine or limit the administration of anesthesia to duly licensed dentists or physicians.

Referred to Reference Committee on New Business C.

(Action, Section 39.)

8. FEE-SPLITTING

Dr. Kaliski of New York, presented the following resolution:

During the year 1932 the Committee on Civic Policy of the Medical Society of the County of New York made an exhaustive study of the problem of the secret division of fees, popularly known as secret fee-splitting. It held a number of open meetings at which many prominent physicians and surgeons as well as others interested in the practice of medicine from the hospital and administrative standpoint, submitted their opinions on this

At least four open meetings were devoted to the taking of testimony, while at other meetings the Committee

itself wrestled with this difficult problem.

As a result of their deliberations, the Committee on Civic Policy came to the conclusion that the essential cause of fee-splitting was in all probability economie They felt that the great majority of young medical men began practice with the highest professional ideals, but for one reason or another, many of these younger men, particularly in the larger cities, began the practice of the secret division of fees. The ethical family praetitioner is often so poorly paid in comparison with the surgeon or specialist, particularly in normal times, as to

make it difficult for him to earn a decent living. The Committee recognized fully the evils of sceret fecsplitting, the corrupting influence on the practitioner, and the specialist, the possibility of betrayal of a patient through reference to an interior surgeon or specialist because of his willingness to indulge in the practice of secret fee-splitting. The influence of secret fee-splitting on the younger surgeon and specialist in building up a specialty practice was particularly noted. results of secret fee-splitting on the public because of the referring of the public to men of lesser ability due to their willingness to split fees is an Important factor in the consideration of this problem. The Committee was unanimous in condemning all forms of secret fce-splitting, commissions and rebates.

In order to cope with the existing evil and, if possible, to lesson or control it, the Committee made the following recommendations to the Comitia Minora of the Medical Society of the County of New York, which were accepted by it and finally adopted by the Society at a

stated meeting:

"I. The Comitia Minora condemns the practice of the secret division of fees in the strongest possible terms.

"2. The Comitia Minora calls upon consulting specialists and surgeons to join with the County Society in the education of the public by explaining to patients and their families the nature and value of the family physician's services before, during and after operation, and the

necessity for his proper compensation.

"3. Where essential pre-operative and post-operative service is rendered by the family physician in a surgical case, an adequate fee should be paid to him for his service. In the opinion of the Comitia, it is desirable that the family physician's bill for this service be rendered at the same time as the bill of the surgeon, in order to establish in the patient's mind the essential importance of both services.

"4. A joint bill may be rendered to a patient for the combined services of physicians and surgeons participating in the conduct of a case, and shall specify the sum

allocated to each total amount. "The Comitia uny joint bill which does not to each par-

ticipant in a given case."

In view of the importance of the problem of secret feesplitting to the public and to the profession alike, we respectfully memorialize the Medical Society of the State of New York, in convention assembled, to endorse the recommendations proposed by the Medical Society of the County of New York, and we call upon the convention to suggest such steps as will lead to the adoption of these principles of professional conduct as an integral part of the Principles of Professional Conduct of the Medical Society of the State of New York.

The Vice-Speaker: Referred to Reference Committee

on New Business C. (Report in Section 38.)

9. Allocation of Money to District Branches

Dr. Allison of Nassau, presented the following resolution:

WHEREAS: Since, due to the present economic conditions, the several District Branches and their component County Societies have great difficulty in balancing their budgets, and in providing funds for such purposes as carrying on their rolls and otherwise assisting indigent members, previously in good standing; and in order to avoid the necessity of retrenchment of normal standard activities of the District Branches and County Societies therefore

BE IT RESOLVED: that the Executive Committee and the Board of Trustees be requested to allocate three dollars (\$3,00) per member back to the District Branches for such utilization as in their judgment may be wise.

The Vice-Speaker: This resolution will be referred

to Reference Committee on New Business B. (Action. Section 45.)

Is there any other new business?

10. Woman's Auxiliary

Dr. Menckeu of Queens, presented the following reso-

lution: Whereas, the American Medical Association at its meeting in St. Louis in 1922 endorsed the motion for the formation of a Woman's Auxiliary to the American

Medical Association, and

WHEREAS, in July, 1932 there were thirty-six State Auxiliaries and the District of Columbia Auxiliary in addition to a County Auxiliary in each of two States functioning as State Auxiliaries; and

WHEREAS, a Woman's Auxiliary to the Medical Society of the County of Onecus has been formed and is func-tioning, therefore, be it

RESOLVED, that it is the sense of this meeting that a Woman's Auxiliary to the Medical Society of the State of New York be formed and that the Woman's Auxiliary to the Medical Society of the County of Queens be endorsed and requested to function as the nucleus of the New York State Auxiliary, with five (5) members of the State Society to be appointed by the President and these five members shall act as a Council for the guidance of this Anxiliary.

The Vice-Speaker: This resolution will be referred to Reference Committee on New Business A. (Action, Section 51.)

Is there any other new business?

11. RADIOLOGICAL SECTION

Dr. Taylor of New York, presented the following resolution:

1. Whereas it would be to the benefit and best interests of the Medical Society of the State of New York, 2. Whereas it would be to the best interests of the NEW YORK STATE JOURNAL OF MEDICINE.

3. Whereas it would be for the good of the Medical

and Surgical Profession.

4. WHEREAS it would be savorable to the general education and mutual benefit of the roentgenologists of this Society and state.

5. Whereas this would reflect also to the advantage of

patients and the public generally.

6. WHEREAS the temporary session granted has proved

a definite success.

7. WHEREAS Roentgenology has become a very important integral part of our profession. And

8. WIERRAS the five individual X-ray societies, namely—The New York City, the Brooklyn, the Central New York, the Rochester and the Buffalo groups desire this

section. Therefore, be it asked and resolved that the House of Delegates of the Medical Society of the State of New

York establish a section known as the Radiological Section of the Medical Society of the State of New York.

The Vice-Speaker: This resolution will be referred to

Reference Committee on New Business B.

The Secretary: We have something similar here regarding the formation of a section on Physical Therapy, and also one on Urology. I should suggest that they all be placed together and referred to the same committee, if you would allow me to suggest it.

The Vice-Speaker: So ordered. These three recom-

mendations are all referred to Reference Committee on New Business B. (Action, Sections 46 and 47.)

Any further new business?

12. CERTIFICATION OF QUALIFIER SPECIALISTS (Sec also Section 15)

The Secretary: The Assistant Secretary will read the resolution presented by Dr. Walter T. Danureuther of New York County.

The Assistant Secretary read the following resolution:

Whereas, the American Board of Ophthalmie Examinations, the American Board of Oto-Laryngology, the American Board of Obstetrics and Gynecology and the American Board of Dermatology and Syphilology have been organized by their respective National Societies, together with the corresponding scientific Sections of the American Medical Association, have functioned suceessfully under the supervision of the parent bodies, and have been endowed with the prestige of the sponsoring societies, and

Whereas, at least two additional special groups are contemplating the creation of similar Boards in the near

future, and

Whereas, the efforts made by the existing Boards to certify well qualified specialists have met with the approval of the medical profession at large, and

Whereas, the personnel of such examining Boards is best selected by the sponsoring National Societies, and Whereas, the autonomy and independence of each of

the special Boards is essential to preclude political domin-

ation or control by extraneous influences,
THEREFORE, BE IT RESOLVED that the House of Delcgates of the Medical Society of the State of New York instruct its delegates to the American Medical Association, at the meeting in Milwaukee, in June, 1933, to further any and all Resolutions which have for their purpose the advancement of these well established efforts to certify well qualified specialists, and to oppose any and all Resolutions which have for their purpose interference with the constituted authority and activities of the Special Examining Boards as they now exist.

The Vice-Speaker: This resolution will be referred to Reference Committee on New Business C. (Action,

Section 41.)

13. Malpractice Defense and Group Insurance

The Secretary: I have a supplementary report on the Regulations Governing Malpraetice Defense and Group Insurance. These have been passed by the Executive Committee and are now submitted to the House for final action. I will ask Dr. Sondern, Chairman of the Insurance Committee to read them.

Dr. Sondern read the following:

Regulations Governing Malpractice Defense and Group Adopted by the Executive Committee of the Council of the Medical Society of the State of New York and referred to the House of Delegates for adoption.

MEMBERS NOT INSURED UNDER THE GROUP PLAN

The Medical Society of the State of New York will furnish to its members the services of the Counsel of the Society in actions brought for alleged malpractice, error, or mistake done or elaimed to have been done in the legitimate performance of the duties of their profession as physicians under the following regulations:

The Counsel of the Society will serve as attorney in all actions for alleged malpractice, brought against members in good standing, who must be so certified by its Seere-

tary, excepting as follows:

Members shall not be entitled to malpractice defense if the acts in the suit for which they make application for defense were committed prior to their admission to mem-

bership in the State Society.

Members shall not be entitled to malpraetice defense if the acts in the suit for which they make application for defense were committed during a period when they were not in good standing, according to Chapter XIV, Section 4, of the By-Laws.

Members shall not be entitled to malpractice defense while residing and/or practicing medicine or surgery outside of the territorial limits of the State of New

York.

The Society will not undertake the defense of any member who, after consideration by the Executive Committee, is believed guilty of criminal abortion, feticide, homicide, or any criminal act or who has not com-

plied with the recognized ethical laws in regard to these

Members shall agree not to compromise any claim against them, nor to make settlement in any manner without the advice or consent of the Society given through its attorney.

In the event that a member sued or threatened with suit shall, without the advice or consent of the attorney of the Society, determine to settle or compromise any claims against him, he shall reimburse the Society for the expense incurred in undertaking his defense, and in default thereof, he shall be deprived of further privileges of malpraetice defense.

The Society shall not assume any responsibility for the payment of any sum agreed upon by arbitration in the settlement of claims, or awarded by court verdicts, or for making payments for any purpose whatsoever.

Members of the Society desiring to avail themselves of

the privileges of this act shall make application therefor in writing to the Secretary of the Society, and it shall be shown to his satisfaction that they are members in good standing. They shall also furnish the Legal Counsel a complete and accurate statement of their connection with, and treatment of, persons upon which complaints against them are based, giving dates of attendance, names and residences of nurses and of other persons cognizant of facts and circumstances necessary to a clear and definite understanding of all matters in question, and shall furnish such other relevant information and execute such papers as may be required of them by the attorney of the State Society.

In the event of any difference of opinion between a member of the Society and the Counsel concerning the eligibility of a claim for defense, or any other matter having to do with malpractice defense or indemnity, all details shall be presented to the Insurance Committee to be referred with recommendations to the Executive Com-

mittee of the Council for its decision.

The foregoing regulations are subject to such change as may from time to time be authorized by the Excentive Committee of the Council or the House of Delegates.

MEMBERS INSURED UNDER THE GROUP PLAN

All members in good standing shall be entitled to malpractice defense and indemnity in the Group Plan of Insurance on payment of the premium due on the policy selected but the amount of insurance protection granted to any member may be limited at the discretion of the Executive Committee of the Council, subject to petition for reconsideration.

When, upon the final completion of the defense of any suit or elaim, it shall appear to the satisfaction of the Executive Committee that the medical procedure, conduct or attitude of the member involved was such that it could not have the approval of competent medical opinion generally and that the continuance of such medical proeedure, conduct or attitude would constitute a burden to the Society's Group Insurance Plan more hazardous than that contemplated in what is generally accepted as the competent practice of medicine, the Society shall have the right to withdraw from such member the privilege of renewal of his indemnity insurance under the Plan. Nothing in this rule shall deny such member a rehearing by the Frenchic Committee. This rule shall deep not ing by the Executive Committee. This rule shall also not abrogate such member's right to subsequent malpractice defense by the Society.

If an assured shall fail to maintain in good standing his membership in the State Society, according to Chapter XIV, Section 4, of the By-Laws, the policy, so far as it applies to such assured, shall be cancelled as of the date upon which he ceased to be a member in good standing. A notice to this effect shall be mailed to the member's last address, and the Company will return upon demand and surrender of his certificate, the uncarned premium due him on account of such cancellation. If the member is reinstated by payment of dues, the former

policy cannot again be put in force but the member can secure a new policy under the same conditions as if he were a new member of the Society. This rule shall become operative if and when it is written into the

policy of the Group Plan.

The Group Plan of Insurauce shall insure a member within the limits of his policy against loss growing out of suits or claims for malpractice, error or mistake, committed or alleged to have been committed by an insured member in the legal practice of his profession or by any assistant of such a member whether in institutional or private practice, in the treatment or care of a patient previously seen and diagnosed by such a member and for whom the member has directed a course of treatment or care.

The Group Plan of Insurance shall not cover the liability of an insured member on account of the use of X-ray for therapeutic treatment, the employment of partners, associates, assistants, technicians or nurses to practice medicine in his name independently of his personal diagnosis and specific instructions as to the treatment or care to be given, nor shall it cover the liability which such a member may have by reason of his ownership in whole or in part of any association, partnership, clinic, hospital, sanitarium, dispensary or any enterprise other than his personal practice of medicine therein. The liability for such ownership constitutes additional hazards not contemplated under the Group policy or rates, and losses on account thereof shall not be charged against these hazards shall, upon request and payment of an additional premium, be furnished by the carrier by endorsement upon member's Group Plan Certificate or under an additional policy of insurance when necessary.

The Group Plan policy shall not cover the liability which an insured member may have on account of injury to patients from causes other than medical treatment, care or advice, nor for injury to persons other than patients from any cause whatsoever. Protection on account of such losses can only be had under general liability or workmen's compensation insurance.

When in the course of duties imposed upon him as a medical officer of the State, or any political sub-division thereof, an insured member shall be required to render medical opinion, he shall he fully protected under his Group Insurance against the consequences of such an opinion provided it shall have been given to competent authority and not made public by him.

All members of the Counties in Greater New York, and Rockland, Westchester, Nassau and Suffolk, desiring insurance protection in the Group plan of the State Society, shall secure that protection through the Authorized Indemnity Representative of the Society, Mr. Harry F. Wanvig.

Members Insureo by Companies Other Than the Carrier of the Group Plan

A member who elects to secure malpractice insurance protection from a company other than the Carrier of the Group Plan shall have the same right of defense by the Counsel of the Medical Society of the State of New York as those members not insured provided said carrier is authorized to do business in the State of New York. If the member desires this service under the circumstances, all the regulations as detailed above applying to members not insured under the Group Plan must be observed. At the time the action is begun and not later the Secretary of the Society shall be furnished with the name of the Insurance Company, policy number, date of policy and amount of insurance carried. There shall also be presented at the same time a letter from an authorized officer of the Insurance Company certifying that the Company will assume the full cost of the defense including the fees of the Counsel of the Medical Society of the State of New York similar to those paid by the Carrier of the Group Plan in like instance. Also

that he shall not be required to consult with or receive instructions from the Company as to the manner of defense and that the Company will accept his opinion on

the final disposition of the action.

As Companies other than the Carrier of the Group Plan usually couped the holders of their policies to accept defense by the Legal Counsel of the Company concerned, the above would not apply. It is essential, however, that members so insured shall also cujoy the benefits of the services of the Counsel of the Medical Society of the State of New York if desired; but it is obvious that such service will be restricted by the rule of the Insurance Company cited above. Thus while the Legal Counsel of the Medical Society of the State of New York cannot be required under these circumstances to assume control of the defense or to appear as associate counsel, he shall be ready to render to the Counsel of the Insurance Company, if requested, a consultant's opinion and advice provided the Company concerned will compensate him for this service in the same manner as the Group Plan Carrier would do if the member was thus insured. All previous resolutions heretofore adopted, pertinent

to malpractice claims and defense, are hereby rescinded. The Vice-Speaker: These resolutions being supplementary to a similar action which has already been considered by the Council, will be referred to the Reference Committee on the Report of the Secretary, Council and

Councillors.

The Vice-Speaker: Any further new business?

14. RESOLUTIONS SPONSORED BY THE EXECUTIVE COMMITTEE

The Secretary: The following resolutions have been approved by the Executive Committee of the Council and referred to the House of Delegates for adoption:

15. CERTIFICATION OF SPECIALISTS (Sec also Sec. 12)

RESOLVEO, That the House of Delegates be requested to authorize the appointment of a Special Committee to study the Certification of Specialists with a view of submitting recommendations and plan of procedure for their certification and registration. (Action, Section 52.)

16. THE JOURNAL

RESOLVEO, That the House of Delegates be requested to authorize the appointment of a Special Committee to study the entire question of the Journal with a viewpoint of submitting recommendation as to organization, form of Journal, finance, and possible profit-making administration. (Action, Section 53.)

17. WORKMEN'S COMPENSATION

RESOLVED. That the House of Delegates be authorized to instruct the President to appoint a committee for the purpose of studying the professional aspects of the Workmen's compensation and to make recommendations to the Executive Committee on the desirability and method of formulating a plan whereby the State Society may set up a basic organization through the constituent local societies for the administration of the professional aspect of the Workmen's Compensation.

The Vice-Speaker: The first two of these resolutions will be referred to Reference Committee on New Business A and the third to Reference Committee on New

Business B.

18. PLAN FOR MEDICAL SERVICES

RESOLVED, That the House of Delegates he requested to authorize the appointment of a Special Committee for the purpose of studying and preparing a plan for medical services throughout the State of New York. (Action, Section 6.4)

The Vice-Speaker: I will refer this to Reference Committee on New Business C. (Report, Section 43.)

19. PRINCIPLES OF PROFESSIONAL CONDUCT

The Secretary: The following is a suggested change in the Principles of Professional Conduct, Section 32.

The Principles of Professional Conduct of the Medical Society of the State of New York shall be amended by adding a new section to be denominated Section 32

(a) to read as follows:

Sec. 32 (a) Physicians shall not participate in the act of the division, transference, assignment, subordination, rebating, splitting, or refunding of any fee for medical or surgical care. Physicians shall not by any subterfuge be a party to such division, transference, assignment, subordination, rebating, splitting or refunding of any fee for medical or surgical care. Nothing in this section, however, shall prohibit the payment of salaries by a qualified physician to other duly qualified persons rendering medical care under his supervision.

The Vice-Speaker: This resolution will also be re-

ferred to Reference Committee on New Business A, they having a similar resolution to consider. (Action,

Section 72.)

20. STATE CONTROL OF CERTIFIED MILK

The Secretary: This is the report of the Special Committee to consider the question of state control of cer-

tified milk.

The Committee recognizes the importance of uniform methods and standards for the production of Certified Milk and it believes these can only be secured by co-operation with the Medical Society of the State of New York, interested County Medical Societies, milk producers, distributors and health departments—but due to lack of information concerning the activities of many milk commissions, no definite steps can be recommended for the improvement and correction of overlapping authority and activity. We recommend that the Execuauthority and activity. We recommend that the Executive Committee of the Mcdical Society of the State of New York forward to the House of Delegates a resolution urging the importance of a committee to further study the situation and report at a subsequent meeting of the Executive Committee.

We also recommend that the following questions be submitted to the Committee for study and report:

1. The desirability of retaining control of the certified Milk Function-this responsibility now being only in the County Medical Societies.

2. A State-wide set-up, with a permanent Executive

and permanent Milk Inspector.

3. A system of bookkeeping to control the situation. The benefits or defects of a Statc-wide Medical Society control and organization.

The Vice-Speaker: This resolution on certified milk is not signed. Is any delegate here, a member of the

Committee responsible?

Dr. Van Kleeck: That was a report of the Special Committee appointed by the President to report to the Executive Committee instructing the Executive Committee to present such a resolution. I was chairman of that committee.

The Vice-Speaker: This resolution will be referred to Reference Committee on New Business C. (Action, Section 40.)

21. PRIZE ESSAYS

The Secretary: There is a report of the Committee on Prize Essays, recommending that the Merrit H. Cash Prize be awarded to the author using the motto "Claude Bernard," and the Lucien Howe Prize to the author using the motto "Watch Your Feet." It is also recommended that the Prize be for \$150.00, \$15.00 of which will be in the form of a bronze medal and the remainder in cash.

On motion duly made and seconded the report was

adopted.

The Secretary opened the envelopes and announced that the winner of the Merrit H. Cash Prize was Dr. H. Hamilton Cooke of Lowville for his Essay on "A Pathological, Experimental, and Clinical Study of Lipoid Deposits in the Gallbladder," and of the Lucien Howe Prize, Dr. Julius Ferber of New York for his Essay on "The Present Status of Thrombo-Angiitis Obliterans with Special Reference to its Treatment by Intravenous Injections."

The Speaker: If the Scorctary has no other new business, I will call for the Reports of the Reference Com-

mittees.

22. Reference Committee on Report of the President (Journal March 1, 1933, page 259)

Dr. Warren of Kings: Your Committee wishes to recognize the honor and the responsibility given to it in surveying the President's Report. The report has been most instructive, for from the beginning to the end, it shows a keen insight into many of the factors embroiling us in our present difficulties.

It appreciates that there is such an intertwining of medicine with organized society, government, and industry that we must study all these in order to understand our own problems better and so to lead better in their solution. All these institutions affect medicinc and medicine must be in close contact with them to influence them. Their fundamental problems are our own primary problems and call for unbiased study to the end that we achieve more stable economic and social security for the future. The report expresses the belief that organized medicine will do its part, and our Society will make such changes as are necessary to keep in consonance with sound development and real progress. We commend this vision of our leader.

23. SUPPLY AND DEMAND OF DOCTORS

The President's report concerns itself first with the facts regarding medical schools and medical matriculants. It states that there are 4,900 doctors graduating a year and 10,000 more young men who are qualified and wish to enter medical schools but who cannot be accommodated. These facts show the tremendous appeal of the idea of a medical career. There are many who would say, "let all who wish to enter medicine do so, do not attempt to discourage a young man or interfere with the planning of his life's work." And they add that slowly this condition will adjust itself, for, as there becomes an over-supply of physicians, the practice of medicine will become less inviting and fewer young men will want to enter the profession. But what happens to medicine in the meantime? The facts are, as gathered from the report of the Lowell Commission, that at this date there are 25,000 physicians in this country in excess of the demand, and it is recognized by all that over-supply of a commodity cheapens it and tends to lower its quality and to undermine its true value. And this is no less true if the commodity happens to be a profession. Who, then, wishes to look forward to our profession lowering standards of service and becoming commercialized through oversupply? Again, when standards are low in a profession, it deters those of better ideals, and high quality and attainment, from entering that field and consequently would deprive medicine of the men of good quality who would otherwise enter. The question finally resolves itself into the latter and allow self into: shall we simply drift in this matter and allow an excess of doctors to graduate yearly, or shall we use our influence and plan to keep out of the pitfalls that such drifting will create: Your Committee feels that this subject is of vital importance and finally

RECOMMENDS that our delegates to the American Medical Association should be instructed to ask for a study to be made by the Committee on Medical Education of the American Medical Association as to the actual yearly need of medical men for our country, and if it find, from that study, that there are more graduates yearly than are needed, it should use its influence to bring about a limitation of the number of medical matriculants and lience of medical graduates

I move that this recommendation be adopted Motion seconded and carried

24 I AN ORGANIZATIONS AND PHYSICIAMS EMPLOYED IN THEM

In contrast to the apparent surplus of doctors throughout the country, the report next speaks of a dearth of medical men engaged in national health organizations and other independent health programs These organizations have nine non medical individuals to every doctor at present occupied in carrying on such work fact calls for reflection, and one asks, would not doctors be of greater assistance in furthering these various health programs? It seems reasonable that medical training should contribute more to programs of this nature than could be expected when they are so dominantly directed by a non medical personnel Why, then, does the situa tion persist? And can there be an adjustment whereby more medical men may he employed to the end that greater efficiency and greater service may be obtained? The object of these agencies is to promote health along one line or another This is also our fundamental purpose, and if we can convince some of these lay and na tional organizations of our sincerity, your Committee feels that there would be an understanding never before realized and eventually they would be converted to the thought that there should be more medical men carrying on activities in their organizations than are at present engaged in them Turthermore, in this way organized medicine would be untlating a forward step in co ordinating and correlating these many activities to the end that finally it might come to direct some if not all of them Your Committee feels that this is a field that should have more careful and detailed study and there

RECOMMENOS that the Commuttee on Public Relations undertake such a study, with the above in mind engaging the interest of some of the larger national and other health agencies and offering our professional experience

and co operation to those organizations

The report next stresses the work of various continuit tees, commissions, foundations, reformers, etc. It states that as reports from these and other bodies have been completed the Executive Committee has subjected them to careful, deliberate, and critical analysis. It states that one report that on the Costs of Medical Care, has been assigned to a special committee to report its findings and recommendations on this matter. Therefore your Committee has no recommendation to make on this part of the report but commends the promptness and dispatch with which these matters have been handled by your President I move the adoption.

Motion seconded and carried

25 Dues and Organization

The next matter taken up by the report dwells at some length on the financial status of our Society. It tells of a disbursement of a dollar a member made to each component society by the Board of Trustees in June 1932. Your Committee commends the spirit of this action in that it shows an understanding of the financial position of many of our members and it displays a willingness to help each one in time of difficulty. Such thoughtful expression serves to weld more securely the parent society to its off-spring Judicious and given in time of difficulty is doubly appreciated. However, the report expresses the thought that even if there are many members of our organization who have difficulty in meeting dues the State Society dues were diminished. We all recognize that organizations are markedly curbing their budgets and further note that many medical organizations have reduced their membership dues. This is reasonable and demanded by the times. It seems to your Committee that we are

brought face to face with one of two alternatives. Shall we reduce the State Society dues or what can the Society do for its members to climinate the rather widespread feeling in favor of a reduction? If we proceed along the first line we must realize that reduction of dues memberetrenchment of activity. In these criterial times when organized medicine is challenged by so many critics it needs money, but more than money it needs a matter to the seems apparent, then that our income should not be diminished. But why we ask ourselves, do more than a few of our members feel that the assessment of the State Society is too high? Certainly ten dollars a year to belong to a great professional organization is a very small amount. And it is a fact that when a man gets what he wants he is willing to pay for it.

If all our members, then, get what they want in the way of help from our organization, there certainly would be no question about paying such a small yearly due Further observation of the matter shows that many of our members complain of the imbility of organized medicine to protect their practice. They eite the lack of a strong active, foreeful campaign against the evermultiplying dispensaries and their abuses. They eite our lack of action when hospitals practice medicine and thes state that we have stood by many years without con certed or effective stand against many abuses of The Workmen's Compensation Law More recently there has been no organized effort th get remuneration for the doc tors who care for the unemployed, although the butcher, the baker and the candle stick maker are naid are a few of the many protests that are launched against medieme from those within its ranks. They fail to ap preciate the many aids that have been at their command But now in time of difficulty they look back and hold medicine responsible for allowing such inroads into their practice that many of them are nearly robbed of livelihood Little wonder, then, that many complum If we could answer the question of why such conditions were not met successfully by organized medicine and adjust ourselves so as to be able in the future to command a more effective solution in handling similar mitters, we could silence the contender for lower Society dues and enlist him in our united front. The report of the Presi dent points the way to such adjustment. It states that there is an insufficient paid personnel. It seems then, to be a matter of organization an organization that will be able to convert recommendations into action. It has long been recognized by all that a great society such as ours cannot possibly function effectively on volunteer help Your Committee feels that the issue could be settled by the answer of one or other of the questions first, shall we reduce dues and retreneli our activities or second shall we continue with our present dies and adjust our organization to such a modern plan as will enable us to

Your Committee unanimously
RECOMMENDS that a committee be appointed to study
our plan of organization to the end that it would become
an effective and efficient one in handling our present
day needs it should be mouded to appeal to and command
the confidence of the people of the State of New York,
and the undivided support and loyalty of the infantry

make proper studies gather facts and effectively and

forceably strive to execute those measures which are rea sonable and right in the conduct of medical matters?

men of our profession—the general practitioners
I move its adoption

Motion seconded and carried

26 ADMINISTRATIVE OFFICER

The Committee further recommends that there should be an administrative officer appointed who should be an employee of the House of Delegates the Council and the Executive Committee of the State Society and whose duty it should be to execute the orders of these bodies and correlate the medical activities of our various standing committees. He should be a full time individual on a salary.

I move its adoption.

Dr. Rooney: I move that we postpone action upon this recommendation until after we have heard the Report of the Reference Committee on the Report of the Committee on Economics, and these two plans be discussed at the same time.

Motion was seconded and carried.

27. INVESTMENT FUND

Furthermore, stressing the need of finances for our organization, the report states that instead of an investment fund of \$145,000 we really need \$500,000. We all realize the money stringency of the present, nevertheless, if we believe that the income expenditure of such a fund would add to the safe-guarding of the health of the people of this state we should make a strenuous effort to organize immediately to that end and continue our efforts until the end is accomplished. Your Committee therefore, recommends that a committee should be appointed to study ways and means for gathering an investment fund from the public with the aim in mind that its yearly income should be expended for the public health and welfare of the people of the State of New York.

I move its adoption. Motion was seconded.

The Vice-Speaker: Is there any further discussion? Are you ready for the question? All those in favor of adopting the recommendation of the Reference Committee in regard to this section of the report signify by saying "aye" . . . those opposed by saying "no."

Motion is lost.

28. Tribute to Dr. John Card

Your President next reminds us of the loss of the distinguished Speaker of this House, Dr. John Card. Your Committee commends the spirit of tribute given in the report to this able leader and recommends that there be spread in the minutes of our meeting an expression of appreciation of the able service rendered to this House for a period of eight years by a most able, loyal, enthusiastic and conscientious officer.

Motion seconded and carried. (See Section 74.)

29. Consolidation of Committees on Physio Therapy, Public Health and Periodic Health Examination

Reference is next made to the consolidation of the Committees on Physio Therapy and Periodic Health Examinations with the Public Health and Medical Education Committee. Your Committee commends the centralization of effort and the elimination of duplicate activity with

its unnecessary expense.

The report next commends the untiring effort and effective work of the Legislative Committee and the Committee on Medical Research. It expresses appreciation, to all members of these Committees and to their chairmen, of their handling of all matters in their domain in a most capable and efficient way. Your Committee has no recommendation but wishes to express its appreciation of the able service given by these committees and their chairmen, with the feeling that every member of our Society is indebted to these gentlemen for their effort and their ability in guiding the matters detailed to them in such a manner that their action has been a credit to organized medicine.

30. GRADUATE INSTRUCTION

It next stresses the organization of graduate instruction under the Committee on Public Health and Medical Education. It is recognized that there are all varieties of medical instruction. It is a proven fact that now the practitioner wishes his medical instruction to be given to him in such a way that he can apply it to his daily problems. Your committee strongly recommends that this work of graduate medical instruction should he con-

tinued and amplified, stressing the practical application of the subjects dealt with.

I move its adoption.

Motion seconded and carried.

31. GOVERNOR'S COMMISSION ON WORKMEN'S COMPENSATION

The report next takes up the matter of the Governor's Commission, appointed to study some of the abuses of the Workmen's Compensation Law. This Commission is to make a complete, unbiased study of the Workmen's Compensation Law with the idea of ultimately making such changes as the study discloses should be made to eliminate some of the abuses of its administration. Again your Committee commends the activity and promptness of the President in having this matter speedily reviewed, and, as a recommendation will be made through the Committee on Economics none, will be made here.

32. MAINTAINING ORGANIZATION SOLIDARITY OF COUNTY SOCIETIES AND STATE SOCIETY

We then pass in the report to the statement that "certain component societies have a tendency to initiate certain movements within their ranks without due regard to the State Society." Such movements hardly seem possible. We all know there are defined, in the Constitution and By-laws of the State Society, its relation to the com-ponent societies, and again the component societies have in their Constitution and By-laws explicit statements as to their full relationship to the parent Society. It seems, then, there should be no misunderstanding about movements on the part of either body which would divide the prestige or strength of either society. However, it is recognized that there are problems individual to societies, as conditions calling for action may prevail in a metropolitan area that might not be possible in a rural section. Thought on such problems must not be stifled, for the more thought, study and strength that any one component society develops the greater will be the strength and force of its parent society. There must, however, be a complete recognition of authority in organization or else that organization crumbles. It seems to your Committee, then, that the general statement above mentioned in this report can reach an amicable understanding in the following recommendation. If any component society has problems individual to itself it should not act on such problems inde-pendently if such action is contrary, either in spirit or word, to its recognized relationship to the parent society without first presenting its problems, with recommenda-tions, to the House of Delegates, to The Council, or to The Executive Committee for discussion and disposition.

I move its adoption.

Motion seconded and carried.

33. LEGAL DEFENSE, ORGANIZATION AND INDEMNITY

Dr. Warren of Kings: Malpractice and malpractice protection are referred to next in the report. It states that nine out of every one hundred members are or will be sued for malpractice. It stresses the need for legal defense and protection, and expounds the principle that defense and indemnity should go hand in hand. There are many of our members who buy other protective insurance, and then look to our Society for defense when trouble comes. They spend their money elsewhere and then wish to have our Society spend its money to protect them. This attitude is not conductive to medico-legal solidarity. Through vears of continued thoughtful study of this matter the Medical Society of the State of New York has made available protection insurance to our group, through a recognized company, giving ample security and at a reasonable rate. It seems that, under the circumstances, every member would welcome the opportunity of participating in the State group plan, rather than to remain an outsider. It seems axiomatic

that wherever or from whom one obtains insurance he would look to that source for protection, and your Committee therefore recommends that the Medical Society of the State of New York should assume the responsibility of legal defense in malpractice suits to those members only who earry insurance in the State Society group plan.

I move its adoption.

Motion seconded.

Dr. Rooney: I move, as a substitute motion that this recommendation of the Reference Committee he post-poned until the Reference Committee on the report of the Council has presented its report, because there is subject matter in the report of the Council that is pertinent, and that should be discussed, in my opinion, at the same time that discussion arises upon this section.

This motion was seconded and carried.

34. TRIBUTE TO STAFF WORKERS

Dr. Warren of Kings: The President's report goes on to express his personal appreciation to all the members of the Society's office staff in New York City, for the aid and cooperation given him during the past year. In particular he mentions the nost valuable help given by our secretaries Dr. Dougherty and Dr. Irving. Your Committee feels that it cannot allow this occasion to pass without registering its appreciation for the untiring effort and the unswerving loyalty which these individuals have given our Society for many years, and for which every incomber of this House is duly grateful.

35. STATEMENT OF WORK DONE

Finally the report expresses the regret of the President in his inability to accomplish all that had been planned. It recognizes that a year is too short to do much with the tremendous issues that have faced medicine. It mentions that whatever has been done the Medical Society of the State of New York has been true to its tradition and history, and in spite of every adverse condition it has maintained the ideals for which it has always stood. Your Committee heartily agrees with this thought of the report and wishes to record its belief that much has been accomplished and many seeds have been sown during the past year that will bear fruit in the future. We believe that we have lived in the strength and wisdom of a real leader and will continue to live under the influence of his effort for many years to

I move you the adoption of the report as a whole with the exception of the section that was postponed and the section that was defeated.

Motion seconded and carried.

36. Report of the Reference Committee on the Reports of the Committees on Arrangements and on Scientific Work

The Vice-Speaker: Dr. Kosmak will read the report of the Reference Committee on the Reports of the Committees on Arrangements and on Scientific Work.

Dr. Kosmak: The report of the Committee on Arragenents speaks for itself through the material evidence which is afforded by the extensive and interesting program for the instruction and entertainment of the visitors to this year's meeting. We desire to commend in particular the innovation of having several guest speakers of the Delegates' Dinner discuss certain topics of vital interest to the profession. The Open Forum meeting constitutes another feature, the outcome of which will be awaited with interest. Dr. Samuel J. Kopetzky, the Chairman of the Committee and his colleagues are deserving of thanks and appreciation for their outstanding labors in the effort to make a signal success of this year's meeting of our Society.

37. COMMITTEE ON SCIENTIFIC WORK

Your Reference Committee has also been delegated to consider the Report of the Committee on Scientific Work, Under the leadership of its very capable Chairman Dr. Arthur J. Bedell, an excellent program of well closen topics has been developed in the various sections. The innovation for this year is the symposium on "Dental Conditions as They Affect General Health," developed in cooperation with some of the members of the dental profession. The Scientific Exhibit, begun last year, has been greatly enlarged and ably arranged by Dr. Frederic E. Soudern and, it is hoped, may constitute a pear, the feature of the Society's anunal meeting. A "Clinical Day" has likewise been inaugurated, the success of which will be measured by the attendance at the various hospitals which have cooperated in this program.

The Committee on Scientific Work deserves the unstinted praise of our Society for carrying out the difficult task assigned to it and upon which so much of

the success of the meeting depends.

I move the adoption of this report.

Motion seconded and carried.

38. FEE-SPLITTING (Section 8)

Dr. Winslow: The Reference Committee on New Business C reports that during the year 1932 the Committee on Civic Policy of the Medical Society of the Committee on Civic Policy of the Medical Society of the Committee of New York made an exhaustive study of the problem of the secret division of fees, popularly known as secret fee-splitting. It held a number of open meetings at which many prominent physicians and surgeous, as well as others interested in the practice of medicine from the hospital and administrative standpoint, submitted their opinions on this question.

At least four open meetings were devoted to the taking of testimony, while at other meetings the Committee

itself wrestled with this difficult problem.

As the result of their deliberations, the Committee on Civic Policy came to the conclusion that the essential cause of fee-splitting was in all probability economic. They felt that the great majority of young medical men began practice with the highest professional ideals, but for one reason or another, many of these younger men, particularly in the larger cities, began the practice of the secret division of fees. The chical family practitioner is often so poorly paid in comparison with the surgeon or specialist, particularly in normal times, as to make it difficult for him to carn a decent living.

The Committee recognized fully the evils of secret feesplitting, the corrupting influence on the practitioner and the specialist, the possibility of a betrayal of a patient through reference to an inferior surgeon on specialist because of his willingness to indulge in the practice of secret fee-splitting. The influence of secret fee-splitting on the younger surgeon and specialist in building up a specialty practice was particularly noted. The inimical results of secret fee-splitting on the public hecause of the referring of the public to men of lesser ability due to their willingness to split fees is an important factor in the consideration of this problem. The Committee was unanimous in condemning all forms of secret fee-splitting, commissions and rebates.

In order to cope with the existing evil and, if possible, to lessen or control it, the Committee made the following recommendations to the Comitia Minora of the Medical Society of the County of New York, which were accepted by it and finally adopted by that Society at a stated meeting.

"1. The Comitia Minora condemns the practice of the secret division of fees in the strongest possible terms."

I move its adoption,

Motion seconded and carried.

Dr. Winslow: 2. The Comitia Minora calls upon con-

sulting specialists and surgoons to join with the County Society in the education of the public by explaining to patients and their families the nature and value of the family physician's scrvices before, during and after operation, and the necessity for his proper compensation.

I move its adoption.

Motion seconded and carried.

Dr. Winslow: 3. Where essential pre-operative and post-operative service is rendered by the family physician in a surgical case, an adequate fee should be paid to him for this service. In the opinion of the Comitia, it is desirable that the family physician's bill for this service be rendered at the same time as the bill of the surgeon, in order to establish in the patient's mind the essential importance of both services.

I move its adoption,

Motion seconded and carried.

Dr. Winslow: 4. A joint bill may be rendered to a patient for the combined services of physicians and surgeons participating in the conduct of a case, and shall specify the sum allocated to each participant as well as the total amount.

The Comitia Minora disapproves of any joint bill which does not specify the sums allocated to each participant in a given ease.

In view of the importance of the problem of secret fee-splitting to the public and to the profession alike, we respectfully memorialize the Medical Society of the State of New York, in convention assembled, to endorse the recommendations proposed by the Medical Society of the County of New York, and we call upon the convention to suggest such steps as will lead to the adoption of these principles of professional conduct as an integral part of the Principles of Professional Conduct of the Medical Society of the State of New York.

Your committee disapproves of number 4 and I move the disapproval by this society.

The motion was seconded.

The Vice-Speaker: The Reference Committee recommends that section four of the report be disapproved. If you vote in the affirmative you are supporting the Reference Committee in disapproving of this resolution. All those in favor of adopting the report of the Reference Committee disapproving the joint bill proposition, signify by saying "aye"—those opposed "no." The "ayes" have it. The Reference Committee is sustained and the disapproval of Section 4 of the resolution is confirmed.

39. Nurse Anesthetist (Section 7)

Dr. Winslow: The next resolution is on the nurse anesthetist. In the preamble there are twelve statements and two resolutions. You have heard the statements read. The resolutions are as follows:

Resolved that the Medical Society of the State of New York affirm that the giving of an anesthetic constitutes the practice of medicine and insist on the strict observance of the provisions of the Medical Practice Act without subterfuge or evasion.

I move its adoption.

Motion seconded and carried.

Dr. Winslow: Resolved that if it is the opinion of the Attorney-General that non-medical technicians practicing anesthesia are not violating the law under present conditions, that the proper procedure be instituted to obtain legislation which will include anesthesia in the practice of medicine or limit the administration of anesthesia to duly licensed dentists or physicians.

I move its adoption.

nd carried.

40. STATE CONTROL OF CERTIFIED MILK (Section 20)

Dr. Winslow: The Committee recognizes the importance of uniform methods and standards for the production of Certified Milk and it believes these can only be seeured by cooperation with the Medical Society of the State of New York, interested County Medical Societies, milk producers, distributors and health departments. But due to lack of information concerning the activities of many milk commissions, no definite steps can be recommended for the improvement and correction of overlapping authority and activity. We recommend the Executive Committee of the Medical Society of the State of New York forward to the House of Delegates a resolution urging the importance of a committee to further study the situation and report at a subsequent meeting of the Executive Committee.

I move its adoption.

Motion seconded and carried.

Dr. Winslow: We recommend that the following questions be submitted to the committee for study and report:

- 1. The desirability of retaining control of the Certified Milk Function—this responsibility now being only in the County Medical Societies.
- 2. A State-wide set-up, with a permanent Executive and permanent Milk Inspector.
 - 3. A system of bookkeeping to control the situation.
- 4. The benefits or defects of a State-wide Medical Society control and organization.

I move its adoption.

Motion seconded and carried.

41. CERTIFICATION OF SPECIALISTS (Section 12)

Dr. IVinslow: Whereas, the American Board for Ophthalmic Examinations, the American Board of Oto-Laryngology, the American Board of Obstetries and Gynecology and the American Board of Dermatology and Syphilology have been organized by their respective National Societies, together with the corresponding scientific Scetions of the American Medical Association, have functioned successfully under the supervision of the parent bodies, and have been endowed with the prestige of the sponsoring societies, and

WHEREAS, at least two additional special groups are contemplating the creation of similar Boards in the near future, and

WHEREAS, the efforts made by the existing Boards to certify well qualified specialists have met with the approval of the medical profession at large, and

WHEREAS, the personnel of such examining Boards is best selected by the sponsoring National Societics, and

Whereas, the autonomy and independence of each of the special Board are essential to preclude political domination or control by extraneous influences, therefore

BE IT RESOLVED, that the House of Delegates of the Medical Society of the State of New York instruct its delegates to the American Medical Association, at the meeting in Milwaukee in June, 1933, to further any and all Resolutions which have for their purpose the advancement of these well established efforts to eertify well qualified specialists, and to oppose any and all Resolutions which have for their purpose interference with the constituted authority and activities of the Special Examining Boards as they now exist.

I move its adoption.

Motion seconded and carried.

Dr. Winslow: I move the adoption of the report as a whole.

Motion seconded and carried.

42. RETIRED MEMBERS

The Secretary: I have on my desk the names of a number of physicians that have been recommended to the State Society by their respective County Societies

for election to retired membership.

Moses Aronson, New York; Edward L. Ayme, New York; Willis G. Babcock, Cleveland; Elias H. Bartley, Brooklyn; J. T. Joseph Bird, New York; John W. Brannan, New York; Garrison Lee Brnwu, Euclid; William S. Bryant, New York; Clark Burnham, Brooklyn; Charles L. Dana, New York; Frederic de Kraft, New York; Frederic S Dennis, New York; A. Wilson Dods, Fredonia: John E. Dusseldorf Brooklyn; Hiram Elliott donia; John E. Dusseldorf, Brooklyn; Hiram Elliott, donia; John E. Dusseldorf, Brooklyn; Hiram Élliott, Brooklyn; Albert H. Ely, New York; Myron C. Hawley, Randolph; John A. Jackson, New York; William B. Johnston, Ellicottville; William M. Keen, New York; Isabel T. MacMillau, New York; George H. Pierce, Brooklyn; Sigmund Pollitzer, New York; Hirsch Rabinowitsch, New York; Nelson G. Richmond, Fredonia David Robert Rodger, Richmond Hill; George L. Rood, Etna; John Clarence Sharp, New York; Henry M. Silver, New York; Gustav H. E. Starke, Glen Ridge, N. J.; Franklin M. Stephens, New York; Frank H. Stephenson, Cazennvia; Benjamin S. Swetland, Brocton; Mathilda K. Wallin, Elmsford; J. Zinmerman Wild, Brooklyn; Adolph Zeli, New York; Frank Reynolds, Onondaga. Frank Reynolds, Onondaga.

The Secretary: I move these names he placed on the retired list.

Motion seconded and carried.

The Vice-Speaker: Have you any further report to make?

43. PLAN OF MEDICAL SERVICE (Section 18)

Dr. Elliott: Reference Committee on New Business C. WHEREAS, various reports from lay and medical societies regarding practice of medicine suggest the desirability of the State Society undertaking a comprehensive study for the purpose of ontlining a plan of medical service for the state—an example worthy of study being the report of the British Medical Society, entitled "Medical Service for the Nation,"—be it resolved that the House of Delegates authorize the appointment of a special committee of five by the president for the purpose of studying and preparing a plan of medical service for the peo-ple of the State of New York.

I move that the resolution be adopted.

Dr. Rooney: I move that the discussion on this ques-Dr. Rooney: I move that the discussion on this question presented by the Chairman of this Committee be postponed and discussed at the same time as the discussion of the report of the Reference Committee on the Report of the Committee on the Costs of Medical Care. Motion seconded and carried. (Action, Section 64.)

44. AMENDMENT TO BY-LAWS-DISTRICT BRANCHES

Dr. Goodrich presented the following resolution: Amend the By-Laws, Chapter 8, Section I.

Delete in line twenty-six of the second paragraph the words "not to exceed \$200.00" and insert in their place the following:

"A sum to be determined on a per capita basis of membership by recommendation of the Executive Committee and final determination by the Board of Trustees. The Secretary: As this is an amendment to the By-

Laws it will have to lay over for a year.

45. Allocation to District Branches (Section 9)

Dr. Jennings of Kings: Reference Committee on New Business B. Whereas, since due to the present economic conditions, the several District Branches and their com-

ponent County Societies have great difficulty in balancing their budgets; and in praviding finids for such purposes as carrying on their rolls and otherwise assisting indigent members, previously in good standing; and in order to avoid the necessity of retrenchment of normal standard activities of the District Branches and County Societies therefore-BE IT RESOLVED that the Executive Committee and the

Board of Trustees be requested to allocate Three Dollars (\$3.00) per member back to the District Branches for such utilization as in their judgment may be wise. I recommend its adoption.

Motion was seconded.

A discussion followed and the motion was lost.

46. Section on Urology

(Scetion 11)

Dr. Jennings: The undersigned, having especial interest in the science and art of Urology, respectfully petition our State Society to establish a section to be known as the Section on Urology.

It is recommended by the Reference Committee a Section on Urology be established.

The motion was seconded and carried.

47. SECTION ON PHYSICAL THERAPY AND RADIOLOGY (Section 11)

Dr. Jennings: 1. Be it resolved that the Society make a petition to the Executive Committee of the Medical Society of the State of New York, asking for the establishment of a Section on Physical Therapy, which could be conveniently combined with that on Radiology, and the time equally divided between the two divisions.

The Committee recommends that this petition be denied. The motion was seconded and carried.

For further action see Section 67.

48. REPORT OF THE REFERENCE COMMITTEE ON REPORT OF COMMITTEE ON PUBLIC RELATIONS

(Journal March 1, page 272)

Dr. Howland: We commend the Public Relations Committee for their extreme zeal, activity and enthusiasm in carrying out their work in endeavoring to provide the public with the best medical and public health service possible.

First, the prime objective being to create harmony among medical and public health workers.

Second, aiding the public to recognize good medical scrvice.

Third, by stimulating physicians to become active members in all public movements in health and welfare and to take a leading part in public health activities.

We endorse their stand in leaving the technique of carrying out this program to each county unit.

We believe the best method to further this project is that they continue their regional conferences.

We endorse their stand on free school and school examinations.

We recommend further study relative to venercal

disease control.

This committee approves of the Public Relation's Committee's stand relative to the correction of the abuse of full time physicians employed by the state entering the private practice of medicine.

We recommend a continuation of the conferences with the Medical Inspection Bureau of the State Department of Education with reference to free school and school examinations, cooperating with the Medical Inspection Bureau of the State Department nf Health, in relation to the anti-tuberculosis work in the schools of the state. We recommend that the county unit take a more active part in this work.

We favor the continuation of sending Bulletins to

various county society committees.

We favor the continuation of the lectures before medical student bodies throughout the state on organized medicine, medical laws and medical ethics.

I move its adoption.

Motion seconded and carried.

49. Committee on Revision of Constitution

Dr. Browder of Kings, presented the following resolution:

WHEREAS, times change and we change with them, and whereas certain modifications of organization become

at times desirable,

THEREFORE BE IT RESOLVED that the Speaker of this House of Delegates of the Medical Society of the State of New York is empowered and directed to appoint from this House a committee consisting of one member from each District Branch and a chairman to prepare a Revised Constitution and present such revision to the next meeting of the House of Delegates.

The Vice-Speaker: This resolution will be referred

to Reference Committee on New Business A. (Action,

Section 73.)

50. RACIAL DISCRIMINATION (Section 6)

Dr. Sobel: Reference Committee on New Business A. The Medical Society of the State of New York believes that there should not be nationality in science or medical progress and it views with concern any policies at any time or in any place that tend to discriminate between

professional men in terms of race or creed.

I move its adoption.

Motion seconded and carried.

51. Woman's Auxiliary

(Section 10)

Whereas, the American Medical Association at its meeting in St. Louis in 1922 endorsed the motion for the formation of a Woman's Auxiliary to the American Medical Association, and

Whereas, in July, 1932, there were thirty-six State Auxiliaries and the District of Columbia Auxiliary in addition to a County Auxiliary in each of two States functioning as State Auxiliaries; and

WHEREAS, a Woman's Auxiliary to the Medical Society of the County of Queens has been formed and is func-tioning, therefore, be it

RESOLVED, that it is the sense of this meeting that a Woman's Auxiliary to the Medical Society of the State of New York be formed and that the Woman's Auxiliary to the Medical Society of the County of Queens be endorsed and requested to function as the nucleus of the New York State Auxiliary, with five (5) Members of the State Society to be appointed by the President and these five members shall aet as a Council for the guidance of this Auxiliary.

Your Reference Committee disapproves of the resolution as read, but approves of it if it ends at the word

"formed," in paragraph four. Motion seconded and carried.

52. CERTIFICATION OF SPECIALISTS (Section 15)

Dr. Sobel: Resolved that the House of Delegates be requested to authorize the appointment of a Special Committee to study the certification of specialists with a view of submitting recommendations and plan of procedure for their certification or registration

I move its adoption.

Dr. Kasmak: This is unnecessary. I do not see any need for a resolution of that kind. The National Bodies

have already taken up the question of specialization in their own field. This Society has recognized that by the purport of the resolution which it has asked its delegates to the American Medical Association to endorse.

The Vice-Speaker: Dr. Kosmak makes the point this is a superfluous resolution. Therefore, if you approve of the recommendation of your Reference Committee you will vote "aye," otherwise "no."

The motion is lost.

53. THE JOURNAL (Section 16)

Dr. Sobel: Resolved that the House of Delegates be requested to authorize the appointment of a Special Committee to study the entire question of the Journal, with a viewpoint of submitting recommendations as to organization, form of Journal, finances, and possible profitmaking administration.

I move its adoption.

Motion seconded and carried. (See also Section 58.)

54. PRINCIPLES OF PROFESSIONAL CONDUCT

Dr. Sobel: The Principles of Professional Conduct of the Medical Society of the State of New York shall be amended by adding a new section to be denominated Section 32 (a) to read as follows:

Section 32 (a) Physicians shall not participate in the

act of the division, transference, assignment, subordination, rebating, splitting, or refunding of any fee for medical or surgical care. Physicians shall not by any subterfuge be a party to such division, transference, as signment, subordination, relating, splitting or refunding of any fee for medical or surgical care. Nothing in this scetion, however, shall prohibit the payment of salaries by a qualified physician to other duly qualified persons rendering medical care under his supervision.

Reference Committee A on New Business recommends the substitution of proposed section 32 (a) for present

section 32 as now standing.

Dr. Rooney: As there seems to be some confusion as to whether this is a substitute for the present Section 32 or an addition to the same, I move that the resolution he re-referred to the committee to consult with counsel and rewrite this section and then report to this house.

Motion seconded and carried. (Action, Section 72.)

Dr. Sobel: I move the adoption of the remainder of

the report as read.

Motion seconded and carried.

55. TRUSTEES REPORT

(Journal, March 1, 1933, page 269)

Dr. Cumiffe: The Reference Committee is very much much pleased with the attitude of our Trustees in conserving the resources and maintaining a balanced budget, so that the financial condition of this Society remains satisfactory at the close of the year, 1932.

We note with pleasure, the increase in the value of our investments during the year to the amount of \$7,838.75, also ten \$1,000.00 United States Treasury Bonds were purchased and added to the investment fund, which now totals \$104,401.50. We endorse their recommendation to continue the policy of annually augmenting this investment fund,

I move its adoption.

Motion seconded and carried.

56. Annual Dues

Dr. Cunnifie: The Committee also concurs in their suggestion that all delegates proposing new activities which involve the expenditure of funds, should carefully consider the ultimate cost to the Society. We note that an analysis of the disbursement of the members annual dues, shows that less than 80 cents go to the investment fund, and we endorse their recommendation that the present annual dues be maintained.

Dr. Kosmak: Do I understand that there is a motion before the House to accept this recommendation?

The Vice-Speaker: Yes.

Dr. Kosmak: I would like to speak against it and offer as a substitute motion that this particular subject be reserved for separate consideration at some subsequent time.

The Fice-Speaker: The motion has been made to

postpone consideration of this report.

Motion seconded.

Dr. Rooney: Why can't we settle it now? It is going to take up plenty of time tonight to discuss the reports of two important committees. 1 am against the substitute motion.

A vote was thereupon taken.
The Vice-Speaker: The motion is lost and the report is now before you. Is there any further discussion of the recommendation of the Reference Committee endorsing the recommendation of the Trustees that the present dues to the State Society be maintained? That is the question that is now before you.
The Vice-Speaker: Are you ready for the question?

A vote was taken and the motion was carried,

Dr. Cunnifie: The Committee congratulates the Board of Trustees on their efficient work during the past year, and commends them most highly for their excellent work.

I move the acceptance of the report as a whole.

Motion seconded and carried.

57. REPORT OF REFERENCE COMMITTEE ON REPORT OF TREASURER (Journal, March 1, 1933, page 270)

Dr. Cumiffe: We have carefully studied both the balance sheet as of December 31, 1932, and the statement of income and expense for the twelve months ending at

the same date. We find the statements accurate and a very efficient analysis of our financial transactions during the year 1932. We commend the Treasurer for his efficient and

diligent work in this office.

move the adoption of this portion of the report. Motion seconded and carried.

58. THE JOURNAL

Dr. Cunniffe: However, there are two items which we think deserve special consideration at this time, note that the deficit in the financial statement of the Journal's income and expense account is \$9,316.13, and the income from dues allocated to the Journal was \$12,330,00, making a total expense of \$21,646.13 for the

publishing of the Journal.

We recommend that the President be instructed to appoint a committee of five, to study the matter of the publishing of the Journal. Said Committee to report its recommendations back to the Council not later than

September 15, 1933.

recommend the adoption of this portion of the report. Motion seconded and carried. See also Section 53.

59. THE DIRECTORY

Dr. Cunniffe: The second item is in relation to the publishing of our directory. We find that the net cost of the directory is \$1,285.57, and the amount allocated from the dues of our members is \$12,330,00, making the cost of our directory \$13,615.57 annually. We recommend that in the future the directory be not published annually, but every second year.

I move the adoption of that portion of the report.

Dr. Rooney: I move that this section of the report

be tabled.

The Vice-Speaker: The motion has been made to table the report on the subject of the directory.

A vote was thereupon taken.

The Vice-Speaker: Division has been called for. All those in favor of laying that part of this recom-

mendation on the table please rise.

All those opposed please rise. The motion is carried 71 to 18.

Dr. Cumific: I seem to misunderstand this motion. Part of this report has already been accepted. The report was accepted to a point that the committee of five

The Vice-Speaker: That is right.

Dr. Cunnific: And the only part that is to be tabled is the part of the report having to do with the Directory. The Journal was accepted.

Dr. Rooney: May I state the intent of my motion? It related only to that section of the report that speaks about the time of publication of the Directory. It had no reference to the preceding part of the recommenda-tion that concerned the appointment of the committee of five to study the Journal and to make a report. As a matter of fact, the chairman having made that motion for adoption, I will second his motion to adopt.

The Vice-Speaker: It was adopted.

Dr. Goodrich: On a point of information, wasn't the Reference Committee's report-another Reference Committee's report a short time ago adopted also appointing The Secretary: Yes, it was.

Dr. Goodrich: I move you, sir, that these committees

be one and the same.

The Vice-Speaker: The motion before the House is that in view of the fact we have already approved a recommendation of another Reference Committee recnmmending the appointment of a committee of five that these two committees be one and the same.

Motion seconded and carried.

Dr. Cunniffe: I move the acceptance of the entire report with the exception of the last paragraph dealing with the Directory.

Motion seconded and carried.

60. REPORT OF REFERENCE COMMITTEE ON REPORT OF LEGAL COUNSEL

Dr. Hambrook: We wish to call attention to the increasing amount of work performed by the Legal Department of this Society, and while the report this year covers a period of only eleven months, the same number of cases were instituted as during the preceding year. Mr. Lorenz J. Brosnan, our Counsel, is ably assisted by his associates, Mr. Thomas H. Clearwater and Mr. Willisan F. Martin, and with a very efficient office force, the work assigned to the legal Counsel has been performed in a creditable manner. Due recognition is given to the able cooperation of the Officers of the Medical Society of the State of New York,

We wish to emphasize again the great number of malpractice actions being instituted against members of the medical profession, and the need of proper protec-tion against such actions. The former Chairman of the Insurance Committee, the late Dr. John A. Card, worked earnestly to perfect the group plan of insurance, and his successor, Dr. Frederic E. Sondern, has carried on the work of the Committee in a very efficient manner.

Of the 292 cases instituted during the eleven months,

188 eases were disposed of; 28 have been settled and in 153 cases either judgments for the defendants have been secured after trial, or they have been disposed of through dismissal, discontinuance, or abatement. In 7 cases only, was judgment rendered in favor of the plaintiff, and 3 of these cases are pending on appeal. This brief summary gives some idea of the amount of work being handled by our Legal Department and the efficient man-ner in which it is being accomplished.

The editorials during the year have been of the same high standard, very instructive to the members, and on a variety of subjects. The Committee feels that more attention should be given to these articles and the information contained therein should be compiled and printed in some way for permanent reference.

In conclusion, the Committee again wishes to emphasize the great importance of the group plan of insurance and the growing need for protection of the medical profession against malpractice actions. Our Legal Department is in every way worthy of our commendation and confidence.

I move the adoption of the report. Motion seconded and carried.

61. Recess

The Secretary: I move that this House adjourn until a quarter before nine o'clock.

Motion seconded and carried.

EVENING SESSION-8:45 P.M.

62. Special Committee on Costs of Medical Care

The meeting was called to order by the Speaker at 8:45 P.M.

The Speaker: We will proceed with the business of the House. Are there any resolutions to be offered?

Vice-Speaker: Under a resolution adopted this afternoon, the first order of business tonight is the consideration of the report of the Committee on the Costs of Medical Care. Is Dr. Booth ready to present his Report?

Medical Care. Is Dr. Booth ready to present his Report?

Dr. Kopetsky of New York: I move that the consideration of Dr. Booth's Report be referred to this House of Delegates sitting as a Committee of The Whole.

Motion seconded.

The Vice-Speaker: The motion has been made and seconded that we go into a Committee of The Whole for a consideration of this report rather than refer it to an ordinary Reference Committee.

Motion carried.

The Vice-Speaker: We will go into a Committee of The Whole. Under parliamentary usage the maker of the motion becomes chairman of the committee and I will ask Dr. Leitner of Rockland to act as sergeant-atarms to see that none are present who are not members

of the Medical Society of the State of New York.

There are some of the doctors who have come down here to listen to this discussion and Dr. Heyd has asked me to allow them this privilege. If you wish the men who are not delegates to be excluded, that is your

privilege.

Dr. Rooney: There is no provision by which the resolution of a parliamentary body sitting as a Committee of The Whole means executive session. It is not executive session. I feel the direction of the Speaker is quite in order, that the members of this Society may listen to, but not participate in the debate, all who are not members of the Society should be excluded from the room.

Dr. Kopetsky, Chairman of the Committee of The Whole: We are assembled as a Committee of The Whole to hear the report of a Special Committee appointed by the President to consider the report of the Committee on the Costs of Medical Care and the report of the Commission on Medical Education.

Dr. Booth read the following report:

To the House of Delegates:

Your Committee, after giving the matters before us careful consideration, is prompted to reiterate the truism that both the problem of quality of medical care and the problem of distribution of medical service are questions for the consideration of organized medicine. Your Committee believes that the Medical Society of the State of New York is the competent body to suggest measures and remedies for medical services in this State, and that the professional aspects of these problems can in the long run be administered adequately, and the remedies

suggested can be made only by a personnel that by training and experience is competent to do the work. To place regulation and distribution of medical service in the hands of non-professional bodies usually results in an overwhelming increase in bureaueracy and a resultant augmented tax rate. Your Committee can find nothing in history or experience that obligates a community to give a perfectability of service simply because a part of the community demands it, when the costs would be beyond the ability of the community to bear.

Holding these views, we first present our general comments on the reports before us, and then offer substitute recommendations for your careful consideration.

GENERAL CONSIDERATIONS

When it is considered that the Committee on the Costs of Medical Care has been five years on its survey, and has expended a sum of money considerably over \$800,000, its final report is an extremely disappointing and empty document. The data assembled under its supervision are both interesting and informative, but they hardly required so much time or so much money for their compilation.

In the interpretation and correlation of the data in these miscellaneous reports there is much that we question. It is significant that a Committee with a total membership of 48 should have had to submit five separate reports. The controversy provoked in the Committee itself by the recommendations in the majority report do not lend an air of authority to them or hold out unqualified hopes of success for the projects advocated.

fied hopes of success for the projects advocated.

It appears too that the leaders of the Committee set ont with a distinct bias for some of the proposals urged so enthusiastically in the majority report. Thus, group practice appears to have been from the start a pet idea of the directing forces in the Committee. This finds support in the fact that the Committee uses as its examples a few outstandingly successful organizations for group practice, but ignores the many instances in which

such groups were not successful.

Another point on which there appears to have been a definite bias is the apparent desire of the Committee to place control of the practice of medicine in the hands of social agencies. The majority report creates the impression that the medical profession is unprogressive and stands in the way of effective reforms in the distribution of professional services. All of its projects involve the establishment of elaborate superstructures about the physicians, who, after all, are the principal agents in any medical project. Even in the recommendations for group practice the majority report makes only casual mention of the county medical society clinics, and merely suggests them as possibilities for rural areas or small towns, although a number of medical societies throughout the country have undertaken work along these lines.

The Committee's drastic recommendations for group practice and for health insurance—whether voluntary or compulsory—are based upon opinion rather than fact. Over and against the evils which they admit have heretofore inhered in medical practice by organizations under insurance systems and by governmental health services, they state the mere opinion, unsubstantiated by any concrete facts, that these evils will cease to exist if the methods referred to are put into general effect here. The majority report opposes compulsory health insurance because of its unsatisfactory results in Europe and its inapplicability to American conditions, and then goes on to urge voluntary health insurance, which it repeatedly states to be the forerunner of compulsory health insurance.

The Committee emphasizes the indispensability of the personal relationship between doctor and patient, and then proceeds to urge systems of practice which must inevitably destroy that personal relationship.

The entire trend of the majority report appears to be theoretical and visionary, rather than practical and con-

crete. Without specifying exactly what it considers adequate medical care to be, it implies an exaggerated and extravagant standard of medical care. Its attitude toward preventive medicine, for example, is highly theoretical and implies that it is possible to prevent a greater percentage of illness than actually can be prevented with our present knowledge. Under the present method of medical practice, which the Committee considers inetfective and inefficient, every preventive method of specific value has been put into effect with striking results (e.g., prevention of smallpox, typhoid, hookworm, diphtheria, etc.).

No amount of organization is going to prevent disease unless we actually have substantial prophylactic measures to employ. Failure to employ preventive service is not due primarily to the individualistic state of medical practice, but to the fact that prophylaxis is still a relatively new idea, and that many people are unaccustomed to go to a physician for anything but the relicf of pain or actual illness. ical

tee itself said, "the actual

measure because of the multiplicity of factors involved." services in reducing illness There is a constant increase in the use of prophylactic measures, and physicians undoubtedly receive more training in the use of such measures, yet for a long time to come eurative medicine will be by far the major part of medical practice outside of mass public health measures.

Many general hygicnic measures for prevention are as dependent upon economic improvement as upon the application of prophylactic measures by physicians, and the report ignores an essential factor when it dissociates the problems of health, particularly in reference to the prevention of disease, from general economic conditions. The Committee acknowledges the inadequacy of pres-

ent medical income, and acknowledges that the provision for adequate compensation to physicians is a major es-sential of a satisfactory medical service. It also states as an essential that no plan is economically sound which does not safeguard quality. Nevertheless, the insurance plan which it sponsors makes it impossible to safeguard quality or to assure an adequate compensation for the physician unless the costs of such insurance are made so high as to defeat the primary purpose of reducing the costs of medical care,

The so-called "costs of medical care" is but one small aspect of a large sociologic problem. Sickness insurance in the last analysis means both direct and indirect tax-ation. There is no immediate prospect that our national income will materially increase. It is more than likely that for some time to come there will be a continuation in the fall of the national income—a tendency which has been noticeable for some time. Thus, the national incame.

in 1929 was....\$82,500,000,000, in 1930 was....71,000,000,000, in 1931 was....54,000,000,000, and in 1932 was....37,000,000,000 (estimated).

The tax rate per capita has shown a distinct tendency to increase. Thus, from \$19.39 in 1903 it rose to \$124 in 1932, and it cannot sustain an added burden.

The money required to finance an adequate system of insurance which would safeguard quality and assure the doctor suitable compensation would have to come from the State, and the costs of such a system would be so tremendous as to impose a terrific burden of taxation upon the nation. Since taxation must ultimately be borne by all the people, including the poor, this would be a transference and not a lessening of the costs of medical care.

Organization as such is not a thing to be worshipped. To call a place a medical center does not imply that it is a center of perfection. It is the character of the medical service that needs to be stressed, not the organization, nor its cost.

The conception that organized service through medical centers will insure a better grade of medical care is basically fallacions, since the quality of medical care depends ultimately on the quality of the practitioner. A good practitioner working alone holds out more promise of good medical care than a mediocre practitioner working in an elaborate center. The benefits which the Committee hopes to achieve through the creation of large centers are purely theoretical, while the losses that will accrue to the community through the destruction of the personal relationship between family and doctor are very real and very Important.

It has already been observed by those interested in medical education that too much stress is placed upon laboratory procedures and not enough attention paid to

clinical signs.

The concentration of medical practice in large centers would accentuate the tendency to diagnose by summarizing laboratory reports rather than by fine observation and sound elinical judgment. Furthermore, we are of the opinion that about 85 per cent of the diseases or affections with which people suffer are complaints that present no difficulties in diagnosis, but yield readily to treatment by the individual doctor in his private capacity. They are not susceptible nor amenable to mass treatment by health departments, centers or bureaus.

To place that portion of the public suffering from this 85 per cent group of cases upon the clinical resources of the country for elaborate "diagnostic workups" is to shoulder an expense that has no reasonable basis and its cost would be beyond the financial resources of the

community.

On the other hand, the present system of medical practice, for all its disadvantages, is flexible. It encourages the physician to be independent, courageous and resourceful in his thinking. It is hetter adapted to periods of depression like the present than an elaborate, expensive organization. Actually, even the indigent here receive a better type of service than the poorer class in Europe under compulsory health insurance.

From the time of the French revolution in 1792 to the recent sickness insurance in 1930 it has been manifestly apparent whenever compulsory health insurance has been put into practice that (1) the mortality has not decreased; (2) the average days' illness has increased from seven to seventeen days; (3) there has developed a huge amount of industrial neuroses; (4) malingering often reaches such extensive proportions as to eall forth governmental reactions; and (5) there has been no cor-

responding increase in preventive medicine.
In addition, your Committee contends that a fall in the death rate from 18.6 per thousand per year in 1900 to 12 per thousand per year in 1930 is an adequate answer to the critics of the present system of medical care.

FUNDAMENTAL PRINCIPLES

Your Committee believes that in considering the questions before it certain fundamentals must be comprehended. We believe first that sickness is primarily the problem of the individual; second, that the most desirable goal to attain in caring for the sick is a continuation and an improvement in the quality of medical care; third, that preventive medicine is also an individual problem, and not capable of solution by mass efforts of health departments; and fourth, in most cases the medical problem is a local one, differing with locality.

Thus the medical service in large cities differs from the problems presented in rural communities, and no plan of medical service can be devised applicable alike to a city like New York or rural communities in a densely populated State like New York, and communitics in sparsely populated areas like those of Nevada or the Dakotas.

Your Committee contends that no substantial evidence can be produced under which an idealistic system of medical service, irrespective of cost, could be devised medical service should be decided upon the principle of local needs and local autonomy.

I move the adoption of this section of the report.

Motion seconded and carried.

Dr. Rooney: Your Committee recommends in relution to paragraphs 10 and 11 of the Report of the Committee on Medical Economics that this Committee reiterate the statement of the policy of the House of Delegates of long standing in opposition to any form of practice by contract either actual or implied.

I move its adoption.

Motion seconded and carried.

Dr. Rooney: In relation to the matter contained in paragraphs 12 and 13 any conclusions formed from such inadequately small samples must be purely superficial and of no significance as to trueness or policy.

I move the adoption of this section of the report.

Motion seconded and carried.

Dr. Rooney: In order to expedite matters I suggest that a member of the House make the motion that as the Chairman of your committee make the motion for the adoption of these many propositions that the Speaker be empowered that they will be adopted, if there be no objection from the House, I think it will save much

This motion was made, seconded and carried.

Dr. Rooney: Your Committee recommends that the study of this subject be continued by the Committee on Medical Economics.

Your Committee disapproves of the policy presump-

tively outlined in paragraph 14 of the Report.

Your Committee recommends that the policy of conducting all arbitrations in New York City be disapproved and that our approval be given to the policy of conducting arbitrations in the counties in which the con-

In relation to the draft of the new medical section for inclusion in the law relating to Workmen's Compensation your committee has felt compelled to make many changes: (a) to elarify the meaning of various paragraphs; (b) to eliminate certain provision in the original draft; (c) to place more completely all power in rela-tion to the medical administration of the law in the hands of those best fitted to do justice to all concerned. that is, the organized medical profession; (d) to secure justice to the employee, the employer or carrier, and the State.
Your Reference Committee submits this amended

draft.

Subdivision 1: Eliminate the word "eligible" in the last sentence and substitute "legally qualified person."

Under subdivision 2: "Those eligible to render medical care"—(a) strike out under Article 48, Section 1251 of the Medical Law, and have the section read: person licensed and registered to practice medicine in the State of New York." Delete "provided." Delete sub-paragraphs b and c and a new paragraph d will then be b; paragraph e will be c, and f will become d. In old paragraph f delete "must" in the second line and in the second sentence, and substitute "shall" in both instances. Paragraph g becomes e and should read: "Any person, firm, or corporation, who shall solicit by himself or for another the professional treatment, examination, or care of an injured employee, or who shall make it a business to solicit in person or by circular or placards the employment of a physician or physicians, in connection with any claim under this chapter shall be guilty of a misdemeanor."

Subdivision 3: Remuneration: The Reference Committee recommends that the word "remuneration" be changed throughout this subdivision to "payment" with the following other substitutions by section.

(a) Payment for medical service shall consist of a fair and adequate return to persons qualified to render medical care under this act and such charges shall be based on the social and economic status of the individual and shall be the same as the charges that pervail in the same community for similar treatment of injured persons of a like standard of living not covered by this act.

Subdivision B: Under subdivision C: All payments for such services shall be made within 30 days by employer or carrier or shall be protested to the Labor Department within 30 days of the date on which bill for such service was mailed.

Subdivision D: Any person participating in the act of dividing, transferring, assigning, subordinating, rebating, splitting, or refunding, or who by any subterfuge is a party to such dividing, transferring, assigning, subordinating, rebating, splitting, or refunding of a fee for medical care under this act shall be guilty of a misdemeanor, except that this rule shall not prohibit the payment of salarics by a qualified physician to others rendering medical care under his supervision as provided

in Subdivision 2, Paragraph D of this section.
Subdivision 4: (a) We recommend that this Section be amended to read: Said Commissioner or referee shall approve or direct the appeal of such determination; he shall not alter, modify, or change such determination,

(b) In the end result after accident or accidents the following shall be used as a general guide for the determination of the degree of disability:

1. Function, or capacity to perform.

2. Union, or state of repair of parts injured.

3. Contour, or external appearance, including presence or absence of facial or other disfigurements.

Subdivision C: Thereafter delete to subdivision C: In the second line change "and" to "or." In the fourth line remove parentheses around "or carrier." The second sentence will read as follows: "The determination in such appeals shall be rendered by the Medical Advisory and Appeal Board of three physicians appointed by the Commissioner from a list of not less than twelve members nominated by the County Medical Society in the County where the member resides or elects to be heard."

In line 15, strike out "this" and substitute "these." Remove "or these" in parentheses, and add "s" to Board. Remove words "or Boards" in parentheses and in line 17 substitute "and" for "or." Substitute the following for the last sentence: "Whenever a County Medical Society fails to nominate a Medical Advisory and Appeal Board in accordance with this section of the law within two weeks from the time of the mailing of the request for such payment the Medical Society of the State of New York shall nominate such a Board in accordance with the provisions of this section."

Subdivision D: Substitute this phraseology: Industrial Board or an Appeal Board may avail themselves of the written opinion of an expert upon the examination of a claimant with the approval of the Commissioner of Labor who shall also direct the award of compensation for such service, the payment to be that usual for the Community in which the appeal is heard.

Sub-paragraph E: Substitute this phraseology: Whenever a case is reopened the review and re-adjudication of the determination of the degree of disability may be obtained upon order of the Commissioner of Labor after application by the referee who rendered the original decision or by employee or by employer. This review or re-adjudication shall follow the course herein prescribed for the primary determination of disability.

Delete matter in parentheses at the end of this sub-

Subdivision 5: Delete parentheses and question marks. Subdivision 6: Substitute the following: Arbitration bills for market and of bills for medical care. Employer or carrier and physician shall arbitrate all contested bills for medical care. Such contested claims shall be billed by the arbitration committee consisting of two members of the Medical Society of the County in which the claimant physician resides, appointed by the President thereof; two physicians also members of the Medical Society of the State of New York appointed by the employer nr carrier and examining physician in the employ of the Labor Department designated by the Commissioner of Labor, who shall be Chairman of such Arbitration Com mittee and who shall be entitled to vote only in the event nf an equal division in the Arbitration Committee decision of the Board of Arbitration shall be final

Subdivision 8 At the circl of the paragraph include to following 'No such waiver shall prevent however the following an individual from claiming a compensation not attrib utable to an aggravation or reactivation of the impair

ment wanted against

In the second paragraph delete Article 48 Section 1251 of the Medical I aw and substitute 'm' for 'of

Subdivision 10 On the second line delete within Delete parentheses around 'not cirbons Delete parentheses around "or carrier" Delete paren

Subdivision II In the sixth line delete first or" and Subdivision 1 In the ninth line, following the word 'disability add 'is provided under Subdivision 4 Paragraph A of this section"

At the end of this section, Subdivision II, add 'of

this section

Subdivision I2 In the third line after the word 'alue include and in' In the fourth line remove parentheses around or earriers' In the fifth line after the word corrected' add without serious risk to life In the eleventh line delete first 'or' Remove paren theses around 'or carrier' In the sixteenth line after paragraph C, add 'of this section' In the nuneteenth line delete parentheses around 'or earrier'

Subdivision 13 Substitute this pliraseology The Committee on Discipline shall be appointed by the Com This committee shall consist of eight quali-mans. The Commissioner shall appoint the fied physicians members of this committee by selection from a list of at least eight members from each District Branch of the Medical Society of the State of New York submitted to the Commissioner by the President of such District Branch one of each eight thus chosen to be appointed to membership on this Board. The function of this committee shall be to receive charges conduct hearings and make recommendations to the proper authorities in any case of formal complaint, and filing of charges against qualified physicians after due hearing by such Board of all charges purporting to show professional or other misconduct in connection with medical service rendered under the Workmen's Compensation Law, ex cept that the original appointments shall be so made that four members shall serve one year and four members two years Thereafter each appointment shall be for two years Any physician found guilty of neglect mis conduct deceit or gross unfitness in the treatment of injured workmen in the province of this law shall be suspended from participation and privileges of rendering medical care under this law by the Commissioner of Labor upon recommendation of the Committee on Disci pline The Commissioner of Labor upon receiving notice from the Committee on Discipline of their finding a physician guilty of neglect misconduct deceit, or gross unfitness as above stated shall notify the Commissioner of Education of the State of New York of such find ings which report the Commissioner of Education will place before the Board of Regents for their opinion in proceedings if the charges come within the province of the Public Health Law relating to the suspension or revocation of license to practice medicine

That concludes the report of the draft of the law and I wish to say to the House that this is merely a statement or a draft embodying the desires of the Society to be in turn submitted to Governor Lehman's Commit tee appointed for the purpose of correcting the abuses in the Workmen's Compensation Law I move the adop tion of the Reference Committee's recommendation

The Vice Speaker I have a note in reference
Committee B referred to me in this matter 7

Charman of the Reference Committee 'B is privileged to report to the floor because the report of his section

was postponed to this particular time

Dr Jennings Resorted that the House of Delegates be authorized to instruct the President to appoint a com untlee for the turpose of studying the professional aspects of the Workmen's Compensation and to make recommendations to the Precutive Committee on the de strainlity and method of formulating a plan whereby the State Society may set up a basic organization through the constituent local societies for the administration of the professional aspects of the Workmen's Compensation

The Committee recommends that this resolution be discussed in combination with the recommendation of the Reference Committee on I conomics on this subject

Dr Jennings I mine its adoption

I second the idoption of Dr Jennings Dr Roones

motion The motion was earried

Now Mr Speaker I move the adop Dr Roones tim of the draft submitted by your Reference Commuttee The Vice Speaker There being no objection it stands adopted

Dr Rooney Paragraph 19 Your Reference Com mittee recommends that the House of Delegates record its disapproval of any extension of the number or nature nf compensable diseases beyond those already enumer

ated in detail section 3 subdivision 2 of the present law. We recommend that the Medical Society of the State nf New York recognize the need of a new chapter in the Public Welfare law which shall specify the prin eiples upon which medical care shall be given to the indigent and provide for reasonable compensation to the physicians rendering services. We recommend that the said medical chapter should contain the provision that the uningent persons thus served should have the privilege of choosing the physician to whom they should go and that the principle of hiring one or two lowest bidders to do all the medical work in the County is not good public policy

We recommend that the Medical Society of the State of New York instruct the Committees on Public Health Public Relations and Feonomies to join in the drafting of a desirable chapter as suggested ut recommendation paragraph 27 and such other amendments as would seem best for the welfare of the people of the State of New York including New York City

We recommend that the Geib Vaughan Detroit Plan of Public Health Work be cordully and completely approved by the Medical Society of the State of New York and that the State Society initiate active efforts to intro iluce this principle of participat - of the medical prince fession in Public Health work hoth preventive and curative throughout the State of New York

We recommend that the President appoint a commit tee representing the several branches of medical science and practice to study the field of Preventive Medicine and in association with the several standing committees to prepare and present authoritative information and recommendations in a coordinated report calculated to msure the development of this work in accordance with sound principles of medical organization and practice

The Vice Speaker Are there any objections to these recommendations? If not they are approved

Dr Rooney Your committee recommends paragraph 40 We recommend the fourth sentence should read as follows. These promulgated rules and regulations have the same force and effect as law'

Paragraph 42 Your Committee recommends that the constitution powers and potentialities of the Public Health Counsel be referred to the joint consideration of the Committees on Public Health Public Relations and Economics with legal counsel for report at the next Annual Meeting of the house

This committee also recommends this joint committee consider the importance that at least two of the three Delegates to express its appreciation of its efficient activity.

The following supplementary report of the Committee on Legislation has also been referred to us.

SUPPLEMENTARY REPORT

The Legislature is still in session and unless the Beer Bill is disposed of soon, may remain in session indefinitely. However, we have been informed that the Anti-Vivisection and Osteopathy Bills have been killed in the Assembly Committee.

A Chiropractic bill was introduced by Senator Feld of New York. May I urge that every delegate send a letter of protest to his Senator and to the members of

the Senate Committee on Education.

In our report to the House of Delegates last year we recommended that the legislative policy of our Society be changed from passive resistance to aggressive action. Our experience with the Crawford and Evans bills has convinced us that our recommendation was wise and that the members of our Society are willing and ready to support such leadership. Never in the experience of the Committee has there been such enthusiastic and spontaneous response from the members of the Medical Profession as in the support of the Crawford-Evans bills. At the hearing on these bills last Thursday representatives of nearly every medical, dental and pharmaceutical society in greater New York appeared in favor of the bill. The Senate Committee were favorably impressed by our organization and I expect the bills to come out on the Senate floor.

For years the dispensary abuse has received very little attention from the directorate and management of the hospitals. Efforts on the part of the Medical Association to meet these gentlemen in order to control these abuses have been repeatedly refused; nay, we were even told to mind our own business. Now, suddenly the management of the hospitals' organizations realize that organized medicine is alive and they became anxious to At the above-mentioned hearing the hospital representatives conceded that the medical profession was right and they suggested that we meet them at the Round Table to straighten out our differences and not

push the Crawford Bill.

Year after year the medical profession has to fight for the public in opposition to Anti-Vivisection, Chiropractic and other quack bills. So far, through the watchfulness and personal efforts of our executive officer, Dr. Joseph S. Lawrence, we have been able to protect the public from vicious legislation. We may not always be so fortunate. Let me again urge the House of Delegates to appoint a special committee whose duty it shall be to see that the leading citizens in every community be organized to assist the medical profession in protecting the public against these repeated attacks on public health and welfare.

Let me urge again that the various County Societies watch the work of the Legislators and that, irrespective of their party affiliations, Legislators who have repeatedly shown themselves to be antagonistic to the interests of the medical profession, be opposed for renomination and if nominated, each County Society actively fight their election.

The Reference Committee moves the adoption of these

Reports.

Dr. Rooney: I would like to rise to a question of information before the adoption of the report of this Reference Committee. Does it include and recommend to the House of Delegates the proposition of the Chairman of the Committee on Legislation for the appointment of another committee, to be added to the present ones?

The Vice-Speaker: I think it does.

Dr. Rooney: That was my impression. I, therefore, move a substitute to the motion of the Chairman of the Reference Committee that the House of Delegates approve the Report of the Reference Committee except the portion referring to the appointment of another committee. I move that that be deleted.

The Vice-Speaker: Dr. Ludlum accepts the substitution, therefore it is not necessary to vote upon it, and the motion now is that of the Chairman of the Reference Committee for the adoption of the report with the deletion of that portion that refers to a special committee.

Motion seconded and carried.

The Vice-Speaker: Is there any further business?

67. RADIOLOGICAL SECTION

(Sections 11 and 47)

Dr. Jennings: WHEREAS it would be to the benefit of the best interests of the Medical Society of the State of New York,

Whereas it would be to the best interests of the New York State Journal of Medicine,

WHEREAS it would be for the good of the Medical and Surgical Profession,

WHEREAS it would be favorable to the general education and mutual benefit of the roentgenologists of this

Society and State, WHEREAS this would reflect also to the advantage of patients and the public generally,

WHEREAS the temporary session granted has proved

a definite success,

WHEREAS Roentgenology has become a very impor-

tant integral part of our profession, and
WHEREAS the five individual x-ray societies, namely,
the New York City, the Brooklyn, the Central New
York, the Rochester and the Buffalo groups, desire this section.

THEREFORE, BE IT ASKED AND RESOLVED, that the House of Delegates of the Medical Society of the State of New York establish a section known as the Radiological Section of the Medical Society of the State of New York.

The Committee recommends the adoption of this report.

Motion seconded and carried.

68. REPORT OF THE REFERENCE COMMITTEE ON THE REPORT OF THE SECRETARY, COUNCIL, AND COUNCILORS

(Journal, March 1, 1933, pages 262, 265, 300)

Dr. Krieger: Your Committee notes with pleasure the evidence of Dr. Dougherty's recovery from his recent illness as indicated by his enlightening report. We join Dr. Dougherty in his tribute to Dr. John A. Card and emphasize the great loss that this House of Delegates has sustained in his passing.

It is interesting to note that despite this time of financial stress, so many county societies have increased their annual dues. This is testimony of the strength of organized medicine in New York State.

Your Committee feels justified in calling particular attention to the additional duties imposed upon Dr. Peter Irving by the recent illness of the Secretary, and the efficient manner in which he eonducted the affairs of the Secretary's office in Dr. Dougherty's absence.

Your Committee calls attention to the numerous activities of the Executive Committee, the several actions taken for the benefit of the membership of the State Society, and the wise selection of the Committee personnel made

by the President and indorsed by the Committee.

Your Committee notes the following paragraph in the Report of the Council: "Some doubt having been expressed as to the resolution passed by the last House of Delegates against the distribution of form the Legal of Delegates concerning the division of fees, the Legal Counsel's advice was sought as to whether this might not be in conflict with the Principles of Professional Conduct—The Counsel's opinion was that it constituted an extremely depression and the constituted and extremely depression and the constituted are extremely depression. an extremely dangerous precedent and was repugnant to and in conflict with the meaning and purposes of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and purpose of Section 32 of the Delivite meaning and the Section 32 of the Delivite meani tion 32 of the Principles of Professional Conduct.

The Council's Report does not disclose what the attitude of the Executive Committee has been since the

Counsel's opinion was rendered.

Your Committee has analyzed carefully the "Rules Governing Malpractice Defense and Group Insurance," approved by the Executive Committee, together with the amendments handed to your Committee under this date. Your Committee is of the opinion that the provisions of these rules will operate to the advantage of the members of the Medical Society of the State of New York as a whole

Your Committee has reviewed the several reports of the various Councilors and commends the District Branches for their activities during the past year.

Your Reference Committee on the Reports of the Secretary, Council and Councilors make the following recommendations:

1. That the Counsel be requested to state his opinion regarding the resolution passed by the last House of

Delegates concerning the division of fees.

2. That the rules governing malpractice defense and group insurance be adopted as printed and amended.

3. That the Committee to Prepare a History of Medicine in the State of New York and the Committee to Consult with the Saratoga Springs Commission in its effort to develop the mineral resources of Saratoga Springs be continued.

I move the adoption of the report.

Motion seconded and carried.

On motion duly seconded and carried the meeting adjourned until Tuesday, April 4th, at 9:00 A.M.

ADJOURNED SESSION OF THE HOUSE OF DELEGATES Tuesday, April 4th, 1933

The meeting was called to order by the Vice-Speaker at 9:00 A.M.

69. ROLL CALL

The Vice-Speaker: The first order of business will

be the roll call.

The Assistant Secretary called the roll and the following delegates responded;

lowing delegates responded:
Frederie C. Conway, William P. Howard, Edgar A. Vander Veer, Lyman C. Lewis, J. Lewis Amster, Harry Aranow, Edward R. Cunniffe, Louis A. Friedman, Vincent S. Hayward, William Klein, Moses H. Krakow, Arthur B. Sullivan, Blinn A. Buell, Perry H. Shaw, Joseph P. Garen, Harry S. Bull, Edgar Bieber, DeForest W. Buckmaster, Reve B. Howland, Earl W. Wilcox, Anton S. Schneider, Charles J. Kelley, Robert Brittain, C. Knight Deyo, William A. Krieger, Aaron Sobel, George R. Critchlow, Robert E. De Ceu, James H. Donnelly, John T. Donovan, Mary J. Kazmierczak, Thurber Le Win, Edward J. Lyons, Herbert A. Smith, Charles C. Trembley, Sylvester C. Clemans, Peter J. Di Natale, Alton B. Daley, O. Houghton Love, Murray M. Gardner, Robert F. Barber, John L. Bauer, Bernard B. Berkonder, St. Peter J. Din Natale, Alton B. Daley, O. Houghton Love, Murray M. Gardner, Robert F. Barber, John L. Bauer, Bernard B. Berkonder, St. Peter J. Din L. Bauer, Bernard B. Berkonder, St. Peter J. Din L. Bauer, Bernard B. Berkonder, St. Peter J. Din L. Bauer, Bernard B. Berkonder, L. Peter J. Din L. Bauer, Bernard B. Berkonder, P. Barber, John L. Bauer, Bernard B. Berkonder, L. Peter J. Din L. Bauer, Bernard B. Berkonder, P. Leven, P. Leven C. Tremoley, Sylvester C. Clemans, Peter J. Di Natare, Alton B. Daley, O. Houghton Love, Murray M. Gardner, Robert F. Barber, John L. Bauer, Bernard B. Berkowitz, Siegfried Block, Thomas M. Brennan, E. Jefferson Browder, Frederic E. Elliott, Herbert C. Fett, Gordon Gibson, Alec N. Thomson, John E. Jennings, Henry Kresky, Walter D. Ludlum, Thomas A. McGoldrick, John J. Masterson, Harvey B. Matthews, Benjamin Rabbiner, Joseph Raphael, Hyman L. Ratnoff, Irving Gray, Alfred E. Shipley, James Steele, Luther F. Warren, F. Edward Jones, William T. Shanahan, Byron S. West, Clarence V. Costello, William A. MacVay, Willard H., Veeder, Edward T. Wentworth, Floyd S. Winslow, William H. Seward Benjamin R. Allison, James W. Bulmer, Emily D. Barringer, Milton A. Bridges, Edward M., Colie, Jr., Walter T. Dannreuther, Adolph G. De Sanctis, John Douglas, Ten Eyck Elmendorf, Julius Ferber. B. Wallace Hamilton, David J. Kaliski, Samuel M., Kaufman, Frederick C. Keller, George W. Kosnak, William M. Patterson, Nathan Ramoff, Sidney M. Saphir, Wendell C. Phillips, James W. Smith, DeWitt Stetten, Abraham Strachstein, Henry K. Taylor, Terry M. Townsend, Franklin Welker, Fred-

erick J. Schneil, Richard H. Sherwood, George M. Fisher, Dan Mellen, Andrew Sloan, Oliver W. H. Mitchell, William W. Street, Albert G. Swift, Homer J. Knickerboeker, Joseph B. Hulett, Moses A. Stivers, Floyd J. Atwell, Carl Boetliger, James M. Dobbins, Edward A. Flemming, Harry P. Mencken, Janues R. Reuling, Jr., Albert L. Voltz, Augustus J. Hambrook, John H. Reid, Eugene D. Scala, Joseph F. Wortlen, George A. Leitner, W. Grant Cooper, Stanley W. Sayer, George S. Towne, Dudley R. Kathan, William C. Treder, David W. Beard, Allen W. Holmes, Frederick W. Lester, Leon M. Kysor, Herbert B. Smith, Charles C. Murphy, Albert E. Payne, Luther C. Payne, Gny S. Carpenter, Wilber G. Fish, Fred H. Voss, Morris Maslon, Denver M. Vickers, Ralph Sheldon, Harrison Betts, Robert B. Hammond, Arthur F. Heyl, Merwin E. Marsland, Edward W. Weber, Bernard S. Strait.
The following Officers, Trustees, and Chairmen of Standing Committees were present:
Chas. Gordon Heyd, Frederick H. Flaherty, Daniel

S. Dougherty, Peter Irving, Frederie E. Sondern, James Pedersen, George W. Cottis, Arthur J. Bedell, Thomas P. Fariner, Harry Aranow, Charles H. Goodrich, James E. Sadlier, Samuel J. Kopetzky, Arthur W. Bootli, Nathan B. Van Etten, Grant C. Madili, Harry R. Trick, James F. Rooney, Louis A. Van Kleeck, Herbert L. Odell, Frank vander Bogert, James M. Flynn.

Odeil, Frank vander Bogert, James M. 1970n.
The following Ex-Presidents were present: Wendell
C. Phillips, Martin B. Tinker, Thomas H. Halsted,
Grant C. Madill, J. Richard Kevin, James F. Rooney,
Arthur W. Booth, Nathan B. Van Etten, George M.
Fisher, James E. Sadlier, Harry R. Trick, James N.
Vander Veer, William H. Ross, William D. Johnson.
Ex-Sections: Educated Maries Presidents

Ex-Secretary, Edward Livingston Hunt.

0. Election of Officers

The Vice-Speaker: There being a quorum present

the next order of business is the election of Officers.

The Assistant Secretary announced the tellers: Fredrick Assissant Secretary announced the tellers! Frederick J. Schnell, Chairman, Edward W. Weber, John T. Donovan, Edgar Bieber, Clarence V. Costello, John L. Bauer, David J. Kaliski, Albert G. Swift, William W. Street, Allen W. Holmes, Ralph Sheldon, James R. Reuling, Jr., Joseph P. Garen, Dan Meilen. For the election, see Section 75.

71. PRESIDENT'S INAUGURAL ADDRESS

Dr. Frederick H. Flaherty, President-cleet, delivered an address on "The Control of Medical Activities by the Medical Profession." This address was printed in the Journal of April 15, 1933, page 497.

72. PRINCIPLES OF PROFESSIONAL CONDUCT (Sections 19 and 54)

Dr. Sobel, Chairman, Reference Committee on New Business A, presented the following amendment to Section 32 of the Principles of Professional Conduct: Section 32. Physicians shall not give, solicit, or receive, nor shall they offer to give, solicit, or receive any gift, gratuity, commission, or bonus in consideration of or in return for the referring, recommending or procurng of any patient for medical, surgical or other treatment

Physicians shall not directly or by any subterfuge, participate in, or be a party to, the act of the division, transference, assignment, subordination, rebating, splitting or refunding of any fee for medical, surgical

or other treatment.

The provisions of this section shall apply with equal force to the referring, recommending, or procuring by a physician of any person, specimen or material for diagnostic or other study or work.

Nothing in this section, however, shall prohibit the payment of salaries by a qualified physician to other duly qualified persons rendering medical care under his supervision.

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I move its adoption. Motion seconded and carried.

73. REVISED CONSTITUTION . (Section 49)

Dr. Sobel: WHEREAS times change and we change with them, and

WHEREAS certain modifications of organization become at times desirable,

THEREFORE BE IT RESOLVED, that the Speaker of this House of Delegates of the Medical Society of the State of New York is empowered and directed to appoint from this House a committee consisting of one member from each District Branch and a chairman to prepare a Revised Constitution and present such revision to the next meeting of the House of Delegates.

I move its adoption.

A vote was taken and the motion was lost.

74. MEMORIAL TO JOHN ALLING CARD, M.D.

The Secretary: The next order of business is the memorial to Dr. Card prepared by Dr. Sadlier at the request of the Executive Committee. I move that it be spread on the Minutes of the House.

I move that the memorial be read as we can well afford a few minutes to hear the tribute to one whom

we all loved and revered.

Motion seconded and carried.

Dr. Rooney: In the carly morning of June 28, 1932, as the sun was rising out of the east, surrounded by some of the friends with whom he had worked for many years, our Speaker of the House of Delegates passed to his reward in the great world beyond. His earthly career was ended but the influence of his life will carry on and on throughout the years to come, and the world will be the better for his having lived and been a part of it.

John Alling Card was born in Poughkeepsie, N. Y., May 20, 1877, the eldest son of the late Silas E. and

Eva Belle Alling Card.

After graduating from the Poughkeepsie High School at the age of 16 he entered Columbia University. He completed his medical course in the New York University Medical College in 1898, before he had reached the

age of 21 years.

His first experience in the work of his profession came to him as an interne on Blackwell's Island and the Bellevue Hospital, following which he returned to Poughkeepsie as a general practitioner. He served as physician for the City of Poughkeepsie for several years. Within a few years Dr. Card took up Pediatrics, doing bedside work with the late Dr. Holt at the Babies Hospital in New York for eight years.

He was elected Coroner of the County of Dutchess November, 1917, beginning his duties January, 1918, and continuing in this office, several times receiving the largest number of votes given to any candidate in the county, until June 1st, 1932, when it was abolished and a Medical Examiner was appointed. This position was tendered Dr. Card, and accepted by him and he began his duties June 1, 1932.

His hospital affiliations were, attending Pediatrician on the Staff of Vassar Brothers Hospital and consultant in this specialty on the staffs of St. Francis. Bowne Memorial Hospitals, Poughkeepsic, Dutchess Hospital at Rhinebeck. and Northern

Dr. Card organized the Child Welfare of the City of Poughkeepsie during 1907 and gave of his time liberally in developing Well Baby Clinics. For many years he has been in charge of the Well Baby Clinic sponsored by Mrs. Vincent Astor at Rhinebeck.

When the Poughkeepsie Board of Health developed Department of Child Hygiene he was made its direcand held that position until the time of his death.

was an outstanding man in the Dutchess-Putnam Society and has served as Secretary, President, of the Committee on Legislation and Chair-1e [ittee on Public Relations. Seldom was

he absent from a niceting. His leadership was recognized by all members of the Society. He was first secretary and then later president of the Poughkeepsie Academy of Medicine, which some years ago was merged with the Dutchess-Putnam Medical Society.

In 1925 he was President of the First District Branch of the Medical Society of the State of New York.

He served continuously as member of the House of Delegates of the Medical Society of the State of New York from the Dutchess-Putnam Medical Society for the last 16 years. When President of the First District Branch he was appointed to the Executive Committee of the Medical Society of the State of New York (1925) and has been continuously reappointed year by year and

was serving in that capacity at the time of his death.

He was elected Vice-Speaker of the House of Delegates of the Medical Society of the State of New York in 1926 serving two years, when, by reason of the Speaker, Dr. E. Eliot Harris, being incapacitated by illness, Dr. Card was elected Speaker of the House of Delegates at its annual meeting in Albany, May, 1928, and has been re-elected annually to that office. He served continuously as a Delegate to the American Medical Association since 1926.

As Chairman of the Committee on Group Insurance of the Medical Society of the State of New York, Dr. Card rendered a very faithful and signal service to the medical profession of this State. He met with each of the eight District Branch Societies at their annual meetings. ings and very forcibly warned them against the dangers of malpractice and the necessity of protection.

Dr. Card's interest in medicine is well exemplified in his faithful attendance and active participation in the work of the County Society of the First District Branch and the Medical Society of the State of New York From the onset of his medical career he assumed duties and responsibilities so naturally that he was advanced from one position of honor and trust to another of greater proportions in the County Medical Society which in turn was followed by election to presidency of the First District Branch. This position placed him in the Council of the Parent Body and from thence he was appointed to the Executive Committee of the State Medical Society serving continuously for seven years without once missing a meeting. This continuation of office was made possible by his election as Vice-Speaker and later, 1928, Speaker of the House of Delegates, a position he held at the time of his death. For six years he served the State Medical Society as a Delegate to the American Medical Association. From all of this you will be reminded of that verse,

> "The heights by great men reached and kept Were not attained by sudden flight, But they, while their companions slept Were toiling upward in the night.'

Undoubtedly his most distinguished medical servic was rendered as Speaker of the House of Delegates where he was uniformly fair and impartial. The following, taken from The New York Medical Week, gives proper recognition of his service:

"In his duties as Speaker of the House of Delegates of the State Society, which position he held for many years, he had ample opportunity to display the tact, intelligence and ability characteristic of him to handle difficult situa-tions. His infinite patience, his kindliness, his tolerant good nature lessened the tension in many a heated debate and made his decisions acceptable to opposing factions without an aftermath of rancor.

Dr. Card was a man of strong convictions, good judgment and a personality which was respected by all. Just and impartial in his decisions he naturally became a leader in the many phases of his active life and especially so in his medical associations.

He died at his post of duty at the hour when medi-cine requires just such strong minds. His death means a loss to this Society which seems almost irreparable.

Dr. Rooney: I move, Mr. Speaker, that this Society adopt this expression of appreciation of the services of our former Speaker and that it be spread upon the minutes of the Society and a copy thereof be sent to any surviving relatives.

The motion was seconded and earried.

75. Election of Officers (Section 70)

The lollowing officers were nominated and elected: President-elect, Arthur J. Bedell; First Vice-president, Ralph R. Fitch; Second Vice-president, Charles D. Kline; Secretary, Daniel S. Dougherty; Assistant Secretary, Peter Irving; Treasurer, Frederic E. Sondern; Assistant Treasurer, James Pedersen; Trustee, George W. Cottis; Speaker, Samuel J. Kopetzky; Vice-Speaker, Floyd S. Winslow; Chairman of Committee on Egislation, Harry Aranow; Chairman of Committee on Legislation, Harry Aranow; Chairman of Committee on Public Health and Medical Education, Thomas P. Farmer; Chairman, Committee on Medical Econom-The following officers were nominated and elected:

ies, Frederie E. Elliott; Chairman of Committee on Public Relations, James E. Sadlier. The following were elected Delegates to the Ameri-

can Medical Association for 1934-35:

Drs. Daniel S. Dougherty, Nathan B. Van Etten, William H. Ross, George A. Leitner, Orrin S. Wightman, George M. Fisher, George W. Kosmak; Thomas P. Farmer was elected Delegate for 1933-34 to fill the unexpired term of Dr. John A. Card.

The following were elected Alternates to the Ameri-

can Medical Association:

Drs. Louis A. Van Kleeck, James N. Vander Veer, Luther F. Warren, Joseph F. O'Gorman, J. Richard Kevin, Carl Boettiger, Frank M. Sulzman.

Moved, seconded and carried that the election of the Chairman of the Committee on Arrangements be referred

to the Council.

76. ADJOURNMENT

Dr. Rooney moved that the House of Delegates adjourn sine die.

Motion secunded and earried.

GEORGE W. COTTIS, Vice-Speaker. DANIEL S. DOUGHERTY, Secretary.

INDEX OF MINUTES OF HOUSE OF DELEGATES

The numbers refer to the sections

the humers terr	the sections
Administrative Officer	Lay Organizations and Their Physician Employees 24
Allocation of Money to District Branches 9, 45	Legislation, Committee on
Amendment to By-Laws 44	Malpraetice Defense
Arrangements, Committee on	Medical Services Through the State, Plan of.18, 43, 64
Card, Dr. John A., in Memoriam 28, 74	Nurse Anesthetist 7, 39
Certification of Specialists12, 15, 45, 52	Organization of State Society, Committee on 25
Certified Milk, State Control of	Physical Therapy and Radiology Section 47
Cod Liver Oil, Free Distribution of	Plan of Medical Service 43
Consolidation and Appreciation of Committees 29	President's Report
Constitution and By-Laws	Principles of Professional Conduct 19, 54, 72
Costs of Medical Care, Special Committee on 4, 62	Prize Essays
Council, Report of 68	Public Health and Medical Education Committee. 65
Counsel's Report	Public Relations Committee 48
County Societies, Relation to State Society 32	Racial Discrimination
Credentials	Radiological Section
Directory	Reference Committees
Dues, Annual56	Retired Members
Dues and Organization	Revision of Constitution and By-Laws 44, 49
Economics' Committee	Scientific Work, Committee on
Election of Officers	Secretary's Report
rec-Spatting 8 39	Staff Workers of State Society, Tribute to 34
Graduate Education Committee 65	Supply and Demand of Doctors
Graduate Instruction	Treasurer's Report
Group Insurance	Trustees' Report
investment Fund of State Society 27	Urology, Section on
Journal16, 53, 58	Woman's Auxiliary 10. 51
Law Proposed on Workmen's Compensation 63	Workman's Compensation



NEWS NOTES



LEGISLATION, SPECIAL BULLETIN, APRIL 17, 1933

The following bills in which we have been interested this year have been signed by the Governor:

Senate Int. No. 993—Twomey, amending the Education Law relative to payment of certain monies into state treasury, so as to postpone until July 1, 1935, time when act shall take effect. Chapter No. 153 of the Laws of 1933.

Senate Int. No. 1590—Buckley, Tax Law, imposing an excise tax of 31/3c per gallon on beer, and appropriating \$50,000 for temperance education. Chapter No. 142 of the Laws of 1933.

Senate Int. No. 1983—Dunnigan, enacting Alcoholic Beverage Control Law. Chapter No. 180 of the Laws of 1933.

BILLS IN HANDS OF GOVERNOR

Senate Int. No. 621—Quinn, amending Criminal Code, by providing for employment of experts not exceeding two, in a criminal case where affirmative presentation of evidence is incumbent on defendant and prosecution has not indicated any number of experts to be employed.

Senate Int. No. 1043-Esquirol, Health Law,

enacting a uniform Narcotic Drug Law.

Senate Int. No. 1556—Esquirol, amending

Mental Hygiene Law generally.

Senate Int. No. 1791-Blumberg, Penal Law, making it misdemeanor for applicant for public welfare relief or person receiving such relief for another person, to make a fraudulent or false representation.

Senate Int. No. 1510-Esquirol, Workmen's

Compensation Law, by placing in excepted employments inmates of, and other recipients of charitable aid from, a religious or charitable institution, who perform work in or for the institution in return for aid conferred.

Assembly Int. No. 782-Robinson, Criminal Code, relative to proceedings when a person in confinement appears to be insane or a mental de-

fective.

Assembly Int. No. 692—Horn, County Law, by providing no person, not residing in Rockland County for at least three years, shall be admitted as a patient to Summit Park Sanatorium at Pomona, as a county charge.

Assembly Int. No. 705-Austin, Public Health Law, by providing rules or regulations for protection from contamination of potable water supplies shall be published at least once each week for two instead of six consecutive weeks.

Assembly Int. No. 772—Doyle, Penal Law, regulating sale and manufacture of bichloride of mercury and compounds thereof and to prevent

accidental poisoning.

Assembly Int. No. 2439—Esmond, creating the Saratoga Springs Authority to construct on lands of Saratoga Springs Reservation, a cure devoted to use of mineral waters for public health purposes, to lease such lands from the state and construct incidental facilities, and to issue bonds.

All other bills in which we had an interest were defeated.

HARRY ARANOW, Chairman.

THE AMERICAN MEDICAL ASSOCIATION MEETING

The annual meeting of the American Medical Association which will open in Milwaukee at 10:00 A.M. Monday, June 12th, 1933, will undoubtedly attract many members of the Medical Society of the State of New York.

Milwaukee has ample hotel facilities for the adequate accommodation of all visiting delegates. The railroads are more liberal in their rates this year than ever before. Fare and one-third for the round-trip has been authorized. The plan is to purchase a one-way ticket from your home station to Milwaukee. When you purchase your ticket, secure from the Ticket Agent a certificate which should be validated by the special agent of the carriers, who will be in attendance at the

meeting. The ticket, when properly validated, should be presented to Ticket Agent, who will issue a return ticket at one-third of the going fare This return ticket has the liberal provision of permitting a stop-over at Chicago to visit the "Century of Progress" Exposition.

On June 1, 1933, in the city of Chicago, the curtain will rise on Chicago's Great World's Fair, one of the most enthralling dramas ever produced by man. It is a masterful, colorful presentation of human achievement during the past century

and will appeal to all physicians.

Either special cars, or if numbers justify, a special train, will be operated over the New York Central and Chicago & North Western Railroads to Milwankee, leaving Grand Central Terminal 7:45 P.M. Eastern Standard Time Saturday, June 10, arriving Milwaukee about 7:00 P.M. the following day. Reservations may be secured on the above or any other New York Central train by addressing Mr. J. S. McAndrew, Room 1216, 466 Lexington Avenue, New York CityTelephone Murray Hill 2-8000, Extension 671. Your cooperation is earnestly requested in order to make possible the convenience of through service to your Convention City.

DANIEL S. DOUGHERTY, Chairman of the Special Committee on Transportation.

ONEIDA COUNTY

The quarterly meeting of the Oncida County Medical Society was held in the Hotel Utiea on Tuesday, April 10, 1933. The society plans to give Mothers' Day, May 14, a new meaning, for it voted to cooperate with community clubs and health organizations to educate the people on the subject of Maternal Mortality. The program for Mothers' Day in the past has been centered on prenatal care. This year, with the cooperation of the County Medical Society, the need of hospital care at the time of delivery will be emphasized.

Dr. T. H. Farrell, Chairman of the Committee on Public Relations, reported on the relation of the Temporary Emergency Relief Administration to the rural committees, and said that forty per cent of the costs of medical care of the indigent would be refunded by the State.

Dr. Farrell also reported on the progress of the campaign for the early care of cases of tuberculosis, which is being conducted under the leadership of Dr. W. C. Jensen, Superintendent of The County Sanatorium, Dr. S. A. Mahady, School Medical Examiner, and Dr. H. J. Ball, District State Health Officer.

Dr. J. S. Lawrence, Executive Officer of the State Medical Society, reviewed the action of the

Legislature on medical bills,

Dr. John F. Kelly of Utica read a paper on intestinal obstruction.

Dr. F. M. Miller, Jr., read a paper on the transposition of the viscera.

Dr. G. A. Holden discussed the relation of the coroner to the district attorney.

Dr. G. F. Jones, Utica, and Howard Beach. Sherrill, were elected to membership.

The next meeting will be the annual outing and will be held on July eleventh.

W. HALE, JR., Secretary.

DUTCHESS-PUTNAM

A regular meeting of the Dutchess-Putnam Medical Society was held Wednesday, April 12, 1933, at the Chimney Corner, Poughkeepsie, N. Y. The meeting was called to order by the President, Dr. S. E. Appel at 9:00 p.m.

The minutes of the February and March meetings were read and approved.

Drs. C. W. Layne, Beacon, N. Y., and L. W. Stoller, Red Hook, N. Y., were elected to membership.

It was regularly voted that matters concerning mental hygicne work be left to the Dutchess County Psychiatric Society.

It was regularly voted that the Economics Committee headed by Dr. James T. Harrington investigate Workmen's Compensation, arbitration, and outline a plan for the Dutchess-Putnam Medical Society to be presented at the next meeting.

A letter from County Welfare Commissioner Cox concerning rules and relations governing medical care to Home Relief patients was ordered submitted to Commissioner Burnett by the Public Relations Committee.

Program

Professor Howard J. Howson, Vassar College, "What Freud Has Accomplished."

Discussion by: Dr. Richard H. Hutchings, Jr., Harlem Valley State Hospital, Wingdale, Dutchess County; and Dr. James P. Kelleher, Hudson River State Hospital, Poughkeepsie, N. Y.

Meeting adjourned at 10:45 p.m. for refresh-

Present: Drs. Voorhees, Peekham, Harrington, Thomson, Cadwell, Gosse, Wilson, Cranc, Howson, Kelleher, Krieger, Deyo, Appel, Carpenter, Hedgecock, Andrews, Borst, C. E. Lane, Marks, Davison, Cavanaugh, Rivenburgh, Conger, Rogers, Sobel, Leonidoff, Rosenberg, Smith, Lander Hamilton, Conger, Tonger, Palithic Stoller, Harrington, Stone, Languer, Baldwin, White, Breed, Keating, Jennings, Storrs, Hutchings, McGrath, G. E. Lane, C. A. Crispell, Simon, Price, Cotter, Toomey, Bacile, Harin.

II. P. CARPENTER, Secretary.

GRADUATE COURSES

The Committee on Public Health and Medical Education desires to direct attention to suggested plans for the extension of graduate education among the members of the State Medical Society. Discussion of this subject appears as part of the Committee's annual report to the House of Delegates which is published in the March first issue of the New York State Journal of Medicine, page 277.

As the first step to the inauguration of one week graduate courses in New York City, through the offer of the Administrative Board of Postgraduate Studies in Medicine of Columbia University, it is necessary to know how much demand there is for this type of instruction. Unless at

least twenty physicians throughout the state register for a definite course it is doubtful whether such courses could be organized. Consequently any physician interested in registering for such a course should immediately inform Dr. Thomas P. Farmer, 608 East Genesee Street, Syracuse, New York, Chairman of the Committee on Public Health and Medical Education of the New York State Medical Society, or the secretary of his local county society regarding his desire to take such a course as well as the time of the year most convenient for him to have this work.

Tentative outlines for three courses are herewith submitted. It is expected that the registration fee will be \$10.00.

		PROGR	ZAM I		
Monday	Tucsday	Wednesday	Thursday	Friday	Saturday
9 - 12	9 - 12	9 - 12	9 - 12	9 - 12	9 - 12
Cardiac	Diabetcs	Cardiac	Pneumonia	Cardiac Diseasc	Diabetes
Disease		Discase		Disease	
2 - 5	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5
Pulmonary	Pneumonia	Pulmonary	Cardiac	Pulmonary	Pulmonary Tuberculosis
Tuberculosis		Tubcrculosis	Diseasc	Tuberculosis	1 Injerculosis
	PROGRAM II				
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9 - 12 Maternal Care	9 - 12 Newborn and In-	9 - 12 Care of School	9 - 12 Matarral Cara	9 - 12 Newborn and	9 - 12 Newborn and
Obstetrics in	fancy. Infant	Care of School	Maternal Care Obstetrics in	Infancy	Infancy
Gen'l. Practice	Fceding		Gen'l. Practice	•	
2 - 5	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5
Newborn and	Maternal Care	Newborn and In-	Crippled	Maternal Care	Dental
Infancy	Obstetrics in Gen'l. Practice	fancy. Infant Fceding	Children	Obstetrics in Gen'l. Practice	Hygiene
		recuing		Gent. Tractice	
				,	
		PROGRA	AM III		
Monday 9 - 12	Tuesday 9 - 12	Wednesday	Thursday	Friday	Saturday 9 - 12
9 - 12 Public Health	9 - 12 Communicable	9 - 12 Cancer	9 - 12 Public Health	9 - 12 Cancer	Communicable
Problems in	Discases	Cancer	Problems in	Cancer	Diseases
Gen'l. Practice			Gen'l. Practice		
2 - 5	2 - 5	2 - 5	2 - 5	2 - 5	2 - 5
Gonorrhea and	Public Health	Mental Hygiene	Gonorrhea and	Public Health	Industrial Hygiene in
Syphilis.	Problems in Gen'l. Practice	in General Practice	Syphilis	Problems in Gen'l. Practice	Gen'l. Practice
	com a ractice	, ractice		Genti, E. action	

THE DAILY PRESS



WOMAN'S AUXILIARY OF OUEENS COUNTY

The New York *Times* of March 22 contains the following news item regarding the Woman's Auxiliary of Queens County,—the first to be formed in New York State:

"The Women's Auxiliary of the Medical Society of Queens County, the first organization of its kind in New York State, was formed yesterday at the organization meeting at the Medical Society of Queens County Building, 112-25 Queens Boulevard, Forest Hills. Following addresses and the signing of the charter by 100 wives of members of the society, Mrs. Claire T. Bearnstein was elected president.

"The meeting was called to order by the temporary chairman, Mrs. Ruth Mencken, wife of Dr. Harry Mencken, president of the society. Mrs. William M. Stone was temporary secretary.

Doctors' wives are looked upon as leaders in the community, in welfare groups and in mothers' clubs,' said Mrs. N. Roy Van Ness, past president of the New Jersey State Auxiliary and the Essex County (N. J.) Auxiliary, emphasizing that social functions must not be the most im-

portant activity of the auxiliary. 'You can act as a liaison between organized medicine, as represented by the county medical society, and the public and can take an active part in stimulating health projects.'

"Dr. Mencken said an anxiliary was capable of filling the breach between the doctors and the public in advocating health measures which the ductors, because of their positions, could not propose. He also traced the history of the auxiliaries of the medical society until a national organization was formed and said there were sixty county medical societies in New York State.

"The following were elected officers of the

auxiliary :

"Mrs. Bearnstein, president; Mrs. Ruth A. Mencken, first vice president; Mrs. Lillian Victor, second vice president; Mrs. Katherine Lavelle, third vice president; Mrs. Constance McManus, fourth vice president; Mrs. Katherine M. Stone, recording secretary; Mrs. Gertrude Lipton, corresponding secretary; Mrs. Margaret Rnbbins, treasurer.

HEALTH AND THE DEPRESSION

The New York *Times* of April 11 discusses health and the depression in the following editorial:

"Health conditions for last February in New York State were substantially the same as a year ago, and February, 1932, had the best showing on record for that Winter month. The death rate for infants under 1 last February was a trifle higher than in the corresponding month a year ago, but it was better than in any preceding February. This is one more bit of evidence that more than three years of business depression have

not taken heavy toll of the health of the community. The third full year of depression, 1932, was the best health year we have had. The current year is apparently going to be as good.

"It is often said in apology for grandiose antidemocratic experiments in government and sociology involving misery and cruelty for countless millions that we must think of the benefits which will accrue to their future generations. This country, in the heart of an economic blizzard, is seeing to it that future generations shall not suffer. Our school and health statistics attest it."

DISEASE GERMS AS BULLETS

The New York Sun of February 20 comments on an article on "Induced Epidemics in Warfare" which appeared in the Medical Journal and Record of February 15, 1933. People are frequently aroused by reports of the discharge of disease germs upon a city or army. The Sun allays these fears in the following editorial:

"Discussing the practicability of intentional communication of infectious diseases, the Medical Journal and Record says there is no doubt that it was attempted centuries ago for criminal

purposes. According to this authority the first authentic record of its proposal for use in war is attributed to an English officer who, in the 1700s, suggested the spreading of smallpox among the Indians of Nova Scotia by means of blankets infected by victims of the disease. Technically, the Journal and Record holds that the introduction of disease in enemy forces which, it says, is 'regarded nowaddys as a certitude by the German the Italian and the Russian governments' sents a number of difficulties:

The Sun comments on the very great difficulties of keeping bacteria and viruses alive until they could reach their victims, and closes the editorial with the following comment, encouraging and reassuring:

"The conclusion reached by the Journal and Record is that 'we may well believe as Nicolle

stated in his recent work "On the Genesis, Course and Extinction of Infectious Disease" that "whatever the genius, whatever the wickedness of man, problems of this nature are fraught with such enormous difficulties that wickedness, aye, and genius are bound to be foiled." It is a conclusion the civilian population will be glad to share."

WORLD CONTROL OF NARCOTICS

The New York *Herald Tribune* of April 13 has the following editorial on the international control of narcotics:

"The narcotics-limitation convention, which was signed at Geneva by the representatives of twenty-eight governments on July 13, 1931, narrowly missed going by default today. A year and a half was allowed in which to secure the ratifications of four drug-manufacturing and twentyone other states. A few weeks ago the United States was the only drug-manufacturing state that had accepted the treaty, and it was indorsed by no more than fourteen others. It then began to look suspiciously as though the European manufacturing countries which fought the convention so bitterly in 1931, because it threatened to impose an effective check on a lucrative illicit traffic, had determined to kill it by the simple negative device of letting the time limit on ratification expire. It will, therefore, be a source of sincere satisfaction to the medical fraternity, the police and welfare workers of every kind in every civilized country to understand that twenty-six ratifications had reached the League secretariat on Monday and that the convention is therefore automatically binding today upon all its signatories.

"The system of control which the American delegate, Mr. John K. Caldwell, and his colleagues had these twenty-eight nations adopt in 1931 is unique in the annals of international relations because it endows a League of Nations committee with a degree of sovereignty over the domestic industry and commerce of the signatories which has never before been surrendered to the

League or any similar organ. Each nation submits to the League an annual advance statement of the narcotic drugs required for legitimate medical and scientific purposes, together with an account of reserve stocks, of orders placed for supplies and of orders received by its manufacturers. The totals must, of course, tally, and all permits are then issued by the central control committee. To this committee and to the other parties to the covenant the signatory governments are then responsible for and in a position to check any leakage of manufactured drugs into the channels of the illicit traffic.

"The final ratification of this unusual agreement is a great triumph for a cause that has always had much more powerful and highly organized opposition than support. Addicts, peddlers, smugglers, manufacturers and their governments have always conspired with great success to surround the devastating 'dope' trade with inviolable secrecy. The struggle against it, conducted largely by limited professional groups, therefore enjoyed no great publicity until the League furnished a stage two years ago on which the devices by which the European governments hoped to shield their manufacturers from effective control were exposed to the world and made duly That the signatures disgraceful by publicity. then secured have now been ratified in good faith without further pressure is satisfactory evidence that the airing which the narcotic problem received in 1931 aroused a new sense of governmental responsibility throughout Europe for the most nefarious of all traffics and that the end of that traffic is at last in sight."

INDIVIDUAL TASTES

Every doctor understands the necessity of catering to the individual tastes and preferences of his patients, and will agree with the opinion

I know of a farm by the side of the road
Where the robins are singing their songs
And the musical frogs
Hidden deep in the bogs
Are chorusing night and day long.
And there, if I tire of the tumult of town,
Whose turmoil seems never to cease,
I know I can find
A serene peace of mind
And the perfect contentment of peace.

which James J. Montague expresses in the following verses from the New York Herald Tribune of April seventh.

I know of a number of places like this—Green hills, or wild mountain retreats Or forest-hid nooks,
Filled with music of brooks,
And remote from the echoing streets.
In fact, there is many and many a spot
Where I might, if I liked, settle down
And renew my lost youth,
But, to tell the plain truth,
I would much rather dwell here in town.

(P)

BOOKS RECEIVED



- Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.
- Nov-Trolical Strue. A Study in Idiopathic Steatorrhoea By Th E Hess Thaisen, M.D. Octavo of 258 pages illustrated New York, Oxford University Press, 1932
- VARICOSE VEINS AND HAEMORRHOUDS AND THEFT TREAT MENT By V MFISFN, M D Octavo of 149 pages il lustrated New York, Oxford University Press, 1932
- SURGICAL CLINICS OF NORTH AMERICA Vol 12, No 6, December, 1932 (Philadelphia Number) Published every other month by the W B Saunders Company, Philadelphia and London Per Clinic Year (6 issues) Cloth, \$1600; paper, \$1200
- CLINICAL PHYSIOLOGY OF THE EVE. By Francis H Adler, M.D., Octavo of 406 pages, illustrated New York, The Macmillan Company, 1933 Cloth, \$500
- DISEASES OF THE HEART By SIR THOMAS LEWIS, M D Octavo of 297 pages, illustrated New York, The Macmillan Company, 1933 Cloth, \$3.50
- THE MEDICAL SECRETARY By MINNIF GENEVIPLE MORSE. 16mo of 162 pages New York, The Macmillan Company, 1933 Cloth, \$150
- CLINICAL DIAGNOSIS Physical and Differential By NEUTON S STERN M D Octavo of 364 pages New York, the Macmullan Company, 1933 Cloth, \$3 50
- CRITERIA FOR THE CLASSIFICATION NO DIAGNOSIS OF HEART DISEASE. By JOSEPH H BAINTON, M.D., ARTHUR C. DEGRAFF, M.D., ROBERT L. LEVY, M.D., and HAROLD E. B. PARDEF, M.D. Third Edition 12mo of 131 pages, illustrated New York, New York Tuberculosis and Health Association, 1932
- THE DUODENUM Its Structure & Function, Its Diseases and Their Medical and Surgical Treatment By Enwayo I Kelloge M D Large octavo of 855 pages illustrated New York Pull B Hoeber, Inc., 1933 Cloth, \$10 00 (Hoeber's Surgical Monographs)
- HANDBUCH OER ALLGEMEINEN HAMATOLOGIF Band I. Hälftes I amd II HERAUSGEGEDEN VON HANS HIRSCHI FELD, M. D. and ANTON HITTMAIR, M.D. Large Octavo of 1523 pages, illustrated Berlin, Urban & Schwarzenberg, 1932 Paper, R.M. 139
- THE RISE OF PREVENTIVE MEDICINE. By SIR GEORGE NewMan, M D Octavo of 270 pages illustrated New York, Oxford University Press 1932 Cloth, \$3400 (University of London Heath Clark Lectures, 1931)
- HUMAN VALUES IN PSYCHOLOGICAL MEDICINE B, C P BLACKER, M D Octavo of 179 pages New York, Oxford University Press, 1933 Cloth, \$250 (Oxford Medical Publications)
- THE ORGANS OF INTERNAL SPECETION By Ivo G COBB MD Fourth Edition Octavo of 303 pages Balti more, Walkim Wood & Compuny, 1933 Cloth, \$3 50
- i iie Common Cold By David Thomson & Robert Thomson Quarto of 738 pages, illustrated Balti

- more, Williams & Wilkins, 1932 Paper, \$1500 (Vol. VIII of Annals of the Pickett-Thomson Research Laboratory)
- INTERNATIONAL CLINICS A Quarterly of Illustrated Clinical 1 ectures & 1 specially Prepared Original Articles on Treatment, Metheune Surgery, etc. Vol. 1, 43rd Series 1933. Putted by Louis Hamman, M.D. Octavo of 305 pages illustrated Philadelphua, J. B. Lippincott Company, [c. 1933.]. Cloth, \$3.00.
- Hookworn Infection By Clayton Lane, M.D. Octavo of 319 pages, illustrated New York, Oxord University Press, 1932 Cloth, \$6.25
- Sex & Internal Secretions Edited by Edgar Allen Octavo of 951 pages, illustrated Baltimore, Williams & Wilkins Company, 1932 Cloth, \$10.00
- A SHORTER ORTHOPAEDIC SURGERY By R. BROOKE M D Octavo of 150 pages illustrated New York, William Wood & Company, 1932 Cloth, \$375
- THE HARVEY LECTURES Delivered Under the Auspices of The Harvey Society of New York 1930-1931 Series 26 Octavo of 186 pages, illustrated Baltimore, Williams & Wilkins Compuny, 1931 Cloth, \$400
- THE HARLY LECTURES Delivered Under the Auspices of The Harver Society of New York, 1931-1932 Series 27 Octavo of 226 pages, illustrated Baltimore, Williams & Wilkins Company, 1932 Cloth, \$400
- A Synotsis of Surgical Anatomy By Alexander Lef McGregor 12mo of 609 pages, illustrated New York, William Wood & Company, 1932 Cloth, \$450
- DISEASES OF THE SKIN By the late Robert W MACKENNA, MD Third edition revised and enlarged by Robert M B Mackenna, MD Octavo of 506 pages, illustrated William Wood & Company, 1933 Cloth, \$700
- THE MANAGEMENT OF AIDOMINAL OPERATIONS BY ROBERT H MAINGOT M D 12mo of 311 pages New York, William Wood & Company, 1932 Cloth, \$225
- THE MPDICAL CLINICS IN NORTH AMERICA. Volume 16 No 5 (Baltimore Number) Published exery other month by W B Saunders Company, Philadelphia and London Per Clinic Year (6 1881es) Cloth, \$16 00 net, paper, \$12 00 net
- THE ABILITY TO PAY FOR MEDICAL CARE BY LOUIS S REED PhD Octavo of 107 pages Chicago, The Um versity of Chicago Press [c 1933] Cloth, \$2.00 (Publications of the Committee on the Costs of Medical Care No 25)
- THE INCIDENCE OF ILLNESS AND THE RECEIPT AND COSTS OF MEDICAL CARE AMONG REPRESENTATIVE FAMILIES BY 1 S FAIL PILD MARGARET C KLEM and NATH IN SINI DP II Octave of 327 pages Chrono The University of Chicago Press, [c. 1933] Cloth, \$300 (Publications of the Committee on the Costs of Medical Care, No. 26)



BOOK REVIEWS



DIAGNOSIS AND TREATMENT OF DISEASES OF THE THYROID GLAND. By GEORGE CRILE, M.D. and Associates. Octavo of 508 pages, illustrated. Philadelphia, W. B. Saunders Company, 1932. Cloth, \$6.50.

A remarkable, comprehensive symposium concerning the most interesting and fascinating subject of medicine, surgery and their allied specialties. Dr. George Crile writes 14 of the 39 chapters. The remaining 25 chapters are ably handled by an array of authoritative and special talent.

Thyroidectomy is advised for hyperthyroidism during the course of—1. Active Pulmonary Tuberculosis. 2. Diabetes Mellitus. 3. Syphilis. 4. Pregnancy, regardless of its stage. 5. Arthritis, especially of the spine and shoulders. Separate chapters on these complicating diseases impart valuable information.

Essential hypertension and rheumatic carditis may mimic hyperthyroidism. The reader is warned against

advising thyroidectomy in these cases.

A chapter by Dr. Crile on the adrenal factor advises a two stage denervation as a preventive against a residual or recurrent hyperthyroidism. He reports 24 such operative cases with apparent cure. Note that in a more recent paper, Dr. Crile has added a third indication and reports 21 additional adrenal denervation cases of severe primary hyperthyroidism too sick for thyroidectomy. A more detailed description of the adrenal denervation operation would probably have enhanced an already valuable book.

Medical and x-ray therapy of hyperthyroidism are impartially presented. There are 22,441 operative cases listed. For the last 5,000, a mortality rate of 0.84 per cent is reported. With such a remarkable record, Dr. Crile justifiably claims for operation the only safe and rapid cure for hyperthyroidism.

This indispensable volume is a culmination of unselfish endeavor in a crowning achievement of Medicine and Surgery, through a long list of historic names from Theodor Kocher to George Crile.

HARRY FELDMAN.

LABORATORY SERVICE AND THE GENERAL PRACTITIONER. By Arnold Renshaw, M.D. 12mo of 267 pages. New York and London, Oxford University Press, 1932. Cloth, \$2.50. (Oxford Medical Publications.)

The title of this book, Laboratory Service and the General Practitioner, summarizes briefly the purpose of this valuable text. The reader is impressed with the effort which the author makes to guide the practitioner in seeking the assistance which he can obtain from the laboratory. The important available laboratory methods are briefly and explicitly described with examples in normal findings appended to each test. In order to aid the physician in avoiding unnecessary tests, the author includes an appendix in which are listed the more useful laboratory examination which should be made in cases coming or believed to come, under the condition mcntioned, the latter being placed in alphabetical arrangement: Thus, under C, one finds "coma" with the following suggestion. Urine—for sugar and acetone, blood urea estimation, blood film for malaria if associated with pyrexia. About 250 conditions are thus listed, each with suggestions of the laboratory tests to be employed.

In reading through text books on this subject, one is impressed with the growing needs for the clinical pathologist who functions as the link between the clinician and the laboratory, a link which is too often missing.

SILIK H. POLAYES.

MANUAL OF EMBRYOLOGY. By J. ERNEST FRAZER, F.R.C.S., Eng. Octavo of 486 pages, illustrated. Baltimore, Williams & Wilkins Company, (William Wood & Company), 1932. Cloth, \$8.00.

The plan of this interesting book differs from that of previous texts on this subject in that the now rather universal plan of teaching anatomy by the regional method is followed, with the result that embryology, histology, and gross anatomy may be considered simultaneously. The subject has been divided into two parts, part one being devoted to early and general development dealing with the formation of the embryo as a whole and in itself forms a text of general embryology. Part the deals more specifically with the development of organs and regions and can be used as a reference section by the physician who is especially interested in one definite region, in this way enabling him to round out his knowledge of his specialty without wading through a mass of information regarding other structures whose only relationship is that of chronological sequence. The book is well illustrated by diagrams and drawings, many of which are original. The printing is up to the standard set by the publishers.

Injuries of the Eye. By Harry Vanderbilt Würde-mann, M.D. Second Edition. Octavo of 900 pages, illustrated. St. Louis, Mo., The C. V. Mosby Com-pany, 1932. Cloth, \$13.50.

Relatively well-known facts set down from an unusual

viewpoint, may be as valuable as new facts.

When we buy a new book nevertheless, we subconsciously at least want it to contain information not found in books already in our possession. Besides this, we feel a particular interest in a book well illustrated and well printed.

We can say that this second edition of Würdemann's work abounds in these three features. There is a pleasant blending of new and worthwhile old material with a wealth of satisfactory illustrations which appeal. The diction is pleasing, and the presentation of the material is logical and clearly set forth. We can have the greatest confidence in a writer of such broad technical experience, such great ingenuity, and of such versatility in literary and artistic expression.

Reference to his chapters on operative injuries, artificial cyes, injuries to the visual nervous system, he departs somewhat from the traditional in his remarks on phynology and anatomy and injuries of the lacrimal apparatus will be found to contain not only new material and material not found in other works, but will provide a very interesting viewpoint of pictures met with in daily practice. In Part III Dr. Würdemann has collected a great mass of data on forensic medicine which is not available in other works on the eye. There are sections on the physician in court, malpractice, a digest of workmen's compensation laws of the world, and a great variety of other topics which are of the greatest interest and value to the ophthalmologist. All this material is authentic and as up-to-date as is possible with the everchanging material of this type.

The illustrations are clear and demonstrate very well the points which the author wishes to make clear. All in all this book is a real addition to the library of every ophthalmologist, plastic surgeon and industrial surgeon. It should be on the shelves of every hospital for reference not only by the surgical staff but by the executive staff of the institution.

JOHN N. EVANS.

DISEASES OF THE SPINAL CORD. By WILLIAMS B. CAB-WALADER, M.D. Octavo of 204 pages, illustrated. Baltimore, The Williams & Wilkins Company, 1932. Cloth, \$5.00.

In this book we have a timely addition to the growing literature on spinal cord disease.

The first two chapters are devoted to the neuron theory and an anatomical review of the content of the spinal cord including pathways and circulatory supply.

The third to fifth chapters are utilized in describing the elicitation of neurological signs and their significance; similarly with symptoms. In describing symptomatology and physical signs, there is correlation with the previous anatomical description, to indicate how a determination of the level of a spinal cord tesion is arrived at.

In the remaining ten chapters, specific diseases are discussed. Each disease is treated systematically with reference to ctiology, pathology, symptoms, progress and treatment. Particularly good is the discussion of compression myelitis.

The book is liberal in its illustrations. There is an extensive hibliography. It is well suited to the needs of the general physician.

STANLEY S. LAMM.

EXCITABILITY—A Cardiac Study, By W. BURRIDGE, D.M., M.A. Octavo of 208 pages. New York and London, Oxford University Press, 1932. Cloth. (Oxford Medical Publications.)

This volume consists primarily of the elaboration of a new theory of the processes involved in excitability and contraction based on cerlain experiments performed on perfused hearts. The theory is also later applied to all fundamental physiological processes. The views are so nuch at variance with the accepted principles of physiology that they cannot be accepted without a great deal of independent corroboration.

J. H. Crawford.

AN INTRODUCTION TO ANALYTICAL PSYCHOTHERAPY. By T. A. Ross, M.D. Octavo of 203 pages. New York, Longmans, Green & Company, 1932. Cloth, \$350.

This book is precisely what its title implies, an introduction to analytical psychotherapy. The author has had a rich experience in treating neurotic patients. He has familiarized himself with all recognized forms of psychotherapy, and apparently is learning towards the Freudian doctrines. In fact, he has acquired considerable knowledge in Freudian principles, but consciously seems to rehel against accepting them completely. Nevertheless, the books serves as an illuminating exposition of psychoanalysis. He discusses at length such topics as the unconscious, transference, dreams, sex problems, symptom formation and technic.

This book is highly recommended as it briefly and lucidly presents the analytic approach in the management of the neurotic patients.

INVING J. SANDS.

ERDMANN'S CLINICS. Excerpts Selected from the Clinics of John F. Erdmann. By John F. Erdmann, M.D. Octavo of 315 pages, illustrated. Philadelphia, W. B. Saunders Company, 1932. Cloth, \$4.50.

The Saunders Company has just issued a most interesting volume based on the Clinics of Dr. John F. Erdmann of New York. The material in this compilation is based on the forty years experience of Dr. Erdmann in his work, both private and public, in New York Gity. Part of it is didactic and given in lecture form in a most illuminating way, covering not only the surgical aspects of the lesions, but the gross and microscopical description of the same. Another part is composed of descriptive remarks made at the time of operation which also adds much to the value of the work. The whole work covers

the Sirgery of the Abdomen and Pelvis, both male and female, to which is added Breast Surgery and short chaplers on Hemorrhoids, Ilernia, etc. The work as stated is the expression of Dr. Erdmann in relation to his own experience and where he may differ with othere as to technique and choice of methods he gives reasons to justify his position. The book is deserving of careful s'udy and is arranged so that subject matter is classified, and reading may be done at odd times without losing the continuity of thought.

Eugene W. Skelton.

CLINICAL GYNECOLOGY. By C. JEFF MILLER, M.D. Octavo of 560 pages, illustrated. St. Louis, Mo., The C. V. Mosby Company, 1932. Cloth, \$10.00.

The author has designed this book to serve as a companion volume to his "An Introduction to Gynccology," and it is intended for the student who is just beginning his study of gynccologic therapy. The discussion of pathology, symptomatology and diagnosis is purposely avoided.

The book is divided into three parls,—Part I deals with gynecologic diseases and their treatment. Part II considers therapeutic measures in gynecology, and Part III is devoted to operative gynecology. The text is accompanied with many excellent illustrations.

While this excellent text book is primarily intended for students, those of more mature years will find much of great value, both in the clear and concise suggestions so to therapeutic measures, and in the discussion of various gynecologic operations.

W. S. SMITH.

THE EARLY DIAGNOSIS OF THE ACUTE ABDOMEN. By ZACHARY COPE, M.D. Sixth Edition. Octavo of 248 pages, illustrated. New York, Oxford University Press, 1932. Cloth, \$3.25. (Oxford Medical Publications.)

This little book of two hundred and forty odd pages has reached its sixth edition in ten years; really nine editions because there has been a second impression of three editions. It is therefore provably a useful book. Though a considerable number of minor alterations have been made in this edition the scope of the book has not in any way been extended.

The book deals solely with the early diagnosis of the acute abdomen. It is a book for the general practitioner as well as the young surgeon.

The author has had a very extended experience in acute abdominal surgery and has been particularly fortunate in seeing a sufficient number of such cases in the early stages.

The book is clearly and pleasingly written, and if it is read by the general practitioner with understanding, serves an extremely useful purpose. It is well indexed so that its contents are readily accessible.

RUSSELL S. FOWLER.

Anatomy of the Brain and Spinal Cord. By William W. Looney, M.D. Second Edition. Octavo of 370 pages, illustrated. Philadelphia, F. A. Davis Company, 1932. Cloth, \$4.50.

In writing this book, the author has had in mind several important points and has succeeded in fulfilling the requirements. The book is intended to be a text for first year medical students. The author believes that as such, it should be simple in its description and arrangement of material but at the same time it should cover the subject. Throughout the text he has carried in mind the importance of arousing and maintaining the interest of his students. In this second edition many sections have been entirely rewritten and errors climinated. We believe that this type of textbook is to be desired.

O. C. PERKINS.



OUR NEIGHBORS



STATE HEALTH DEPARTMENT OF TENNESSEE

The February issue of the Journal of the Tennessee State Medical Association prints a bill proposed by the Association for reorganizing the State Department of Health. It provides for a council of seven members, six to be physicians nominated by the State Medical Association and one dentist nominated by the State Dental Association.

The Council shall elect a Commissioner of Health. It shall also formulate the policies of the Department by which is probably meant

the enactment of a sanitary code.

Commenting editorially on the proposed bill

the Journal says:

"This bill will be introduced when the Legislature reassembles. In the meantime local medical societies should explain this bill to their representatives in the House and Senate and secure their support of it. This should be done now.

"The following are a few of the reasons why this bill should become a law: First, the Commissioner of Public Health under existing statutes has more power than should be vested in one man. His powers are almost limitless in so far as health policies and health regulations are concerned. For this reason there should be a Board of Directors whose duty it is to make the regulations and formulate the policies to be followed by the various executives of the department.

"It is not the purpose of the medical profession in sponsoring this bill to destroy the health department or its effectiveness. It is rather our desire to see that sound policies are formulated and followed. It is believed that economies can be affected and the usefulness of the department increased at the same time.

"Sound policies of administration will remove the causes for the growing conflict between the practitioners of medicine and the public health agencies. This is a vital consideration. The practitioners of medicine who take care of sick people, who make the first contact with contagious diseases of all sorts, are the most vital public health agencies in the state. To destroy their interest in public health by following unsound and unnecessary public health policies financed by large appropriations have a disasterous effect. It has the effect of destroying the greatest public health agency we have, and of bringing about the necessity for still larger appropriations for public health departments and the creation of more bureaus. By such steps the medical profession and the public become engulfed in bureaucracy.

"Every one recognizes the need for a public health department clothed with the authority to exercise those powers which only an executive of the State can exercise. These powers should be preserved and vested in a board who will exercise them judiciously, in the interest of public health, in the interest of economy, and in the interest of preserving the institutions and principles of government which makes ours a free country.

"We must arrest our march toward bureau-

cracy or our freedom is gone."

MEDICAL LEGISLATION IN SOUTH CAROLINA

The February issue of the Journal of the South Carolina Medical Association contains the following editorial on the legislative needs of South Carolina:

"The so-called economy legislature is now in session. At the present moment the chief concern of the medical profession in South Carolina is the attitude of this body towards our educational institutions, notably the Medical College. As the appropriation now stands the Medical College will suffer tremendously in the event that this appropriation cannot in some way be increased. We wish to emphasize the necessity for every doctor in South Carolina taking up the matter personally with his delegation and explaining the whole situation with reference to the demands of medical education for the highest type of teachers. Our

State Medical School is probably run more economically now than any other Class A medical college in the United States. More than half of the doctors in this State received their training there, and doctors are decreasing in this State in numbers every year. We have now a lower ratio of doctors per population than any other State in the Union. It is readily seen that a good medical school maintained at a high level is one of the most important considerations before us at the present time.

"The legislative program for health activities very likely can stand some modification in certain phases of its work without serious consequences. It cannot be denied that the Legislature in general has done a great deal for the health of the

(Continued on page 616-Adv. xii)

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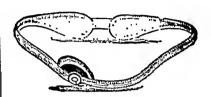
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people of South Carolina. The results worthwhile in a lowered mortality and The State continues to appropriate cosums of money as a result of the enco of these statistics. In this matter also cal profession is in position to render a ice to the people by talking over will spective delegations the needs of pub. It is back home and in the hands of doctor very frequently that the best we when it comes to making a real impropriate of our representatives.

"We would not forget the great wor our Food Research Laboratory and the Resources Commission. Both have attraction of scientists in various particularly world. The economic stability of our been and will be tremendously enhancementalled to keep these institutions as the

CHRISTIAN SCIENCE HEA IN WEST VIRGINIA

The following editorial on the prolegalizing the practice of Christian Scie is contained in the March number of Virginia Medical Journal:

"At the time this editorial is being bill is under consideration by the hour gates of the West Virginia legislature faith healers from the provisions and 1 of the medical practice act. The meast as H.B. 269, would allow spiritual heale business offices and charge fees for the sick by prayer. The bill is sponsor Christian Science Church.

"In protesting against such legislatic sociation has repeatedly pointed out that tion involved is of far more concern to than to the medical profession. As a fact, the passage of H.B. 269 would procease the incomes of most of the doctate, because, if the bill should pass, the a decided upward trend in the nuseverity of epidemics. However, the metession, not the faith healers, is charge responsibility of keeping epidemics und We know that epidemics can't be con any group that does not believe in the ge of disease.

"We have no particular quarrel with tian Science Church, but we do feel the belongs to the church and the home. unquestionably cured many sufferers. y neither a science nor a business. If fai is to be commercialized, let us look at mercial investment in regulated medica in West Virginia.

(Continued on page 619-adv. xv)



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(Continued from page 616-adv. xii)

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"This colossal investment in time and money, built up for the protection of our citizens, is the result of more than sixty years experience under our medical practice act. We can not believe that the legislature of West Virginia will ignore such an investment. Certainly it is not consistent with sound judgment to say that one group (the medical profession) must spend years of study before being allowed to treat the sick, and that another group (the Christian Scientists) can go ahead without any preparation whatever."

BASIC SCIENCE LAW IN COLORADO

The March issue of Colorado Medicine contains six pages on the subject of a Basic Science Law, such as was adopted in Wisconsin eight years ago, and since that time in Connecticut, Minnesota, Nebraska, Washington, Arkansas and the District of Columbia. The proposed law for Colorado fills two and a half pages of the Journal, and would require examinations in anatomy, physiology, pathology, chemistry, and bacteriology.

Commenting on the law the Journal says:

"An important feature of this measure is that the projudices of drugless healers against examination by medical boards are entirely climinated. Likewise the distrust of medical practitioners in the ability of drugless healers to conduct adequate examinations in the fundamental sciences is avoided. This is accomplished through provision that the Board of Examiners in the Basic Sciences shall be made up of educators, shall have on its membership no person engaged in the practice of any branch of the healing art, and no more than one member out of the five who is an advocate of any one school of thought in healing.

"The Basic Science Law ignores differences in preprofessional education by allowing high school

graduates to be examined.

"Persons who pass the examination held by the Basic Science Board are given certificates to that effect. Such certificates do not entitle them to practice, but merely authorize their admittance, on compliance with other necessary requirements, to examination by whatever one of the several professional examining boards each applicant may (Continued on page 620-adv. xvi)

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Observations and experiments conducted by Drs. G. F. Kempf and L. G. Zerfas, members of the Lilly Research Staff, and Dr. J. T. C. McCallum, a former member of the Lilly Research Staff, warrant the conclusion that Sodium Amytal, Lilly, is an effective antidote against strychnine poisoning. The physicians found that Sodium Amytal, Lilly, could be given in large doses without bad effect. It stopped the convulsions promptly, put the patient to sleep without interfering with his breathing. For use as an antidote where prompt effect is highly desirable, Sodium Amytal, Lilly, should be given intravenously. Its effectiveness by mouth, however, has already been demonstrated.—Adv.

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MÜNCHENER MEDIZINISCHE WOCHENSCHRIFT

Dr. Kurt Ochsenius

"Zur Behandlung der Broncho-pneumonias in Early Childhood"

The author states at the beginning of his article that the treatment of gastro-intestinal catarrh of infants has advanced considerably during the last years and that Cholera infantum, previously so much feared, can be successfully treated, even during the summer season. The next problem in pedi-

atrics the author sees is the successful treatment of broncho-pneumonia is early childhood which is still said to show a mortality as high as 80 per cent.

Next to proper prophylaxis the author recommends a continuous change of position of the infant, and the application of hot kataplasms which will retain the heat for hours, and also preparations of quinine. This treatment was successfully applied in 50 cases and the author therefore believes Antiphlogistine to be the ideal method of applying continuous moist heat.—Adv.

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MEDICAL SERVICE FOR THE NATION By EDWARD H CARY, MD, DALLAS, TEXAS

An address by the I resident of the American Melical Association deliverel at the Annual Meeting of the Medical Society of the State of New York after the Annual Ranquet on the exenung of April 4, 1933 in the Hotel Wallorf Astoria New York City

FOUR hundred years before Christ, the medical profession was given a law by Hippocrates Although twenty-four centuries have elapsed, this law contains for its all the essential elements to guide and hold us. It is the rich earth from whence the Tree of our Order has sprung

It is too, the background of medical tradition worth treasuring. In our history we have not departed appreciably from the tenets of this law, and they have survived because Hippocrates was able to sum up the fauidimental principles which should govern those whose profession is medicine.

In the last paragraph of the Law wherein he stated, "Those things which are sacred are to be imparted only to sacred persons, and it is not lawful to impart them to the profane until they have been initiated into the mysteries of the secence," he established a principle which has been followed faithfully. Inventions have been given by the discoverers to followers of the healing art, just as all scientific knowledge has been revealed. The improved technique of medicine has become the property of all who cultivate the art and science of medicine.

It is an interesting circumstance that of all the associations of men who for centuries have bound themselves together for a common purpose the profession of medicine is the only one which has grown stronger and more digmfied through the years

It has survived as an entity because of the bisically sound policy of the distribution of knowledge, imparted by its members each to the other for the purpose of serving the human race

Medicine readily becomes an instrument of the brotherhood of men who are engaged in properly interpreting Nature's secrets

Medicine, both a science and an art is gloriously stimulating for it lays bare the gamut of human emotions

The science of medicine bridges human eccen tricities and all ethnological circumstances

Disease affects individuals differently depending upon the immunity acquired. Cellular reac-

tions in human beings, when observed and recorded, represent widespread experiences

The true scientist develops a extrain quality of nind, for while deling and searching for genis of truth, his mind becomes attitued to Jeliovah's purposes. The patient worker builds a pathway with fact after fact honorably placed for the pageant of excilization to mount upward and onward. Sometimes the builder is not well known and remains unsuing regardless of nationality. His own reward is a glimpse of God expressed in the infinitely small or maybe, in the infinitely great

Conjecture as you may, we believe that this is a real reward for men who toil in every Nation of our far flung Universe, for they are interpreting facts, and constructing the Roadway of

Medicine has liad its allies both in the men who developed the basic sciences and those who rightly interpreted them. Open minds, with ready wit, and a capacity to inform the world through literature as did Voltaire, Franklin, and others, quickened the acceptation of scientific truths as they were developed.

The science of medicine, as we know, gained its greatest impetus with the discoveries which rapidly followed the work of Pasteur, who revealed the heretofore invisible but important factors of life to an astonished world. From that time on, the etiology of disease could be proven experimentally, and as one discovery after another of the causes of recognizable diseases became known medicine lost much of its superstition and developed true scientific merit.

The thirst for knowledge became the ruling factor in medical education and this incentive is the binding force which underlies the progress of the medical profession

The law of Hippocrates has been a determining factor in holding men to ethical standards for it expresses particularly the nobility of the art and emphasizes the necessity to word ignoble practices

The Father of Medicine has made it possible

for us to adjust the practices of tomorrow by using the yardstick of his tenets to measure the conditions of the modern world.

Suppose we turn our attention to the influence of modern conditions upon material and ethical problems in medicine as we find them today. We cannot ignore the higher cost in time and money necessary to create competent physicians. The modern medical man is confronted with an evergrowing science which often develops more rapidly than he can encompass the art of medicine as expressed in its practice.

Today we face an ever-increasing army of modernly educated physicians most of them seeking to discover through research in laboratories and thinics, the cause of disease. This vast army is ready to apply acquired knowledge to prevent the recurrence of diseases which engage their time and bring them a livelihood. We recognize already a lessening demand for the men of our profession. Preventive medicine has eliminated many diseases which once occupied the profession's attention. Sanitary laws and immunization, the result of professional knowledge and agitation, are rapidly making life safer in all localities; a contribution so great that the people now think of the state instead of the medical background.

It would be inconceivable for the medical profession to fulfill its high task in the service of humanity if it were not working as an organization, having fixed principles to guide it. The people should know this and if they were properly advised, they would sustain any effort on the part of medical men to build a strong responsible association for it conserves the health of the people.

Nothing should be permitted to destroy harmony of action within the profession. The well-being of humanity is intimately associated with the high ethical concept adopted and preserved by the medical profession to sustain its own nobility and its interest in the people's welfare.

Eliminate the application of accurate medical knowledge through ill-considered economic practices to the point of conceivable diminishing monetary returns, and the progress of medicine will in a large measure become an abstract science; of value as an intellectual pursuit but deprived of an important human incentive which has so definitely made the application of the science and art of medicine serviceable to humanity.

Today society is so complicated that if medical knowledge lagged or ceased to progress, it is conceivable that society as we know it, would wane and the human race be left to struggle with the recurring pestilences of the past. Education, the great motif, underlying medical organization furnishes the cementing force which unites men to a common purpose.

In 1902, the American Medical Association was organized as a modern expression of the sentiment which has held medical men together

as a body throughout the ages. Medical men believe in the elevating quality innately existing within the profession. Seemingly it is true that the educated physician in any age has been a superior man; though exact scientific knowledge may have been lacking there was something enobling in the study and traditions of medicine, which caused men to catch a real vision of life's values.

There was simple living and high thinking. There has been orderly evolution however, in the construction of the Roadway of Scientific fact.

An organization such as the American Medical Association, must necessarily have a code of ethics, and although our code is the outgrowth of tradition, it is a modern expression of our desire to relate our interest to the people, and serve them in a uniform manner. It does not abridge the rights of any man and as a living manifestation of ethical restraint, it can be viewed triumphantly for the golden thread of moral and spiritual values can be traced through all medical history.

Conservatism is a normal view of the average practitioner. Any change in method of practice is resisted until it becomes clearly apparent to the majority in a locality that change is necessary. Social trends may be recognized and yet the medical man will be slow to adopt new methods. Such conservatism is normal and in the broadest sense, is probably for the good of society.

If it be true that society is best served by a great profession not easily swerved from its ideals and mode, then society should be willing to have any proffered plan to revise medical practice thoroughly discussed and made genuinely sound before a radical change is adopted. The time necessary for a solution should be conceded by society.

Organized medicine believes that it has several definite functions: first, and most important, to perform the practice of medicine, and when this is said, we mean actual contact with individuals who are sick.

Influenced by economic urge, any mechanism which tends to destroy the intimate relationship between the doctor and patient, will find its reflex in disturbed professional service, destructive to human satisfaction.

We believe that as an organization, it is the duty of the American Medical Association to protect *individualism* in the practice of medicine, and it is wholly logical for us to resist socialization of medicine from any source.

We readily perceive however, that there are superficially informed persons, who would have medical men less individualistic. They would place him in groups under a leadership which would tend to destroy his right of self-determination in the practice of medicine. We believe such a condition would lessen his initiative and develop a tendency to mechanize medi-

cine. If so, the contact of patient and doctor would become less intimate and the true story which every patient wants to tell, would remain in many instances, unrevealed.

We agree with Dean Schwitalla that no one should stimulate a movement toward coercing medicine through social stress as an economic need. It is fallacious to believe that an organized group is immediately endowed with extraordinary capacity. It depends after all upon the members comprising the group aud the amount of individual attention given to the patient by the individual doctor, who should be deeply and personally interested. This function can be performed in or out of a group. While medicine has to adapt itself to human needs, we must not lose sight of the first law of nature which is self-preservation.

Because doctors have felt that healing the sick is a sacred trust; because the very nature of their work requires that they put their time, their strength, their skill and their very life, at the call of humanity, they cannot view with comfort the prospect of radical change in their present plan of practice. No one knows better than the doctor the need for an intimate understanding of the patient's background. To obtain this information the physician must often become the possession of the sick individual. The medical profession cannot be Fordized until human beings become robots.

We believe that it is the function of organized medicine to promote preventive medicine and public health work; primarily this means the education of the public.

Though statements to the contrary have been made, there has been an abundance of medical leadership, deeply interested in magnifying public health measures. Through the units of our organization, and through our state medical associations, all of the information believed to be acceptable to the public, is being constantly and systematically given to the people through professionally supported public health agencies and by doctors who make popular health talks, radio talks and through thousands of articles given to the press. All of this is in the interest of public health in an effort to prevent disease.

The American Medical Association early in its career had among its members, a few medical statesmen who planned wisely for us. Those of you who are familiar with the work of our Councils and Bureaus, not only in education, but in pharmacy and cliemistry and many kindred departments, recognize the far-reaching influence these councils have had in the protection of the people through high standards in medical education, pure food and drug laws, and the standardization of pharmaceutic preparations.

Through the work of our council and committee, the manufacturers of food products have

found it wise to revamp their advertising. Spurious claims in many instances have been eliminated. Over seven hundred products have been submitted to our Committee on Foods. When this Committee sanctions a statement or revision, the manufacturer is permitted to advertise the approval of the American Medical Association.

Certainly this supervision is stimulating the purveyors of food products to a higher conception of their responsibility to the people, who are themselves, looking for the American Medical Association stamp of approval in featured advertisements of packaged products.

We believe that this method of ours based upon scientific investigation, followed by approved publicity, is far more effective than a statuatory enactment enforced through process of law. This is but one of the many active programs for the promotion of public health education.

Pseudo-scientific claims paraded as cures for some of the most serious diseases which affect humanity are not so boldly exaggerated today as formerly. A well recognized human trait is optimism and there are few persons suffering with a chronically fatal malady who will not believe the most improbable promise of cure.

To combat the vultures who are perfectly willing to prey upon humanity, it has required more courage and money than the average doctor or small medical society could afford. The American Medical Association has assumed this task and Medical Association has assumed this task and medical is knowledge, its accumulated monetary surplus, and its determination, to save human beings from such exploitation. Of the numerous suits for libel tried at a cost of thousands of dollars to the Association, not a single case has been lost.

Such protection for the profession and the public is invaluable!

Boldly pursuing this policy, we make it possible for the secular press to condemn evil practices.

Another function of organized medicine is to foster research and through new discoveries, increase our knowledge. Research has been definitely encouraged. We provide money for grants which some three hundred workers are now using. To further this phase of endeavor, our organization is well supplied with journals of the first rank.

Our own American Medical Journal, the greatest of all journals, like a planet has its satellites in Special Journals to stimulate interest in specific subjects. State Journals greatly reenforce the work and aid in the distribution of knowledge.

In conjunction therewith, the *Index Medicus* published quarterly at a considerable cost to our organization, offers an available and accurate index to the literature of the world, and its use conserves both time and money for the man who seeks information.

It is needless to refer to what has been accomplished by the standardization of our medical schools. Unqestionably there has been a vast improvement in the quality and educational equipment of the doctor of medicine, and correspondingly, we have raised the social standing of the physician.

In magnifying the advantages of the practice of medicine, we have attracted a far greater number of the highest type of young people than can be assimilated at this time. This era which brought much in educational accomplishment has evolved material changes in economic values both in urban and rural sections creating a mutual problem for the physician and the people.

The number of medical graduates plus those who come from abroad, exceeds the mortality of our profession in numbers sufficiently large to alarm the practitioner as to the proportionate dis-

tribution of doctors.

We recognize the curtailment in population, due probably to artificial barriers interposed both in home life and restricted immigration laws. This economic problem would seem to be of equal gravity to the Medical Body, and to the Public.

Any retardation in distribution of proper medical service in communities is not necessarily the fault of the Medical Profession, but is a characteristic social phenomenon which has always

existed.

Adjustments are more necessary now however than heretofore; the instances of diseases so prevalent a few years ago have decreased—some of them have been entirely eliminated. The public has been educated to the value of the applied sciences. Medical practitioners find their clientele frequently looking to the public health authorities for preventive measures and services which the practitioner should perform. It has been said that this is the result of a lack of interest on the part of members of the profession.

The Commissioner of Public Health in Detroit is intelligently using the medical profession and has awakened an interest among the doctors in the prevention of disease which has been of decided advantage to the citizens of Detroit as well as to the physicians. He has made of each doctor's office a community health center. Public health officials everywhere should likewise cooperate with the leaders of the medical profession

in the various localities.

Not only forty per cent but eighty or ninety per cent of the children in a community should be immunized. This can never be done by the Public Health authorities without great detriment to the medical profession unless the two forces cooperate.

It is generally recognized that good health is one of the important necessities of life. With physical vigor, a people may be happy and through contentment one might visualize prosperity. Rependency and unemployment often

follow in the wake of sickness. Since health in a measure can be purchased, we must realize that a country which habitually attempts to regulate its industries, and has developed universal education at the expense of the people, is liable to make an effort to conserve and improve their health, through similar regulatory measures.

It remains to be seen whether the medical profession will provide the leadership to guide and

direct this social trend.

The economic situation at this time has stimulated a widespread interest in evolving a plan to meet the present condition. Though it is obvious that methods must be devised and previous ideas of medical care adjusted, we must not lose sight of the fact that social needs today are more extreme than we anticipate for the future. It is our duty to mobilize the best current scientific knowledge for the benefit of the individual in the community.

The public is unaware of the extraordinary amount of labor and time, with monetary outlay, which is required to equip men and women for medical service. I daresay the public knows little of the risks and uncertainties of practice and expense of maintaining proper facilities for their work. Do they ever think of their doctor losing his health and deprived of his income?

The average physician is confronted with an economic problem which makes the practice of medicine precarious. It is clearly the duty of organized medicine to check the growth of community programs for medical service which undermine the financial stability of the individual physician. We concede the ideal that every family should have a hundred per cent of medical service. We recognize that families with annual incomes of under twelve hundred dollars receive but approximately thirty-three and one-third per cent needed health care and while those with salaries of greater amount receive correspondingly more medical service, it will require cooperation of an enlightened citizenship with a willing profession to develop plans suitable to the needs of a given locality.

The recent Report on the High Costs of Medical Care is significant, for it is based upon certain concepts of society and functions of government. As a Nation we have been developing governmental control to meet social demands without

having a definite policy.

The Great War left its quota of disabled. It seemed both wise and just to care liberally for the casualties and there was no objection. Without establishing a definite policy to meet such conditions for the present and future Congress yielded to the demands of a group of citizens for broader concessions. From that time on, Hospitalization and Compensation, with many other far-reaching governmental services became not only the goal of those interested as individuals in receiving benefits, but social welfare forces

became enthused in finding a solution for a more liberal aid for all the people.

Accumulated data have clearly emphasized the importance of medicine as related to social needs. Such data clearly support our belief in our present educational standard. Everyone realizes that there can be no one answer applicable to the varied conditions, social and economic, because they change in different environments.

Schwitalla has said: "That paradox of adaptation lies perceptibly in this; that a measure of isolation spells a continuation of life; exaggerated adaptation means death." A biological truth to be remembered. Also he has said "The organism which adapts itself to its environment with restraint due to self-contained inertia, survives."

The statement has been made that the medical profession of this country has been denied valuable information which is being developed and which is out of harmony with the view expressed in the Minority Report of the High Costs of Medical Care and elaborated in our own Journals. I feel that we can deny this charge.

The reaction of the leaders of our organization to the Report has been very much the same, and if one cares to investigate, it would be found that the profession throughout the country has responded in a similar vein. There is nothing more natural than the desire of a great profession to resist change until it has had sufficient time to adjust its mind, if that time should be needed.

The impatience of some of the leaders engaged in social welfare work to hurry the profession to a decision, even going so far as to threaten us with a definite campaign of propaganda to influence the public is worth noting. I am one of those who believes that it is wise to utilize enough time to erystallize our opinion. The public should recognize that medical men are better able to solve medical questions than anyone else; and that lay-opinion however suggestive and valued it may be, lacks finality and that essence of true understanding of a doctor's relationship to his

Our organization then is striving through its leaders at Headquarters and elsewhere, to serve the public and the profession of medicine; first, by discussion of problems; second, by trial of suggested plans; thirdly, by searching for and

finding the truth and thus be able to crystallize the professional mind so that unity will prevail. We all recognize that until there is unity of spirit and desire among the members of the County Medical Societies, which are units of our organization, no plan however far-reaching and humanitarian in its aspects, can hope to live without the cooperation of the majority of men practicing in that locality.

Medicine of all the arts is the most exacting. It is a jealous master of the time, opportunity, and capacity of those devoted to its service.

In pursuit of the underlying sciences, the art has sometimes been neglected. It is also true that sequential knowledge, culminating in the larger field of sociology and psychology, has become known to an ever-widening circle of humanity.

To adjust the science and art of medicine, to the satisfaction of this educated and expectant mass of socially conscious people, will not be difficult when the members of our profession unify their desire to lead those minds which want to control and direct the practices of medical men.

Regardless of our numerous and valuable associations, doctors throughout this country should recognize their need for a strong and militant national medical organization. It is the only body which can truly claim the loyalty of every worthy praetitioner. It can concretely express the aspirations and purposes of every follower of Aescalapius who believes in the fundamental principles of ethical medicine.

The American Medical Association has won the respect of its members and informed society. It has been faithful to a trust. Let us give it our

unswerving allegiance.

Dignity and economic fairness, as well as conscientious scientific service, depends upon the unity of the medical profession. Ethical standards have held. We have remained true to an ideal. Every appreciative man within our profession realizes his obligations to those who have left a wonderful heritage.

If this organization of ours should fail, medicine as we know it, would disintegrate; and if this should ever come to pass my friends, who would suffer more than the people who have learned to respect and trust us?

TONSILLECTOMY IN THE PRESENCE OF THYROID DISEASE

By H. GRIFFIN BULLWINKEL, M.D., NEW YORK, N. Y.

Read before the Section of Otolaryngology of the New York Academy of Medicine, May 18, 1932.

GREAT many papers presented at medical meetings deal with the more unusual and bizarre conditions met with in medical and surgical practice. It is the purpose of the writer of this paper to present a fairly common condition

which is met with not infrequently and which at times is given too little thought, namely: tonsillectomy in the presence of thyroid disease.

We are all aware of the fact that infection of the naso-pharynx may be an etiological factor in thyroid pathology. In fact, the writer just recently in private practice had a patient who presented himself with sudden and considerable enlargement of the thyroid which was limited to the isthmus alone. This was coincidental with a moderately severe pan-sinusitis. The patient's attention, however, was drawn to the thyroid enlargement and he was more concerned with it than he was with the infection in the nose and sinuses. Needless to say, within a few days after treatment was given the sinuses, the thyroid condition subsided.

Those of us who have done much tonsil work have seen many times thyroid pathology of different types improved after the removal of the tonsils. The writer has personally questioned many of the outstanding laryngologists in the city and they have all felt that tonsillectomy is, by and large, indicated in thyroid disease.

Many authorities, in their reports on thyroid disease state that it is usually advisable to remove the tonsils along with other foci of infection before thyroid surgery is undertaken.

The writer had always concurred in this belief until two cases on whom he performed tonsillectomies, developed subsequently thereto an acute thyroiditis. Only this past winter a case was reported at the New York Polyclinic Hospital of an acute thyroiditis following electro-coagulation of the tonsils. In a personal communication with the writer, Dr. Luther MacKenzie, of Bellevue Hospital, reports a fatal case of acute thyroiditis following tonsillectomy.

Case 1, Female, F. E., Age 22. The patient was referred to me for tonsillectomy and gave a history of having had frequent attacks of acute tonsilitis and about six months previously a severe peri-tonsilar abscess.

Upon examination, the tonsils appeared to be definitely diseased. Her entire physical examination was negative, except for the presence of a slightly enlarged thyroid gland. This was felt to be what is often called an adolescent type of goitre. Her pulse rate was 68, her metabolism—14 and she was at least 40 pounds overweight. Clinically, she appeared to be more of the myxædematous rather than the hyper-thyroid type.

A tonsillectomy was performed at 2 p.m. at the clinic of the University and Bellevue Hospital Medical College and was quickly and easily carried out. After the patient reacted from the anesthesia a quarter of a grain of morphine was given. This seemed to excite her, but when three and a half or four hours had elapsed, another quarter was given. This also excited her rather than acting as a sedative.

She had an extremely nervous night, and the nurse called me in to see her at 7 a.m., when I

found, much to my surprise, that her thyroid gland had increased two or three times its previous size. She had also developed some exophthalmos and all of the signs and symptoms of thyrotoxicosis. This condition persisted throughout her convalescence though it abated somewhat in its intensity.

She was taken to Roosevelt Hospital where several metabolism tests were taken which ranged from +50 to +60. After prolonged study a subtotal thyroidectomy was performed by Dr. Henry Cave. The patient today is well and has since become the mother of two children.

The second case I have to report is a sister of case 1, (E. W.).

She was of a decidedly different type, having clinical signs and symptoms of hyperthyroidism, with a metabolism of +30. She had had several attacks of acute tonsilitis and with each of these attacks the symptoms of thyroidtoxicity increased.

She was advised to have her tonsils out by her own physician. Before removing them, however, I had her confined in the hospital about a week for observation and rest. Having had a disagreeable experience with her sister, as reported above, I sought and received the advice of several other laryngologists. They all felt that the removal of her tonsils was indicated and that undoubtedly her thyroid condition would improve thereafter.

Her metabolism having dropped to +18, I removed her tonsils. She developed the same reaction that her sister did though not to as alarming a degree. She eventually recovered, though she still has mild symptoms of hyperthyroidism. She was living in the West when I last heard from her and is apparently greatly improved.

The question naturally arises as to the cause of the sudden thyroiditis following tonsillectomy. It has been suggested that perhaps the vascular and lymphatic channels transmit infection from the pharynx to the thyroid and also that the shock of operation upsets the balance of the central and sympathetic nervous symptoms thereby producing the thyroid crisis. The writer rather leans to the second of these two theories although both together may play some part.

These cases are not reported to prove or disprove any stated theories, but simply as a warning to all of us to be aware of this condition when we meet it.

My own opinion is that, by and large, attention should be given to the thyroid disease first and to the tonsils second, for it is certainly possible to precipitate an acute thyroid crisis by surgical procedures unless extreme care and thought are used.

Volume 33 629 Number 10

FURTHER RESULTS OBTAINED WITH THE RABBIT OVULATION TEST AS A DIAGNOSTIC PROCEDURE

By KARL M. WILSON, M.D., AND GEORGE W. CORNER, M.D., ROCHESTER, N. Y.

From the Department of Obstetrics and Gynecology and the Department of Anatomy of the University of Rochester, Rochester, N. Y. Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

NE year ago we presented the results obtained with the rabbit ovulation test as originated by Friedman. In that first series of observations we investigated the results obtained in a series of normal pregnancies at various stages, as well as a number of abnormal pregnancies, and a variety of other conditions associated with abnormalities in the female pelvic organs. Our object in that study was to assess the value of the procedure as a diagnostic aid, and to learn the possible sources of error. Having found it to be of very distinct value in diagnosis, particularly in the diagnosis of early pregnancy which might otherwise not have been possible, we have continued its use and the present report presents the results obtained in a second series of patients in whom we made use of this procedure as a diagnostic aid.

Although the technique we have employed differs somewhat from that employed by Friedman and Lapham and by Schneider, particularly in the shorter time elapsing between the injection of the urine into the rabbit and the inspection of the ovaries at operation, our results have shown a high percentage of accuracy and they compare favorably with the results obtained with the original Aschheim-Zondek reaction. Furthermore, if the proper diagnosis is arrived at in a shorter time, it often proves to be of distinct advantage.

The technique as employed by us may be briefly repeated here. The procedure is based on the fact that ovulation in the rabbit is not spontaneous as in most other mammals, but ordinarily occurs only after copulation, though ovulation can be brought about by the injection of the gonad-stimulating hormones of the anterior pituitary body. The urine of pregnant women after about the third week contains large quantities of hormones resembling in their effects those originating in the anterior pituitary body, and as originally suggested by Friedman, such urine injected into a female rabbit will induce ovulation. We use only mature female rabbits, of no particular breed, which have been kept in strict isolation for at least a month. The test is carried out by injecting, without sterile precautions, 5 c.c. of the urine to be tested, into the ear vein of the rabbit. For the sake of convenience this is usually done about 5:00 P.M. in the afternoon. The following morning, that is approximately sixteen hours later, under ether anaesthesia and employing aseptic technique, the abdomen is opened and the ovaries inspected. If evidence of ovulation is discovered with recently ruptured Graafian follicles present, the result is considered positive, while if no evidence of actual

rupture of follicles is to be noted, the result is regarded as negative. The ruptured follicles at this stage will be very small, 1 to 2 m.m. in diameter, will be bright red in color, with a tiny umbilicated depression in the center. To the inexperienced confusion may be caused by the presence of rather large unruptured follicles, particularly if their vessels are injected, and also by the rather frequently found hemorrhagic unruptured follicles, dull red in color or almost black. These latter appear to be more or less peculiar to the rabbit. At present, the only modification of this technique that we would suggest is that on account of the fact that the reaction of the ovaries is occasionally delayed, it may at times prove advantageous to inject two animals at the same time. If the first one is found to show a positive reaction at exploration, nothing further is done to the second, while if the result is negative, the second rabbit may be explored twelve to eighteen hours later. In this way no unnecessary time will be lost in arriving at the result of the test. Very occasionally it will be found that the urine is of such a toxic nature as to cause the death of the animal within a short time after injection. If so the procedure will have to be repeated, using a fresh specimen. This is an infrequent occurrence, however, and only occurred on three occasions in our series. This difficulty may also be overcome by alcohol extraction, following which a larger dosage should be used for injection, a dosage comparable to 25 c.c. of the original urine, as some of the hormone is destroyed by alcohol.

While this procedure is of value at times in helping to exclude the possibility of the presence of a pregnancy, its chief value will be in the aid it offers in establishing a definite diagnosis of pregnancy. It has proved to be of particular value in early pregnancies where the findings on examination are not sufficiently marked to permit of a diagnosis being made, as well as in those pregnancies associated with complicating abnormalities which may render diagnosis difficult

PRESENTATION OF RESULTS

Observations were made on sixty-four normal pregnancies at various stages of pregnancy. In each instance the results were confirmed by subsequent observation of the patients studied. In estimating the duration of the early pregnancies, we have relied on the menstrual history and the lack of physical signs on examination. Those we have recorded as being three to four weeks pregnant were from seven to fourteen days past

their menstrual date. The results obtained may be tabulated as follows:

Twenty-seven observations were made on various types of abnormal pregnancy. These proved of value from the diagnostic standpoint and also served to emphasize certain important points to be kept in mind at all times in interpreting the results obtained with this procedure. They may be tabulated as follows:

The varying positive and negative results obtained are of interest according to the type of pregnancy with which we are dealing. They correspond to the findings we previously reported and they serve to confirm the statement we made in our first report, that the reaction can only be positive when active living fœtal tissue is in biologic contact with the maternal blood, or only very recently (not over 72 hours) separated from it. Thus in the incomplete abortions and ectopic pregnancies giving a negative reaction no active living fœtal tissue was found, while in those giving a positive reaction microscopic examination revealed living fœtal tissue to be present. In the missed abortions the ovum was still attached to the uterus, but microscopic examination showed the placenta to be entirely infarcted and no living feetal tissue could be demonstrated. Further observations may inform us how soon after the death of the ovum, but while it is still attached to the uterus, the reaction becomes negative. At present we cannot make any specific statement in regard to this.

This procedure was resorted to in sixty women who presented various menstrual disturbances. In each instance the history and findings were such as to at least suggest the possibility of a pregnancy either intra or extra uterine being present. In each instance the reaction was negative and in each instance subsequent observation revealed the fact that no pregnancy existed. The results in this group may be tabulated as

follows:

Functional amenorrhoa	24	cases	all	negative
Lactation "			"	a a
Menopause "	5	"	"	4
Irregular bleeding, not pregnant	10	"	"	"
Pelvic inflammation with irregular				
bleeding, not pregnant	19	61	"	- 11

In a group of twenty-one women presenting various abnormalities and in whom there was a possibility of an associated pregnancy the result was consistently negative and later observation proved no pregnancy to exist. Nineteen observations have been discarded from consideration on account of lack of subsequent observation. All of these gave negative results. The results in this miscellaneous group are as follows:

We had the opportunity of observing one instance of a chorio-epithelioma. This patient was included in our first series at the time she was under treatment for a hydatid mole. This patient proved to be of particular interest, and the course of events may be briefly outlined as follows:

Hydatid mole removed May, 1930.

One month later bleeding—curettage. Microscopic fragments of mole obtained, test positive.

July, 1930—bleeding—curettage. Normal endometrium, test negative.

Menstruated normally for a year.

August 26, 1931—bleeding—curettage, normal endometrium.

October 8, 1931—eight days past period, test negative.

October 21, 1931—menstruated normally.

December 26, 1931—admitted with cough and bloody sputum.

Small mass in anterior vaginal wall, uterus somewhat enlarged.

Ovulation test positive.

Died December 30, 1931—autopsy—chorio-

epithelioma.

This patient must have harbored living, though inactive fœtal cells ever since the expulsion of the mole, but they evidently did not produce sufficient hormone to give a positive reaction. At the time of her last admission, the growth was far advanced with extensive local involvement and extension to the lungs. While the test was positive at this time, yet nine weeks previous it had been negative, at a time when no symptoms or physical findings suggested the presence of a malignant growth. The result in this single case casts some doubt on the value of this procedure in the early diagnosis of chorio-epithelioma.

In five instances the procedure gave a negative result in spite of the fact that pregnancy was definitely present at the time the test was carried out. In three of them the reaction became positive in from five to fourteen days later. One was not seen again for two months when the reaction was found to be positive, while in

the fifth it was not repeated. It is interesting to note that two of these errors occurred in different pregnancies in the same woman. errors in the series may be tabulated as follows:

negative [7 days past menstrual period 2 weeks later positive $2 \left. \begin{cases} \text{Lactation 2 months ? pregnant} \\ \text{13 days later} \end{cases} \right.$ negative positive $3 \begin{cases} 2\frac{1}{2} & \text{months pregnant} \\ 2 & \text{months later} \end{cases}$ negative positive Same patient as m (2)

negative positive 10 days past menstrual period negative 5 { Test not repeated but later proven

definitely pregnant

These errors are of great importance in interpreting the results obtained from this procedure and indicate that this is not an infallible test. The failures probably result from a delay in the appearance of the hormones in the urine in sufficient concentration to cause ovulation in the rabbit. The cause for this delay is at present unknown In our first series we encountered three such errors in early pregnancy, the urine at first giving a negative reaction, while later

became positive. In our two series of observations we have studied 155 definitely pregnant, normal women, and have encountered in all eight erroneous negative results-an accuracy of approximately 95%, while if the other conditions studied are added to this, that is those cases where a correct negative result was obtained, the percentage of error is found to be considerably lower. This compares very favorably with the results obtained by the original Aschheim-Zondek reaction.

In this series the only positive result obtained in the absence of pregnancy was in the single case of chorio-epithelioma, a fœtal cell tumor. In our first series we found one positive reaction in a non-pregnant woman who presented a marked degree of endometrial hyperplasia.

SUMMARY AND CONCLUSIONS

The results obtained in 198 observations in which the rabbit ovulation test was used as a diagnostic aid are herewith presented. In our experience it has proved to be of great accuracy. The results are fully comparable to the Aschheim-Zondek reaction, and it has the added advantage of requiring much less time for its de-A positive reaction almost intermination variably indicates that active feetal tissue is in biologie relationship with the maternal blood stream, or has been very recently (not over 72 hours) separated from it. Such errors as occur are most likely to be on the negative side. It must be kept in mind that a negative result does not always exclude the possibility of pregnancy, but may be due to the fact that the ovum has perished some time previously (either intra or extra uterine), or that in an occasional normal pregnancy the appearance of the hormones responsible for the reaction in the urine is delayed. A negative result, however, is often of value in helping to exclude the possibility of pregnancy

DISCUSSION OF OVULATION TEST ON RABBITS By A CHARLES POSNER, M.D.

Since March 3, 1931, we have used rabbits for Ovulation studies at the Harlem Hospital, New York

We have made 525 tests, and have never found a false positive. We have had 10 cases which were false negatives giving us a percentage of

accuracy of 98%

On checking over these ten false negative cases, we found that there was a failure to follow the requirements of the test, such as (1) the pa-tient had been taking some drug, or (2) the specirequirements of the test, such as men was not a morning one, or, (3) the bottle was unclean and had previously contained some chemical Not only have we been able to produce this test with nrine, but with blood serum and animotic fluid

We have been unable to produce positive tests with spinal fluids or with colostrum

In two cases we have been able to establish the diagnosis of pregnancy before the patients had anssed their periods. In one case it was 9 days after the last regular menstrual period, and further study of this patient proved that she was pregnant. In the other case it was 8 days after a known exposure, the patient having been delivered of a child one month before, and further studies confirmed the diagnosis of pregnancy

We have found this test to be of great value in the diagnosis of pregnancy, either literine or ectopie, and it remains so for 48 hours after dehvery. We have found it to be present in 2 cases of hydatidiform mole, and it is in these cases we have found it to remain positive the longest time—8 days after the expulsion of the mole. We have tried to study the urine of these patients, who have had hydatidiform moles, weekly after their discharge from the hospital in order to detect, without delay, chorioepithelioma, should it develop

The way we differentiate between normal preg-

nancy and hydatidiform mole is by diluting the urine 1 to 100 with saline. It will be positive in hydatidiform mole and negative in pregnancy. This was done in one of our cases. We have had no cases of chorioepithelioma in the female, but we have been able to exclude a suspected case by repeated negative tests. This was finally proved to be malignant leiomyoma.

In all male patients who have tumors of the testicles, or who have had previous operations in which their testicles have been removed, we have performed this test; in one we have had a positive result. This was a man who had an operation for the removal of his testicles 5 years ago and had developed a large mass in the abdomen. The test was positive and further study of the case showed the presence of chorioepitheliomic tissue. We feel that the test has some relation

to the chorionic tissue as well as to the pituitary gland.

We have found it to be negative in tubal abortion and to remain positive for 36 hours in incomplete abortions.

I wish to call the attention to the members of the Society to two particular points: (1) Beware of deception and substitution of the urine as we have had substitute urines given us by women who wished to conceal their pregnancies, and (2) there must be no drugs either in the patient or the bottle at the time of specimen is obtained.

I wish to congratulate Dr. Wilson and agree with him on the advantages which the rabbit test has over the use of mice, and I have found it to be easier to interpret, as accurate as, and quicker than, the mouse test.

RINGWORM OF THE TOES IN STUDENTS AND DISPENSARY PATIENTS By EMANUEL MUSKATBLIT, M.D., NEW YORK, N. Y.

From the Department of Dermatology and Syphilology, University and Bellevue Hospital Medical College, Service of Dr. Howard Fox. Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

TNTERDIGITAL mycoses of the feet occupy a most important place among fungous diseases of the skin and their increased incidence has been noted by many observers during recent years. It is difficult to say whether these cases have really become more frequent or whether they attract more attention than before. Toe ringworm often appears as a very inconspicuous lesion without marked subjective symptoms. It can, however, assume an acute inflammatory character, cause severe itching or pain and even impair the The process may involve the general health. soles, the dorsal and lateral aspects of the feet and other parts of the body favorable for fungi such as the groins, intergluteal folds, axillae and umbilicus. Toe-webs may thus become a reservoir where pathogenic fungi remain for a long time even for years and from which they spread over the skin. Furthermore fungous toxins absorbed from the lesions on the feet may influence the entire organism and cause a general allergic hypersensitiveness of the skin to fungi and their In such cases fungous material from the primary foci carried into the skin by means of hematogenous transport may cause secondary eruptions (dermatophytids). Their nature is difficult to determine as they are sometimes of purely toxic origin or because the organized fungous elements producing them are rapidly destroyed and cannot be found by either microscope or culture.

The present survey is based on the study of two groups of persons: (1) 100 patients from the skin clinic of the University and Bellevue Hospital Medical College and (2) 112 medical students. In order to determine the relative incidence of interdigital mycoses all of these 212 persons have been taken for examination without choice, regardless of their complaints or objective

changes in the skin. The group of students can evidently be considered to be of a higher cultural

level than dispensary patients.

After a brief description of the skin conditions, scrapings were taken from all toe-webs whether abnormal or not and also from other skin lesions it present. Preparations made in 30% KOH solution and left for one to two hours under the coverglass were then heated to the boiling point and examined. If fungi were found their microscopic appearance was described. Cultures were planted from every case, regardless of the result of the microscopic examination, on Sabouraud's isolation medium using French glucose and peptone. Three to four culture tubes with six to eight scales in each were planted from every case. From 12 to 16 tubes were seeded when disseminated lesions were present, the material being taken from separate areas. When cultures in spite of positive microscopic results, were negative, the remainder of the scrapings was planted again and thus the culture of pathogenic fungus was at times ob-Culture tubes left at room temperature and in the light were observed for several weeks. From colonies suggesting a pathogenic type, transplantations were immediately made into fresh tubes or Erlenmeyer's flasks on the same medium and also on Sabouraud's conservation medium. The classification of species was based on their external appearance on both media and on their form of growth and sporulation, studied by means of direct observation of a culture tube under the microscope and examination of a piece of culture in a drop of water or alcohol. If necessary hanging drop cultures were made.

Table I shows the incidence of these changes of the skin in the toe-webs which looked clinically suspicious from the standpoint of mycotic infec-

tion. Such cases are designated "clinically positive."

	ΛT	BLE !	Į.			
Clinically positive Clinically negative	Dispen- sary 85 15	Per cent 85	Stu- dents 103 9	Per cent 91.9	Total 188 24	Per cent 88.7
TOTAL	100		112		212	

Thus in 188 from 212 persons examined (almost 89 per cent) such changes were present. The percentage in students is a little higher than in dispensary patients (92 against 85). Included as "clinically positive" were cases with mild changes of the skin for not infrequently pathogenic fungiare found in lesions without typical clinical features (slight maceration or scaling). Although perfectly normal skin occurs rarely in the tocwebs it would be improper to consider toe-ringworm a "universal" disease as many other causes besides fungi may cause similar changes such as



Figure 1

Filamentous fungus in toc-web scrapings, Potassium hydroxide. (Courtesy of Dr. Howard Fox.)

bacterial infections, friction, decomposition of the sweat with formation of irritating chemical products, etc. The exact diagnosis of a mycotic process in the toc-webs requires in my opinion, microscopic examination and cultures. The mere presence of mycosis-like clinical changes is insufficient. In 15 per cent of fect examined all interdigital folds were involved and in 85 per cent only a part of them, most often the fourth (97 per cent) and least often the first (19 per cent).

In some cases the process was simple: there was only maceration or hyperkeratosis or dry scaling, in others we found a combination of various changes. Macerated epidermis was most frequently the main feature with which hyper-

keratosis, bullae, fissures and crosions were assoeiated. Dry lesions whether hyperkeratotic, squamous or erythemato-squamons were relatively rare. Patients were observed where the process on buth feet differed, such as maceration on me foot, er lesions of hyperker he other and also case he same foot showed various changes, maceration in some, sealing or lyperkeratosis in others.

Microscopic findings—Preparations designated "microscopically positive" were those showing typical mycelia of filamentous fungi (Hyphomycetes) or "yeast-like" fungi. In hyphomycetes (Figure I) one sees mycelial filaments of various lengths, widths and shapes. Thin threads correspond to the young stage of the parasite. They



Culture of epidermophyton interdigitale from toe-webs.

are usually straight, of regular diameter, seldom branch, their septa are few and not very marked. Older elements are thicker, more irregular. curved, branch frequently and possess numerous and noticcable septa. In its further development a thread breaks down into a chain of separated segments (spores) which may have different size and shape and be globular, ovoid, cylindrical, cubical or quite irregular. Some of them germinate and give off sprouts which grow into a typical mycelial filament. Threads and chains may form bunches or a more or less dense network. We find also single dispersed spores and groups of them originating partly from the natural process of breaking down of chains partly from the technic of preparation. In true hyphomycetes they are however, not so prominent in comparison

with threads and chains which constitute the main mass of the parasite. A different microscopic picture is seen in preparations with "yeast-like" fungi, namely groups of closely packed yeast-like cells roundish, oval or elongated, some of which are budding. Mycelial filaments may be entirely absent or few and rudimentary. In some cases, however, they are numerous, well developed and form chains. Budding spores are also present on the hyphae themselves

Table II shows microscopic findings.

Tabi e II						
	Dispen-	Per cent	Stu dents	Per cent	Total	Per cent
Microscopically positive Microscopically negative	27 73	27.0	32 80	2 8 6	59 153	278
TOTAL	100	•	112	•	212	

The percentage of microscopically positive cases in both groups was almost equal, in students a little higher than in dispensary patients (286 against 27.0) and the average for all 212 examined persons was 27.8.



FIGURE 3
Culture of epidermophyton inguinale from toe-webs.

Table III gives the subdivision of fungi as seen under the microscope into the two mentioned types.

• •	TABLE II	I	
	Dispensary	Students	Total
Filamentous	20	23	43
Yeast-like	7	9	16
TOTAL	27	32	59

In approximately 75 per cent filamentous fungi were found microscopically and in 25 per cent

yeast-like organisms were present.

It is well known that microscopic examination for fungi even in clinically typical cases by no means always gives positive results, particularly when the glabrous skin or nails are involved. The relation between clinical and microscopic findings is shown in the Table IV.

		Тлы	E IV		
		Miero- scopically	Micro scopically	Mı	Per cent croscopically
Clinically	positive	positive 59	negative 129	Total 188	positive 31 4
Clinically Clinically	negative	Ő	24	24	0
TOT	AL	59	153	212	278



Figure 4
Culture of epidermophyton rubrum from toe-webs

Of 188 clinically positive cases, 59 (31.4 per cent) were also microscopically positive. The chances of finding fungi are much greater where skin lesions are more pronounced. Of 78 cases with marked lesions in the toe-webs 37 (47.4 per cent) were positive under the microscope while of 110 with mild symptoms in only 22 (200 per cent) were fungi found.

Cultures were positive in 38 of 212 (17.9 per cent), Table V showing species of fungi grown

from toe-web scrapings.

	TABL			Total
Γ ungus	I	Dispensary	Students	
Epidermophyton	ınterdigitale	8	11	19
u u	rubrum	0	3	2
"	inguinale	0	2	2
Trichophyton Gy	pseum	1	1	6
Oidium		3	သွ	3
Monilia		3	Ų,	3
Cryptococcus		0	3	
			22	38
TOTAL		15	23	20

The first four species—Epidermophyton and Trichophyton belong to those hyphomycetes whose pathogenic importance is definitely established, while the last three yeast-like fungi Oidium, Monilia and Cryptococcus are frequently considered as saprophytes and accidental contaminants of the skin. Clinical observations, however, together with experiments in animals and men have

proved that these fungi may also become pathogenic. They have therefore been considered but only in cases where they grew in several culture tubes from all or almost all seeded particles and where the result of cultures corresponded to the microscopic appearance. It is assumed therefore

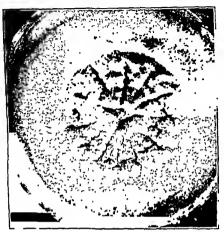


Figure 5
Culture of trichophyton gypscum from toe-webs.

that among these cases there were interdigital superficial eryptococcosis, oldiomycosis and moniliasis. In general, of 212 persons examined regardless of their history, subjective symptoms or objective appearance of the skin, 38 (17.9 per cent) proved to be carriers of pathogenic fungi in their toe-webs as shown by cultures.

Table VI shows the relation between the micro-

scopic and cultural findings.

TABLE VI

Microscopically positive Microscopically negative		Cultures negalive 20 145	Total 59 153	Per cent of positive cultures 50 8 5.2
TOTAL	38	174	212	17.9

Of 59 microscopically positive cases, 30 (50.8 per cent) were also positive culturally. This result should be considered very satisfactory because of known fact that cultures are not always positive when the microscopic preparation contains fungi. The causes of this might be:

(1) Material taken for planting occasionally does not contain any fungi.

(2) Fungi are present in the scrapings but will not grow on artificial culture media.

(3) Pathogenic species are overgrown in cultures by saprophytes.

Of 153 microscopically negative cases only 8 (5.2 per cent) gave positive cultures (one dispensary patient and seven students). All of them were clinically positive. A negative microscopic examination, therefore, predetermines almost surely a negative culture though in a small nercentage of cases it was possible to prove the mycotic origin of skin lesions by cultures where the microscope failed. Adding 8 cases proved only culturally to 59 which were microscopically positive, gives 67 patients with toe-ringworm out of 212 persons examined (31.6 per cent). The dispensary group gave 28 cases (28.0 per cent) and students 39 (34.8 per cent). It is worth noting that the incidence of toe-ringworm was higher in students despite their better hygienic conditions than in dispensary patients.

Among the species of fungi isolated from our material one predominated, namely Epidermophyton interdigitale (also called Trichophyton interdigitale) which was found in 19 cases. This fungus belongs to the most common pathogenic types in this country and occupies the first place not

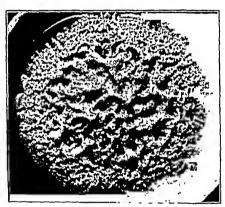


FIGURE 6
Culture of oidium rotundatum from toe-webs.

only in toe-ringworm but also in other mycotic lesions of the glabrous skin throughout the material of our clinic. It possesses an extraordinary viability and energy of growth resisting successfully in culture tubes such saprophytes as Aspergillus or Penicillium. Its cultures from our interdigital cases were rather uniform and characteristic. The culture (Figure 2) starts as a white fluffy point, grows fast and forms a flat disk with creamy-yellowish slightly powdery central area and white, downy and elevated border. Pleomorphic degeneration develops as a rule very soon. Microscopically the culture shows a very abundant sporulation in the form of (1) long hyphae

bearing numerous lateral spores, (2) dense treelike branchings covered with similar spores (grapes) and (3) some multilocular spindlespores. In addition corkscrewlike twisted hyphae (spirals) are usually present in abundance.

Epidermophyton inguinale (Figure 3) in these two cases grew typically and very slowly, forming yellowish greenish, powdery cultures with irregularly convoluted surface and great tendency to pleomorphic degeneration. Microscopically in the culture only one type of spores could be found,

namely multilocular spindles.

Cultures of Epidermophyton rubrum (Figure 4) were at first white and downy, later the basis of the culture developed dark red pigmentation which also stained the adjacent part of the medium. The cultures rapidly became pleomorphic. Microscopically the picture resembled Epidermophyton interdigitale with the same spore bearing hyphae, grapes and spindles, but spirals were absent.

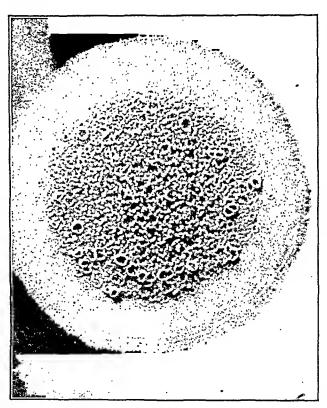


FIGURE 7
Culture of Monilia albicans from toe-webs.

Two cultures of Trichophyton gypseum (Figure 5) greatly resembled Epidermophyton interdigitale in external appearance and microscopic structure and a mistake in differentiation of these two species was quite possible. Because of some external properties like shape, coarse powder of the surface and numerous daughter-colonies I have classified these cultures as Trichophyton gypseum. In the absence of animal experiments,

however, I could not state the biological properties of these fungi, mainly their relation to the hairs (the latter being invaded by Trichophyton gypseum which is not the case in Epidermophyton interdigitale). Thus it is possible that these two strains classified as Trichophyton gypseum belong in fact to the gypseum-like variety of Epidermophyton interdigitale.

Cultures of Oidium (Figure 6) were all of the same type being brownish with a moist glossy and convoluted surface (Oidium rotundatum Castellani). Under the microscope were seen masses of yeast-like cells, some of them budding and also abundant septate mycelium, solid in the early stages of development, later breaking down in chains of segments (oidia or arthrospores).

Monilia (Figure 7) grew in our cases as creamy-white moist and glossy yeast-like cultures whose central area later formed numerous tiny folds, convolutions, and depressions. The periphery was flat or showed shallow radial grooves. Monilia has a tendency to grow deeply into the medium and older colonies particularly in the upper part of the culture tube where they soon begin to dry and produce at their border a characteristic halo made up of numerous long branching mycelial filaments, penetrating far into the medium. Microscopic study of Monilia cultures shows masses of yeast-like cells, many of them budding, and typical mycelium, whose hyphae consist of elongated segments with tree-like branching and bear numerous yeast-like budding spores. The latter appear at first in groups but in old colonies they form dense masses surrounding the hyphae like a sheath. Stab cultures in tubes with solidified gelatin are of great value in identification of Monilia and in its differentiation from simple yeasts. Monilia grows abundantly within the medium even 6-8 c.m. beneath the surface along the line of the "stab" in the form of radial mycelial filaments. Fermentation tests with 1 per cent peptone-sugar-waters with various carbohydrates show production of gas mostly in the presence of dextrose, at times also in levulose, maltose and saccharose.

The last three yeast-like cultures reported were flat creamy-white pasty with slightly darker central area. Neither mycelia nor ascospores could be found even in very old cultures. We believe therefore that these fungi could be classified as "cryptococcus."

Cases of Toe-ringworm associated with other Fungous Emptions

Two patients (101, 181) also had typical onychomycosis of the feet. Mycelium was found in scrapings from the nails and toe-webs.

Case 68 presented a macerative interdigital process and also a vesicular eruption on both soles and right hand (palm and palmar surfaces of the fingers). Scrapings from toe-webs, soles and hand contained mycelia. Cultures from all lesions showed epidermophyton interdigitale. This case is interesting as a true mycosis of the hand which is much rarer than one affecting the feet.

Case 48 presented as erythemato-vesicular patch on the right foot occupying its dorsal surface and toe-webs. A similar eruption was present in the fold between the index and middle fingers of the right hand. Scrapings from both foot and hand showed numerous yeast-like eells, some of them budding. This case may be eon-sidered as superficial blastomycosis. Clinically the lesion on the hand corresponded to the initial stage of the Erosio interdigitalis blastomycetica.

Case 74 resembled the foregoing one but was more extensive. There were present maceration in the toe-webs and dorsal surface of both fect, vesicular eruption on both soles and palms, crythemato-squamous and vesicular moderately infiltrated patches, some with well defined border on both legs. Yeasts were found microscopically in all lesions. This was possibly a generalized superficial yeast infection of the skin originating from inter-

digital blastomycosis of the feet.

Case 64 was still more extensive. There was a macerative process in the toe-webs of both feet. On the trunk and all extremities were numerous erythemato-squamous plaques. That on the left leg which appeared first was slightly infiltrated and covered with vesicles and crusts. Scrapings from both toe-webs and trunk contained yeastlike cells partly growing into mycelial filaments. Cul-tures which were positive only from the toe-webs showed Oldium. Assuming that this fungus was really pathogenic one must consider this case to be an interdigital oidiomy cosis complicated by a generalized eruption due to the same parasite.

Case 80. There were marked interdigital maceration

and erosions on the feet with vesicles and bullae on both soles. On the chest, abdomen, back and thighs there were numerous circinate patches, 1-5 c.m. in diameter with well-defined border. The periphery slowed an erythema and crusts from dried out vesicles and the center regressive changes with brownish pigmentation. Microscopically yeast-like fungi with budding cells and my celial filaments were present in the scrapings from toe-webs, soles and trunk, Lesions on the trunk were culturally negative. Material from interdigital folds of each foot was planted separately in three tubes with seven scales in each. From the right foot 12 pure cultures of Monilia were obtained. From the left foot the result was still more definite. All 21 seeded particles gave pure monilia cultures. Scrapings from one sole showed only the marginal strain of infection by though it was by each fungus ill the pathogenesis of this case.

Cases of Toe-ringworm accompanied by possible Dermatophytids

 The following six patients suffering from toe-ringworm proven microscopically or culturally also presented emp-tion on other parts of the body which were negative for fungi and might possibly be interpreted as dermatophytids.

Case 29. Maceration in the toe-webs. Cultures showed Epidermophyton interdigitale. On the left hand there were erythemato-vesiculo-squamous lesions which were

negative for fungi.
Case 114. Dry scaling in the toe-webs with remnants of vesicles on the feet. Cultures from both locations showed Epidermophyton interdigitale. On both palms and in the finger-webs there were redness and scaling,

negative microscopically and in cultures.

Case 81. Macerative interdigital mycosis of the feet with Trichophyton gypseum in cultures. On the chest, back, abdomen, upper extremities and thighs there were numerous erythemato-squamous patches from one to three cm. in diameter, partly of circinate type with well defined active, slightly infiltrated border and scally brownish pigmented centre. The generalized eruption which was negative for fungi was possibly of hemato-genous origin and could be considered as a dermato-

phytid, more exactly a trichophytid due to Trichophyton

gypseum localized in the toc-webs.

Case 100. Macerative interdigital lesions on the feet. In four seeded culture tubes 26 pure monilia colonies were grown. In the meantime diffuse erythema and scaling on both palms and lateral surface of the index and middle fingers of the right hand appeared which were negative for fungi. Case 72. Very marked process in the toe-webs. In

the scrapings yeast-like fungi were found with budding planted, 3 from each foot, all 37 particles giving pure cultures of Monilia. On both hands there was diffuse erythema and scaling involving the palms, dorsa of the hands and all the fingers. From the right hand the eruption spread over the forearm to the elbow. Microscopie and cultural examinations were negative. There was sufficient evidence to consider the last two cases interdigital moniliasis. The lesions on the hands were possibly secondary ones of allergic origin and could be considered as moniliids.

Case 121. Macerative interdigital mycosis on both feet with filamentous fungi in scrapings. Both soles, both palms and palmar surface of the fingers showed numer-ous round or polycyclic areas with scaly border due to the separation of the superficial horny layer. These lesions of the type Keratolysis exioliativa were negative for fungi and belonged possibly to the epidermo-

phytids.

Summary and Conclusions

(1) One hundred dispensary patients and one hundred and twelve medical students taken without any choice were examined for toe-ringworm, In 89 per cent of these 212 cases there were more or less pronounced changes of the skin in the toewebs, mostly of macerative type, suspicious from the standpoint of mycotic infection.

(2) Fungi were found microscopically or in cultures in 31.6 per cent of all cases examined. The percentage was higher in students (34.8)

than in dispensary patients (28.0).

(3) Microscopic examination alone was positive in 27.0 per cent of all cases. This percentage increased to 31.4 when clinical changes in the • skin were present and reached 47.4 in the group of patients with marked skin lesions. Two types of fungi could be distinguished in microscopical preparations. True hyphomycetes and yeast-like

(4) Cultures were positive in 17.9 per cent of all cases, in 50.8 per cent of microscopically positive cases and in 5.2 per cent of microscopically negative ones. No fungi were found either microscopically or culturally in clinically healthy

persons.

(5) Seven species of fungi were isolated from cases of toe-ringworm. The commonest organism was Epidermophyton interdigitale (19 from 38 cultures) and the following filamentous fungi in order of frequency were: Epidermophyton rubrum, Epidermophyton inguinale and Trichophyton gypseum. In addition yeast-like fungi Oidium, Monilia and Cryptococcus apparently played an important part as causative agents. Mixed infection with Epidermophyton interdigitale and Monilia is described.

INSULIN IN HYPOGLYCEMIA

By CHARLES B. F. GIBBS, M.D., ROCHESTER, N. Y.

Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

NE is struck by the extreme variability of symptoms occurring in hypoglycemia. It soon becomes apparent that children and elderly diabetics must be most carefully watched, because at these extremes have seemed to occur the most bizarre reactions.

A test which the nurses have found of value in determining the proximity of a reaction in a child who is acting strangely after insulin dosage, has been to take the rectal temperature. If this is found below normal, orange juice is at once administered. Rectal temperatures of 96 have been observed.

All patients are instructed to carry wrapped squares of cane sugar and an identification card with instructions referable to the immediate treatment of insulin reaction.

Some of the severe diabetics are certainly far more comfortable if aglycosuria throughout the entire 24 hours is not demanded of them. In some instances I have been satisfied with sugarfree urine after 11 a. m. though the after-breakfast test was brick red. To eliminate these beforebreakfast and after-breakfast spills, requires the holding of glycogen during the long night period by an annoying additional injection of insulin or an early morning dose. Tolerance does not seem to be lost by allowing this morning excess.

In this matter of blood sugar levels it is well to stress the need of higher values with elderly patients having signs of arteriosclerotic coronary arteries. In the early days of insulin usage I am positive that my meticulous control of the diabetes in a woman of 60 years, led to rapidly increasing substernal distress and finally to sudden death from coronary occlusion. After months or years of adjustment to higher blood sugar levels, the heart muscle suffers from a relative sugar starvation when this level is again forced down to normal.

Strouse and his co-workers have recently reported some interesting experimental work on this type of patient and have demonstrated all the symptoms of angina even to the electrocardiographic changes, not only by insulin administration, but also by the use of low carbohydrate diets alone. This would suggest that the mechanism of what has been termed "insulin angina" depends on the insufficiency of available sugar rather than on insulin per se.

In view of the extensive, and in many instances, careless use of insulin at the present time, it seems remarkable that more fatalities have not occurred. Data is accumulating, however, which would indicate that larger doses do very little more to the individual than considerably smaller doses. That is, 100 units of insulin pro-

duce by no means 5 times the effect of 20 units. Apparently there is some mechanism available to modify the effects of insulin and so minimize harmful effects.

That hypoglycemic death may occur without the use of insulin artificially, has been demonstrated numerous times in the past few years.

A brief presentation of a case illustrating this condition may again emphasize the symptomatology and diagnostic possibilities. I am indebted to Doctor Stanley H. Erlenbach for the privilege of seeing this patient and reviewing the data.

Mrs. K. H., age 34 years, first seen March 17, 1930.

Chief Complaint: Sinking spells—periodically for 2 months.

Present Illness: For the past 2 months patient has had attacks of weakness which usually come on at 4 to 5 a. m. or 9 to 10 a. m. During these attacks she is very weak and extremely tired. She says she is too tired to move. At times she is dizzy at the beginning of these attacks. The attack lasts for several minutes to one-half hour after which the patient is irritable and wants to sleep. There is no cough or expectoration but the patient says she has lost 10 pounds in weight during the past few months. Appetite fair—bowels fairly regular. No edema.

Past History: Measles is the only childhood disease she remembers having had. Occasional cold. Tonsillitis—10 years ago. Operated at age of 17—one ovary and appendix removed. Menses 13x5x30—usually has severe headaches which end by vomiting at periods. Two normal pregnancies.

Family History: Husband and two children living and well. Father died at 38—appendicitis. Mother alive and well. Four sisters and two brothers all alive and well. No family history of migraine, T. B., cancer, diabetes, heart or kidney, disease to patient's knowledge.

Personal: Cares for her home. Considerable financial worries recently.

Physical Exam.: Weight 121 pounds. Height 5 feet 11 inches.

General Appearance: Well nourished and developed female 34 years of age who does not look ill. Ears—drums intact. Eyes—pupils are equal and react to light and accommodation. Fundi appear normal. Mouth—teeth in good condition. Tonsils small. Mucosa normal color. Neck—thyroid is small, soft and symmetrical. No adenopathy. Chest—Short, thick type of chest. The lungs are clear throughout. Heart—apex 5th. i.s. Not definitely located. No murmurs. Muscle sounds of good quality. B. P. 126/70. Periph-

Abdomen-liver and eral vessels feel soft. spleen not felt. There is generalized tenderness over the colon. Pelvic—Relaxed floor with torn cervix. Fundus good position. Extremities-No edema. Ankle and knee jerks obtained.

Laboratory Findings:

Urine-1015 acid, albumin none, sugar none, misc-few epith, cells.

RBC---4,460,000 Blood—Hgb. 90% Sahli. WBC 8.57

Basal

X-rays o appear at Proareirregular intervals and patient was admitted to the Strong Memorial Hospital for study, on June 9, 1930. During the stay in hospital had a convulsive scizure. WBC-18,000. Spinal Fluid Discharged June 30, examination-negative. 1930.

After leaving the hospital went to Buffalo where she consulted several physicians. Diagnosis of "neurasthenia" was made.

Returned to Rochester about September 1, 1930, after which time she had daily attacks of coma for short periods. These attacks were followed by crying and screaming. At one time patient had marked ataxia with incoordination of all movements and walked with a high steppage gait staggering as if intoxicated. Within 1 hour of this attack she was out walking up and down street with husband and said she felt "fine."

On night of September 3, 1930 patient went to bed as usual but in the morning was comatose and could not be aroused. Admitted to the Rochester General Hospital. Blood sugar found to be 17 mg. per 100 cc blood. Temperature ranged from 99.8 to 103.6 and at end of 2 weeks patient died with pneumonia, never regaining consciousness from time of admission until death. amounts of glucose were given I. V. Blood sugar increased to 97, 135, 130 and 82. Then recorded as 620 only to fall to 31 and 20 before death in spite of glucose administration.

Positive Findings: Variable neurological signs. At one time positive Babinski and ankle clonus on right side. Marked lateral nystagmus. Evidence of spastic paraplegia right arm and right leg. Marked restlessness.

Autobsy Findings: Pancreas normal size, shape, color and consistency. Near the tip of the tail, there is a small round tumor 13-7-10mm, which is of a pinker color than the surrounding tissue. It is easily shelled out of its bed. The right adrenal is larger than normal and of a deeper red color and on section shows a hemorrhagic cyst. Bilateral lobar pneumonia.

ARRESTED SHOULDERS IN VERTEX PRESENTATION By MARK HORNSTEIN, M.D., NEW YORK, N. Y.

Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

THE primary problem of the obstetrician, in so far as the passage of the child through the birth canal is concerned, is that of overcoming obstacles to the delivery of the fetal head. The importance of emphasis upon this phase of obstetrics is justified, not only in the present state of our obstetrical knowledge: it will continue to constitute our chief preoccupation until such time as we have a definite understanding as to the nature of the numerous factors involved in the mechanism of parturition.

This statement may strengthen the general impression, that once the child's head has been born, mere expectancy, or perhaps slight traction on the head will bring the birth to completion. While fortunately, this is true in the vast majority of cases, not infrequently, the shoulders of the child become arrested after the head is delivered, and a constantly increasing number of instances present themselves in which it becomes exceedingly necessary to render special attention even after the head has been born. One of the reasons for this increase is undoubtedly due to the fact that more

frequent resort is made to forceps or anæs-The obstruction may occur either as a result of faulty position of the shoulders or because of their excessive breadth. There are different degrees of shoulder arrest ranging from a slight delay (when the patient is under anæsthesia and unable to bear down) to an extreme and rare degree of arrest which necessitates various operative procedures such as cleidotomy, decapitation, amputation at the shoulder joint and version.

One possible untoward result of prolonged delay due to shoulder arrest is death of the child from compression of the umbilical cord if the latter should be prolansed into the true Another danger is that of paralysis pelvis. of the Erb-Duchenne type if forcible traction is brought on the head in a faulty manner. If the head is pulled in a direction which causes the distance between the angle of the jaw and the corresponding shoulder to become increased, it is apt to result in permanent paralysis of the arm, due to the tearing of the lower cervical nerves. This latter occurrence is by no means rare, judging from the more than

frequent allusions to the subject made by orthopedic surgeons.

The text books describe various methods for dealing with this complication. In general, they consist of a series of attempts, which,

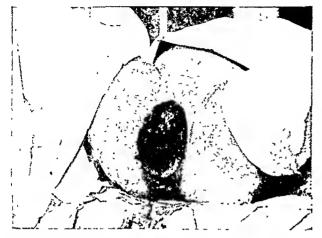


FIGURE 1. All of head but chin is born. Old unhealed perineal laceration in multipara; failure of head to advance due to shoulders arrested at superior strait.

from their variety alone, betray their doubtful value either in accomplishing the desired result, or in doing it without causing harm. Maternal bearing down efforts and manual pressure from above are comparatively safe, but of little or no value when the shoulders are, as is usually the case, arrested at or in the inlet of the pelvis.

When the shoulders are arrested at the pelvic inlet, it may be evidenced almost immediately after the caput presents by an otherwise unexplained slow advance of the head The head often reover the perineum. remains in the introitus long after its largest diameter has emerged from the pelvic outlet and when the soft parts no longer offer any resistance. Indeed, the child's chin may be the only part of the head remaining undelivered (Fig. 1). Even if the chin is extracted by sweeping a finger over the perineum, and extending the neck, the head remains tightly imbedded in the perineal soft parts on account of the relatively insufficient length of the neck. Restitution, therefore, does not take place, and the occiput remains under the pubic symphysis (Fig. 3).

In order to attempt delivery by the usual methods the accoucheur first rotates the head into restitution (Fig. 2) and then proceeds in his efforts by employing any one or a combination of the accepted methods. He usually succeeds in the delivery but sometimes this is accomplished at the risk or actual cost of injury to bone or nerves. The method of delivering arrested shoulders in vertex presentation hereby presented offers the advantages of freedom

from risk of injury and assurance of success in delivery.

TECHNIQUE

In left occiput anterior position the left hand of the operator is placed on the child's occiput. just left of the median line; the right hand steadies the chin, being placed just right of the median line (Fig. 3). The head is rotated slightly to the right of the symphysis pubis, contrarywise to restitution. Traction is applied to the head with the left hand; the direction of the pull being downward and to the right, always with the tendency of bringing the two hands of the operator, which, at the beginning of the maneuver, were partly crossed, into their normal relation to each other. The force of the pull thus passes through the outer fibres of the left trapezius muscle of the child onto the left or posterior shoulder. It is this shoulder which is soon made to point at the outlet (Fig. 4). To com-



FIGURE 2. The wrong method, consisting of restituting the head before pulling. Irrespective of which shoulder is pulled first, there is danger of brachial paralysis. The position is left occiput anterior.

plete the extraction one may continue pulling and deliver the same shoulder first, or the head may be returned to its original position, depressed and the right shoulder extracted first. In some cases of arrested shoulders restitution may not be interfered with, the child's neck being sufficiently long to rotate, or because the pelvic inlet is low or the patient is of slender build, factors which render a greater length of neck available and facilitate external rotation of the head. The procedure to be followed then is the same but the occiput must first be rotated to the right of the symphysis along a longer arc than in the usual instance, before traction is commenced. In posterior position of the occiput, with the head restituted, the occiput need not be brought around as far as the symphysis. It is enough to rotate the head for a sufficient distance to enable one to apply the traction so that the force passes along the outer fibres of the posterior trapezins muscle unto the left shoulder. When the position of the child in utero has not previously been ascertained, one may be guided by locating the position of the back digitally.

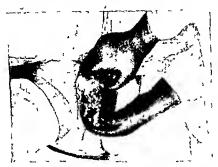


FIGURE 3. Some position. The chin hos been delivered by increasing extension of the hood. The lotter is drown of opinist the moternal soft parts by the fixed position of the shoulders of the inlet. The correct manner of grasping the hood. The honds ove crossed so that the left hond grosps the head over the occipint. The right hond fixes the chim. The pull of the left hond is downward and to the mother's right.

In right occiput positions the procedure is simply reversed.

In case of serious shoulder arrest, where considerable pull is required, traction should be brought intermittently, in order not to interfere too much with the circulation in the vessels of the neek. While in the ordinary case of arrested shoulders a slight pull will be sufficient to effect descent, one need have no fear of exerting considerable traction in case of necessity provided that it be done intermittently and in the manner indicated.

This method has been employed for a period of fifteen years with uniformly good results. It will prove inadequate only in those rare cases where embryotomy offers the only solu-

tion.

Discussion (Closing)

The stress laid in my presentation upon the value of the maneuver in the prevention of brachial paralysis does not overlook the fact that the paralysis may occur in other than vertex presentation with arrested shoulders. Various degrees of injury to the nerves sup-

plying the arm have followed forceps deliveres and have been attributed to pressure of the blades on the neck. The injury has also resulted from difficult extraction of the aftercoming head in breech cases. Nevertheless, it is not easy to see how mere pressure of the blades can cause tearing of the deep nerves of the plexus; and as to breech deliveries, the mechanism of the production of the paralysis must be the same as in vertex presentation, a lateral pull of one shoulder away from the head.

Many descriptions of how the injury is produced have come from neurologists and orthopedists who often reach their conclusions by eliciting a history of forceps, but without being in a position to learn what happened after the delivery of the head. They therefore associate the accident with forceps.

Thomas and Seuer have analyzed 471 cases



FIGURE 4 Note that the traction applied results in descent of the posterior shoulder.

and have shown by experiments on cadavers that tearing of the lower cervical nerves can be produced by stretching one side of the neck.

The cause of arrested shoulders is sometimes said to be a contraction of the lower uterine segment around the child's neck. Such explanation has even been advanced for a retained placenta. The ease with which the shoulders are made to come down by the manipulation described is sufficient refutation of such explanation and need not lead to a discussion of the activity or passivity of the musculature of the lower segment. But the absence of such contraction may easily be determined by digital examination

The facilitation of shoulder descent by the method given is undoubtedly due to their rotation into the transverse pelvic diameter.

SOME NEUROLOGICAL ASPECTS OF SUPRARENAL INSUFFICIENCY

By LEON HASTINGS CORNWALL, M.D., NEW YORK, N. Y.

Read at the Annual Meeting of the Medical Society of the State of New York, at Buffelo, N. Y., May 25, 1932.

It is generally recognized that a number of diseases of extraneural origin may be initiated by symptoms of neural dysfunction. Neuritic symptoms in diabetes, cord symptoms in pernicious anaemia and mental symptoms in thyroid disorders are familiar examples. Clinical evidence of impaired cerebral function in intoxications due to alcohol and lead, the deliria associated with infections and the mental changes accompanying nutritional disturbances, such as pellagra and vitamine deficiencies, are not uncommon in the experience of every internist.

In suprarenal insufficiency one usually encounters the common manifestations of asthenia, hypotension, skin or mucous membrane pigmentation and gastro-intestinal derangements early in the course of the disease and neurologic symptoms, when present, are late incidents. On the other hand abdominal pains simulating gastric arises, lethargic states, reminiscent of epidemic encephalitis, or sudden coma suggesting cerebral neoplasm or vascular accident, may be the presenting symptoms

toms.

Current views of disease of the suprarenal body envisage two pathological entities, one being due to localization in the gland of inflammatory lesions, of which tuberculosis and syphilis are the most frequent, and the other representing a primarily degenerative process. Inflammatory processes usually involve both cortex and medulla whereas those of a primary degenerative nature are confined largely to the cortex of the gland. The classical syndrome of Addison's disease has been considered to be related to pathology of both cortex and medulla. The cardinal symptoms consist of secondary anaemia, bronzing of the skin. gastro-intestinal disturbances, asthenia, low blood pressure and progressive cachexia.

The suprarenal body represents a union of two components that are physiologically and histologically distinct. The medulla belongs to the chromaffin system, a part of the sympathetic, and the cortex is a part of the interrenal system. It is obvious that a variable symptomatology should be produced by disease of this organ depending upon the localization and extent of the pathology resident in it, as well as upon the inherent constitu-

tional endowment of the tissue itself.

It is not the purpose of this contribution to discus in detail the syndromes attributable to suprarenal disease because its intimate physiologic relationship to other endocrine organs would require an excursion into the broad field of endocrinology. It should be mentioned, however, that adrenalin is a product of the medullary substance and that its pharmacologic action is manifested by stimulation of the sympathetic system although some

degree of selectivity is apparent and certain structures, notably the sweat glands, which are innervated by the sympathetic, are not affected. The medullary tissue hormone produces vaso-constriction, especially of the splanchnic area, a rise in blood pressure, a lowering of tone of the intestinal musculature with inhibition of peristalsis. contraction of the uterine muscle, relaxation of the bronchial musculature, activation of the intestinal glands with the exception of the pancreas. mydriasis, enophthalmos and a mobilization of sugar as evidenced by hyperglycaemia and glyco-Hypofunction of the suprarenal medulla has been considered as productive of hypotension, low pulse pressure and hypothermia. The presence of Sergent's white line and asthenia are associated symptoms.

Hyperfunction of the suprarenal cortex is believed to be productive, directly or indirectly, of pseudohermaphroditism, pubertas praecox and adult hirsutism. To cortical hypofunction have usually been ascribed the asthenia and gastro-intestinal disturbances associated with Addison's disease. Our knowledge, based upon experimental data, is as yet too meager to warrant an attempt to make a clinical differentiation of symptoms due to lesions in one or the other component of this organ. It is fair to assume that the intimacy of their spatial relationship implies a certain inter-

dependence in their physiologic activity.

Since 1927 we have been aware of the fact that an adrenalin-free extract of the suprarenal cortex would prolong the life of completely suprarenalectomized animals for five to fifteen days beyond the survival period of controls and since 1930 we have known that concentrated extracts of this same tissue would prolong indefinitely the survival period of suprarenalectomized cats. Only recently has this product, known as cortin or interrenin, become available for general clinical use and the results so far attained justify the hope that it will be the means of saving and prolonging the lives of some individuals suffering from suprarenal cortical insufficiency. It would also seem certain that some of the symptoms formerly ascribed to hypofunction of the medulia of this gland are more properly attributable to deficiency of the cortical hormone.

My purpose in this contribution is to re-emphasize a few of the neurologic phases of suprarenal deficiency.

Case 1

As an instance of a problem in differential diagnosis that came under my observation two decades after diagnosis is made, is imperative if it is to accomplish the maximum degree of effectiveness.

ago might be mentioned the case of a street car conductor, thirty-two years of age, who for no obvious reason fell from his car to the pavement and was removed to a hospital in an unconscious condition. The possibilities of uraemie coma, diabetic coma, eerebral vascular accident, brain tumor or concussion, with or without fractured skull, required consideration. It was noted that there was a diffuse brownish-blue pigmentation of the forehead and hands but otherwise the physical examination disclosed no pathology of the integument, thoracic or abdominal viscera. The blood pressure was 100/65. X-rays of the skull disclosed no fracture or other intracranial pathology. Uraemia and diabetes were excluded by examinations of the urine and blood. The blood Wassermann was positive. No localizing symptoms of organic brain injury became manifest and the patient remained in stupor most of the time, emerging from it for short periods only. On these occasions, however, the mentality was confused and orientation for time, place and persons was lacking. The spinal fluid was normal in all respects including scrology and pressure. There were no changes in the fundi.

The sudden coma with normal urinary findings and blood chemistry, absence of clinical evidence indicative of any localization of cerebral pathology and positive blood serology, suggested syphilitie disease of the brain. Within twenty-four hours the blood pressure dropped to 80/50 and shortly before death, which occurred on the third day, the pressure had dropped to 65/35. This pointed to suprarenal disease which was confirmed at autopsy by the discovery of bilateral gummata

CASE 2

Spasms of abdominal pain suggestive of gastric crises may be the most prominent symptoms of suprarenal insufficiency. These are frequently associated with anorexia, eructations of gas, a sense of fullness after the ingestion of small amounts of food and nausea with or without vomiting.

Within the past few months I have seen a young girl of fourteen whose symptoms developed rather gradually in the late spring of 1931. Up to that time she had been over-nourished, the weight being 150 pounds. There was excessive growth of hair on the arms and legs with masculine character in the distribution of the abdominal hair and the whole habitus suggested hypopituitary function.

There was a gradual loss of weight and appetite, associated with paroxysms of abdominal pain which came on suddenly and were described as "knife-like," originating in the umbilical region and radiating to the flanks and back. These paroxysms occurred at intervals of one-half to one hour and lasted for three to five minutes. When first examined in November 1931 the weight was 90 pounds, representing a loss of 60

pounds in five months. There was evident anaemia of the skin and mucous membranes but neither bronzing of the skin nor abnormal pigmentation of the mucous surfaces except for a bluish color of the circumcorneal region. physical examination disclosed no pathologic findings in the mouth, throat, thoracic or abdominal viscera with the exception of sinus arrythymia and prolonged expiration over the left apex. neurologie examination disclosed a fine tremor of the tongue, convergence weakness of the right eye and hyporeflexia in the lower extremities. Motility and coordination were normal. There was a general weakness and fatigability of all of the body musculature but there were no localized atrophies, no pathological reflexes nor any disturbances of sensation. Sergent's line was demonstrable. The blood pressure averaged from 108/70 to 80/50. The urine was normal, blood Wassermann was negative, feecs were negative for parasites and ova and the chemical constituents of the blood showed no variation from the normal. Sputiim was negative for tuberele bacilli. Roentgenologic examinations of the skull, chest and gastro-intestinal tract revealed no pathology. The blood count disclosed a mild secondary anaemia and the examination of the urine for ereatine revealed an exerction of 362 mg. in twenty-four hours.

Administration of cortin was advised and it was given intravenously in amounts of 5-10 e.c. every second day for six weeks. This resulted in a diminution of the frequency of the attacks to about ten a day and the duration was reduced from three minutes to one minute or less but there was no gain in weight nor was the blood pressure altered. There were intermittent febrile episodes with an occasional rise to 103° F. Although the roentgenograms disclosed no pulmonary pathology and physical signs did not warrant such a diagnosis, the view was entertained that tuberculosis was existent, perhaps in the lymphatic system of the thorax or abdomen. Unfortunately this patient discontinued treatment and when last seen, one week ago, had lost ten pounds more in weight, the blood pressure was 80/50, and diarrhoea had become a prominent symptom. The diagnosis of suprarenal insufficiency would appear to be beyond contradiction.

So far as I am aware emphasis has not been placed upon an increase of creatine in the urine in this condition, although it is known to be an accompaniment of myasthenia gravis, the fasting state, fever, malnutrition and diseases associated with disintegration of muscular tissue. Doubtless the last factor was largely responsible in this case.

CASE 3

Another experience has emphasized the resemblance of suprarenal disease and cpidemic encephalitis. A married woman of twenty-one

years was seized suddenly on October 24, 1930, with profuse vaginal hemorrhage followed by syncope. The hemorrhage continued for twentyfour hours when a gynecologist was summoned. Naturally the suspicion of incomplete abortion was entertained and immediate hospitalization was Gynecological examination reaccomplished. vealed no pathology in the pelvic viscera. As the ordinary conservative measures were not successful in controlling the hemorrhage a transfusion of 1000 c.c. of blood was administered.

Although the hemorrhage ceased after the transfusion and there was improvement in the general condition, the patient remained somnolent. She emerged occasionally from this state but was confused, irrational and mildly delirious. continued in this condition for several days and I was asked to see her on October 29, 1930. During the examination she was restless and asked The responses to many irrelevant questions. questions and commands were slow. Orientation for time, place and persons was impaired but quite variable. For short periods she would be lucid and then suddenly would relapse into an apathetic and lethargic state. The temperature was 102.6° F, the pulse 120, and respirations 20. Blood pressure was 110/70. The skin was dry, smooth and sallow in color but no pigmentation was noted. The breath was foul; teeth were in good condition; tonsils were hypertrophied but not inflamed; pharynx was normal. Aside from a soft, blowing systolic murmur the thoracic and abdominal viscera disclosed no abnormalities. The neurologic status was normal. The laboratory findings were:

Urine—Amber, turbid, 1015, albumin trace, sugar 0, indican normal, occasional hyalin cast, moderate number of leucocytes; kidney function -normal to dye test; blood-haemoglobin 60, thruêr observation this preparation was not available. erythrocytes 4,250,000, leucocytes 9,200 with 43% neutrophiles, 47% lymphocytes, 8% monocytes and 2% eosinophiles; urea 73 mg., sugar 88 mg.; Wasermann and Kahn negative, culture negative, bleeding time three minutes; spinal fluid-clear, slightly increased pressure, cells 11, globulin 0, Wassermann negative, colloidal gold negative.

There were periods of lethargy with mild delirium alternating with short intervals of psychomotor hyperactivity, accompanied by hallucinatory episodes and hypomaniacal over-productivity. The latter were of short duration followed by a gradual transition into a state of apathy or som-There were short intervals when the nolence. consciousnes was relatively clear.

In view of the moderate febrile reaction, the tendency to somnolence and the mental confusion. encephalitis was considered as a possibility but the increased blood urea, in conjunction with a blood pressure of 106/60 and practically normal urinary findings, was extremely puzzling at the g-

The possibility of error was entertained but on repetition the blood chemistry disclosed urea 78.9, 65.4 and 77 mg., and sugar 113, 101 and 111 mg. on subsequent examinations.

The condition remained essentially unchanged for ten days, the temperature ranging from 99.4° to 108.8° F., pulse 90 to 118 and respirations 20 to 24. On November 10th she had a chill followed by a rise of temperature to 105° F., with a pulse rate of 150 and a drop of blood pressure to 65/30. A lumbar puncture at this time showed 12 cells with all other findings normal. On November 11th, 1930, following an intravenous injection of glucose, there was circulatory collapse and a drop of blood pressure to 30/0. There was little response to hypodermic administrations of caffein and adrenalin or to saline infusion and death occurred at noon of that day.

The autopsy revealed an absence of the right adrenal and extreme atrophy of the left. This was associated with a small heart, persistent thymus and tuberculosis of bronchial and mediastinal lymph nodes.

The slight hyperthermia, lethargy, somnolence, mental confusion and cell counts of 11 and 12 cells, respectively, in the absence of any pathologic findings in the thoracic or abdominal viscera or pigmentation or of significantly low blood p sure until the terminal stage of the illness rhis tated against the diagnosis of suprarenal insion ciency. The high blood unea on several oct sions without evidence of renal pathology shows have given a hint as this has been reported f quently since the renewed interest in this con tion that has been stimulated by the discovered animals of proceed that this patient able and we were not in possession of the valuabi information that has come from workers in thi field during the past, two years. It is now know, that some of these patients do not tolerate we intravenous administrations or transfusions, tha the reshold for shock is extremely low and the everyses rejical procedure, no matter how mino

must be to proached with caution.

In the first the sudden coma was probably an indication of platory collapse due to influences operative in the sympathetic nervous sys-The crises of visceral pain in the second case also probably represented a paroxysmal dysfunction of the sympathetic system. Whether the cerebral symptoms in the last case were the result of anoxaemia of the brain due to vasoconstriction of the cerebral arterioles or, on the contrary, to loss of vascular tone with vasodilatation, is a conjectural matter that I do not feel disposed to speculate about at this time.

It is worthy of note that, in addition to the classical symptoms that have already been mentioned, the tendency for a rise in the nitrogenous concentration of the blood, in the absence of manifest evidence of renal pathology, the occurrence of hypoglycaemia and an increase of the creatine excretion, are valuable points for differential diagnosis. In the instances that I have cited hypoglycaemia was not noted but excessive creatiniria was present in the second case and I believe this to be an important feature of the metabolism.

In conclusion I would emphasize that suprarenal insufficiency may manifest itself clinically by an abrupt onset of coma, that will require differentiation from uraemia, diabetes, concussion with or without skull fracture, ccrebral neoplasm and cerebral vascular accident: by gastric crises of an acute nature similar to those encountered in certain lesions of the spinal cord, and by the lathargic state and mental apathy that are such characteristic features of epidemie encephalitis.

Acknowledgment is made to Drs. Wilbur Ward and W. W. Herrick for permission to use some of their clinical data in the third case mentioned in this article and to Dr. Frederick Tilney for access to the clinical records of the N. Y. Neurological Institute covering the second and third cases.

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day polistulosis vacciniformis acuta (juliusberg) followed by anuria AND TETANIC SPASTICITY

A Complicating Disease of Infantile Eczema

By HERMANN FEIT, M.D., NEW YORK, N. Y.

Crom the Department of Dermatology, Vanderbill Clinic, College of Physicians and Surgeons, Columbia University, New York, and read at the Annual Meeting of the Medical Society of the State of New York, at Huffalo, N. Y., May 24, 1932. sINFANTILE eczema, although a troublesome skin disease which demands all the wit Finkelstein.

of a dermatologist and the cooperation of the parents for its control, runs as a rule a penign course. When, however, an infection of the eczematized area takes place, the prognosis Decomes doubtful. In well-nourished children one finds not infrequently pyogenic infections around the hair follicles following miliaria or maceration of the skin by exudate, but furunculosis seldom appears. This mild folliculitis, sometimes referred to as pustulosis, can be controlled by the application of sulphur or by permanganate baths.

On the other hand, in children with chronic disturbance in nutrition a cellulitis may develop or the folliculitis may take on a more severe form. There is a sudden outbreak of papules which become pustules, which may be accompanied by high fever and swelling of the eczematized area. These severe types are known as impetigo simplex or pustulosis of

A rare variety of severe pustulosis is described by Juliusberg under the name pustu-A brief history of his losis vacciniformis. case which resembles closely the one here reported would present the picture of this rare disease. His patient had developed infantile eczema at the age of six months and later developed an eruption of flat papules on the face, scalp, and palms. The papules later developed into pea-sized, round, elevated vesicles with a depression in the center the size of a pin head or lentil. They resembled the lesions of vaccinia. One side of the face was evenly covered with a humid, soft, yellowish, waxlike mass. There were no lesions on the mu-cous membrane. The child developed a high fever and after a course of several weeks, died, apparently as the result of this skin infection. At autopsy no visceral lesions were found.

The patient had not been vaccinated. The vesicles did not show the red halo usually present in chicken pox and vaccinia and were distributed only in regions which could be reached by his fingers. The early lesions were The older lesions showed not cultured. staphylococci in great numbers. The mother had a stye from which child might have be-Juliusberg concludes: "We come infected. are dealing with a skin disease which at first could be mistaken for chicken pox, variola, vaccinia, but which can clinically and microscopically be distinguished from those conditions. The efflorescenses all show the same stage of evolution and represent at the height of their development pustules which can heal without leaving a scar. Staphylococcus aureus seems to be the infecting agent."

Baar and Freud recently reported several cases of pustulosis vacciniformis. One, a boy, eight months old, affected with eczema of the face and bronchial asthma, was suddenly taken sick with a high fever and an outbreak of small vesicles, which resembled those of vaccinia, on the face. The patient developed tonic and clonic convulsions and died after three days. Culture from a vesicle showed



FIGURE 1
On January 7, 1932.

FIGURE 2
On February 15, 1932.

staphylococci. Inoculation of a rabbit's cornea produced a severe keratitis. Guarneris bodies were not found. There was no history of exposure to vaccinia. The spinal fluid was negative. Autopsy showed parenchymatous swelling of the viscera and acute edema of the brain. These authors observed two other cases which terminated fatally. They conclude that pustulosis vacciniformis is either a peculiar type of reaction in a patient with eczema, or an infectious disease caused by an unknown filterable virus.

Report of a Case

The case here reported was an infant of four months. Past History: There was no history of contagious disease or of recent exposure. The child had occasional colds. She had not been vaccinated and no other immunization methods had been employed. At the age of three days she was weaned on account of inversion of the mother's nipples. At the age of two weeks she developed an eczema of the face and to a lesser degree of the body for which she was under my care. Under alteration in feeding and the use of local applications the eczema became practically clear. The infant had a good appetite, no gastric disturbances, and development appeared normal. For three weeks before the outbreak of her eruption she had been given the following formula:

Seven feedings of six ounces. Viosterol ten drops a day, orange juice occasionally. Before the outbreak of the present eruption the child had been given for the first time, The next day bath with castile soap. the face became inflamed and two days later a pustular eruption appeared on face which quickly spread to the oral mucosa making feeding painful. There was at first no apparent pain or fever and no convulsions. When first seen on January 1 there was a recurrence of the eczema on the face and scalp which were covered with thick, greasy scales and crusts. Superimposed on these lesions were multiple pea-sized pustules, the tops of which were flattened and umbilicated in the center. Pustules were filled with grayish liquid mixed with bloody serum. A few similar pustules were present on the chest. In the mouth were small white patches resembling lesions of thrush and the right side of the face was covered with a milky exudate which seemed to be connected with the mouth lesions. In spite of the grave dermatological picture, the general condition of the child did not seem much impaired although there was slight fever. On account of the resemblance of these lesions to those described by Juliusberg the prognosis seemed grave and the child was referred to the Babies Hospital where it was admitted the following day on the service of Dr. Herbert B. Wilcox. By this time the pustular lesions had collapsed and had become crusted. The following note was made:

Physical Examination: A poorly-nourished infant lying quietly in bed. The skin of the face is swollen and inflamed with numerous crusted, cracked, bleeding lesions involving the entire left side, most of the right, the ears, and to a

less extent the scalp, where, however, there was only crusting. The left eye was closed due to involvement of the lids, the right less involved. There was a purulent discharge from both eyes. The lips were swollen, although the immediate circumoral skin was little involved. There were numerous circular white raised patches varying in size from one to three millimeters on the outer tongue, gums, and inner side of the lower lip. These bled freely when touched with a tongue depressor. A few crusted lesions were present on the anterior neck and left shoulder, impetiginous in character. There was a mild intertrigo on the buttock and right popliteal space. Except for moderate rigidity of the neck, hyperactive reflexes, no other abnormal findings were `~erved.

Laboratory Findings: The blood count on admission showed RBC 3,650,000, WBC 35,750, Hemoglobin 64%, PMN 61%, lymphocytes 30%, monocytes 2%, eosinophiles 15%. The urine showed a trace of albumin with a few casts and pus cells. Smears of the mouth lesions showed pus cells and gram positive No Vincents organisms were found and cultures for thrush organisms were negative. Kahn tests was negative. Blood culture was negative.

Course and Treatment: The lesions were treated by the application of boric acid ointment and exposure to air and the child seemed to improve until January 8 when a fresh outbreak of impetiginous lesions appeared on the chest. The temperature during this time varied from normal to 105. The ointment was then discontinued and 3% mercurochrome anplied and generalized treatments with ultraviolet light were begun. In three days the spread of the eruption ceased but two days later the child, who had not voided for thirty hours, developed a spastic retraction of neck and spasticity of the legs and appeared dehydrated. The prognosis at this time seemed grave. Infusions were given of 120 cc of 5% glucose intravenously, 150 cc of normal saline hypodermically, and 0.8 cc of chloral hydrate per rectum. On January 14, after repeated clyses, the temperature became normal and the general condition much improved. January 16 the ultra-violet light treatment was discontinued. Compresses of potassium permanganate solution 1-6000 were applied every three hours and the lesions allowed to dry in the intervals. Luminol 0.015 gms, was given twice daily when necessary to control restlessness. The eyes were irrigated twice daily with boric acid. Under this regime the skin continued to improve and the temperature remained normal. On one occasion cold eream was applied to the face and there promptly appeared tiny vesicles suggestive of the early lesions. These disappeared when cream was discontinued. By January 26 the erusts had disappeared, the child gained weight, and he was discharged practically cured.

Comment: This case is believed to represent an example of the pustulosis vacciniformis acuta of Juliusberg terminating in recovery. The characteristics of the disease are the outbreak of vesicle pustules simulating those of vaccinia limited chiefly to the exposed areas in a child suffering from infantile eczema. A high fever and symptoms of irritation of the eentral nervous system seem characteristic of this disease. The lesions are distinguished from impetigo by their vacciniform character and from chicken pox, small pox, and vaccinia by their distribution and evolution, by the absence of history of infection, and by the course of the disease. The cause of the disease is unknown. It is possible that it is due to some filterable virus, otherwise one must assume an increased virulence of the staphylococcus or a decreased resistance on the part of the patient.

Your talkes to the state r of the Babies to Dr. Jas. F. Kingsbury and

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PHYSICAL THERAPY IN GYNECOLOGICAL OFFICE PRACTICE

By VIRGINIA TANNENBAUM, M.D., BUFFALO, N. Y.

Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 25, 1932.

I-MEDICAL DIATHERMY

A-Medical diathermy in specific infections.

1-Medical diathermy or the therapeutic application of the high frequency current, within normal physiological limits, has a place in the treatment of acute specific salpingitis. During this stage of the infection, local treatment should be deferred. The use of prolonged hot douches and such analgesics as may be necessary should not be omitted.

- The technique for thru and thru or "trans-pelvic" diathermy is definitely established and in popular use. The posseven-by-ten electrode. about inches in size, is placed over the sacrum while the anterior electrode, five-by-seven inches, is placed over the symphasis pubis. The milliamperage is about 1,000 to 1,200 and is given for forty-five to fifty minutes. At the institution of treatment diathermy should be given daily, gradually, lengthening the time interval, between treatments, as the patient's condition improves.
- 2—Sub-acute specific tubal infection gives the most gratifying response with medical diathermy. It lessens the discomfort, decreases the vaginal discharge and hastens the absorption of the inflammatory exudate, and many times allows the patient to remain ambulatory.
- 3—Chronic specific salpingitis can be divided into two groups, namely:
 - (a) The cases where the tubes are palpable and moderately tender, with or without a positive smear, usually without.
 - (b) The cases, that on palpation, show exquisite tenderness and often a mass or masses in the fornices.

The first group or those with the less severe infection are entitled to the benefit of adequate treatment with diathermy before salpingectomy is considered. The majority will improve and stay improved if sufficient treatment is given.

In the second group, if the patient is willing to temporize, diathermy can be tried, particularly if the patient is anxious to retain the childbearing function. However, in my experience these large "pus tubes," sometimes the size of a small orange, and often complicated by ovarian abscesses, are not amenable to treatment with diathermy. Surgery, in these cases, may allow the total removal of the grossly infected material and, yet, possibly, the preservation of sufficient ovarian tissue to avert a surgical menopause.

- 4—Post-operative adhesions in pelvis, specific or non-specific, are one of the salient indications for "trans-pelvic" diathermy.
- 5—Acute specific cervicitis should not be treated locally.
- 6—Endocervicitis, following an acute specific infection treated with intra-cervical medical diathermy has shown no appreciable improvement in my experience.
- B—Medical diathermy in non-specific infection.

- 1—Post abortive broad ligament infection should not be treated by diathermy.
- 2-I have had four cases that I feel have had pelvic tuberculosis. In two of these, the diagnosis of pelvic tuberculosis was made at the time of operation. The other two cases, on pelvic examination, showed tender, fixed adnexa, had a purulent discharge, negative smears, and also had definite physical findings of pulmonary tuberculosis. All four were ambulatory. These women, in addition to the usual rest, high vitamine diet, etc., received "trans-pelvic" diathermy and also general ultra violet ray, approximately twice a week for six months. The results were surprisingly gratifying. There was a softening of the pelvic adnexa, a decrease in tenderness, a marked lessening of the discharge as well as a great improvement in the general condition.

II—SURGICAL DIATHERMY

The term surgical diathermy is used to designate the application, for therapeutic purposes, of the high frequency current at a temperature exceeding normal physiological limits, for the purpose of effecting a destruction or removal of tissue. The extent of this destruction or removal varies from a simple drying of tissue to a massive removal of tissue. The three usual forms of surgical diathermy are: electro-desiccation, electro-coagulation, and the high frequency cutting current.

Electro-desiccation causes a drying or dehydration of tissue. This is accomplished by the use of the spark, that is derived from the Oudin resonator, attached to the d'Arsonval selenoid. It is a mono-polar current. The needle point electrode is connected to the Oudin terminal and is held in contact or at a sparking distance from the area to be treated. The intensity of the current is regulated proportionally to the amount of destruction desired. Electro-desiccation is indicated in "the destruction of superficial growths and lesions of the skin and mucous membrane." 1

Electro-coagulation is a bipolar form of surgical diathermy. The small, active electrode is connected to either of the electro-coagulating terminals, with the large dispersing electrode connected to the other terminal. The active electrode is placed in contact with the tissue to be destroyed, resulting in a coagulation of the tissue. This is a very satisfactory modality and can be used in the destruc-

tion of much accessible pathological tissue. Chronically infected cervical glands, polyps, caruncles, condylomata, can usually be adequately treated with the electro-coagulating electrode. For gynecological work, the bi-polar electro-coagulating electrode perfected by Dr. Thomas H. Cherry offers great possibilities in the treatment of endocervicitis and of cervical erosions.

The high frequency cutting current has for the active operating electrode a suitable needle, wire, or blade. The procedure entails a "coring" of the cervical canal.

A-Indications for surgical diathermy.

1-Chronic cervicitis, specific or otherwise in origin, may be associated with a co-existing endocervicitis, and, in turn, this endocervicitis may be the cause of the cervicitis. Again, we may have a chronic cervicitis without an endocervicitis. Chronic eervicitis usually presents a varying degree of erosion of the cervical mucous membrane. Nabothian cysts can be satisfactorily punctured and the eroded surface stimulated by the electro-desiccating needle. A more severe cervicitis may require electro-coagulation. If the cervicitis is associated or complieated by an endocervicitis, the cervical canal should, in addition to the above procedure, be treated by electro-coagulation.

2-Chronic endocervicitis.

I believe, at this moment, at least, that the use of the Cherry bipolar electrode gives the most satisfactory results in electro-coagulation of the cervical canal. The electrode is inserted into the cervical canal for approximately one-inch. When the electrode is properly placed, with the current set to approximately three-hundred to four-hundred milliamperes, the electrode should be swiftly and gently rotated in the cervical canal for about fifteen seconds. It is essential that the electrode be in position in the cervical canal before the turning on or off of the current. Better results seem to be obtained with an initial mild application, repeated several times, if necessary, at intervals, of five to six weeks. There is a uniform destruction of tissue around the site of the electrode as can be seen at the time of treatment.

If, the cylindrical epithelial lining of the cervical canal, with its contributary glands, when destroyed, is replaced by squamous epithelium from the vaginal eervix, the possibility of cervical stenosis as well as the possibility of any further eervical glandular activity is removed. In many instances, the electro-coagulation of the cervical canal suffices to cause a healing of the cervical erosions. However, if the endocervicitis is associated with a particularly extensive cervicitis and especially with the presence of large Nabothian cysts, the eysts should be punctured with the electro-desiccation needle as before advised. Then, after, the above described electro-coagulation of the cervical canal, the vaginal speculum can be collapsed and with the Cherry bipolar electrode, partially withdrawn, the electrode can again be rotated in a larger circle in order to contact the eroded surfaces of the cervix. The combined electro-coagulation of the cervical canal and cervical erosion with adequate clectro-desiccation of the Nabothian cysts offers today, I believe, the simplest and most efficient form of treatment of combined cervicitis and endocervicitis.

- 3—Specific infection of Skene's glands, in my experience, has been wholly resistant to intraurethral medical diathermy. However, these glands can usually be destroyed with the electro-desiccation needle. Care must be taken to treat only one side at a time because of the resultant oedema of the urethal mucous membrane.
- 4—Urcthral caruncles can be removed by electro-desiccation or electro-coagulation; in fact, the time-honored cautery is frequently useful in the removal of these growths.
- 5—Accessible polypoid degenerations can be removed by practically any surgical diathermy current. The removed tissue should be sent for microscopic examination. However, I believe, that, where sufficient degeneration is present to have resulted in polypoid formation, that a diagnostic curettage is the method of choice. This allows for the complete removal of the pathological tissue. Also, a diagnostic curettage allows for the use of small quantities of radium which may be of great benefit in these degenerations.
- 6—Warts or condylomata are best removed with the electro-desiccating needle or by electro-coagulation. The base of the growths should first be adequately infiltrated with a one per cent novocaine solution. Care should be taken that the destruction of the growths be of sufficient depth to prevent any recurrence.

III-MEDICAL GALVANISM

Cumberbatch states that "The most valuable therapeutic property of the galvanic current is its power to aid the absorption of inflammatory products."²

- A—Galvanism from the positive pole produces an acid condition with a shrinkage and contraction of the tissues and, has been used for years in the treatment of chronic, swollen, eroded cervicitis.
- B—Galvanism from the negative pole has many advocates. Dr. Kovacs1 states "Negative galvanism is an efficient means of gradually dilating a congenitally stenosed cervix. A metal cervical electrode is connected to the negative pole and a dispersing pad, placed about the symphysis, is connected to the positive pole. One should first apply an active electrode of smallest diameter, insert it under antiseptic precautions, turn on 1 to 3 milliamperes of current at first and increase its amount, always within comfortable toleration, to about 10 milliamperes. After a few minutes white bubbles appear all around the electrode in the cervix and it can be easily. moved about. It should now be replaced by the electrode next in size, which easily slips in the softened cervical canal; a still larger electrode can be inserted perhaps once more, during a total treatment-time of fifteen to twenty-five minutes. In the infantile uterus after the dilation of the cervix, the last electrode should be left "in situ" and the surging faradic or sinusoidal current turned on, causing gentle contractions for from fifteen minutes to one-half hour. This treatment should be repeated twice a week for a period of several months, avoiding the proximity of menstrual periods."1

Still quoting Kovacs, "Dannreuther of the Post-Graduate Hospital, in New York, reports that the cervix can be gradually and painlessly dilated by this means, and there is nothing that can be accomplished by forcible dilation and the use of stems under anesthesia that cannot be done as well and with more permanent results in this way. He has used this method often in conjunction with organotherapy, for twenty years, in cases of dysmenorrhea and amenorrhea due to hypoplasia, with the utmost satisfaction" (Kovacs—1932—P. 448)

Possibly my cases have been rather unusual, or possibly the technique defective, but the results that I have obtained from the use of galvanism in gynecology have not been very encouraging.

IV—ACTINOTHERAPY

Sunlight needs neither plea nor proof of value. Ultra-violet rays produced by the quartz mercury burner, are of value because of their tonic effect on the human organism. As yet, there are many conflicting opinions as to their biologic and physiologic mode of action. However, I have often noted that anemic, emaciated girls, generally below par, having ultraviolet ray in conjunction with iron, a high vitamine diet, etc., and also frequently complaining of dysmenorrhea or a relative amenorrhea, have volunteered that they have had greater comfort at menstrual period, since having taken the ultraviolet lamp treatments.

V-HYDROTHERAPY

Water as a remedial agent, has a far greater field of application in sanitarium than in office practice. Nevertheless, the value of hot douches, serving as a cleansing agent, and, for local heat effect, on the vaginal mucous membrane, should not be forgotten in our enthusiasm over electro-therapy.

CONCLUSION

1—Medical diathermy is of value in the treatment specific acute, specific, sub-acute, and some forms of specific, chronic salpingitis. Medical diathermy may be of value in the treatment of tuberculosis of the pelvic adnexa.

2—Surgical diathermy offers a decided advance in the treatment of diseases, specific or otherwise, of the cervix and cervi-

cal canal.

3—Sunlight and ultra-violet rays, because of their effect on the human organism, are of benefit in the treatment of some types of dysmenorrhea.

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THE VALUE OF ANTITOXIN IN THE TREATMENT OF SCARLET FEVER

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TT IS now (January, 1933) over eight years since Blakei reported the first results of treatment of scarlet fever with antistreptococcus serum prepared according to Dochez.2 In this period, although thousands of patients have received specific therapy, the results are not certain. From various quarters of the globe, enthusiastic, doubtful or unfavorable reports are on record. a, a, a, a, 7, 8, 9 Many of them deal with series of patients treated with serum without control groups not so treated; others deal with mortality alone. Since it is generally conceded that the mortality of scarlet fever has decreased, and is still decreasing, this criterion must be discarded in forming judgment. Moreover, the severity of the disease varies widely from place to place, from year to year and in differing age groups. Finally, it is now generally appreciated that the toxic features of the disease and those due to local or metastatic colonization of streptococci must be separately analyzed. Fever, rash, prostration are typically toxic symptoms; the complications must in general be regarded as the result of streptococcal infection and its sequelac.

We are reporting the effect on course and complications, of scrum administration in some of the 202 cases of scarlet fever treated in the Strong Memorial and Rochester Municipal hospitals during the six-year period from 1925 to 1931. These patients were all over 14 years of age, the majority falling between 15 and 30 years; no young children are included. Of the total, 89 were admitted from January, 1926, to June, 1930, chiefly in the fall, winter and spring months, and these were considered sporadic in type. In the fall of 1930 and the winter and spring of 1931, we experienced an increase in frequency of the disease amounting almost to an epidemic. The 113 patients of this period have been separately analyzed.

Of the total group, 127 were given serum, usually on or before the fourth day of illness, and 75 had no serum. The antitoxin was that prepared by the New York State Department of Health Laboratories according to the method of Dochez and the usual dose was 10,000 units.* Rarely, because of relapse, the dose was repeated. A few patients were given antitoxin by vein; the usual method of administration was intraunuscular. The dose was generally given within a few hours of admission to the hospital. The usual precautions in regard to serum sensitiveness and anaphylactic accidents were carefully followed.

On the basis of fever and general clinical appearance, we have arbitrarily placed these patients in mild, moderately severe and severe groups.

Leucocytosis does not parallel severity, as has also been noted by Wylie 10 nor does the percentage of streptococci to total flora in throat cultures as determined by the poured blood plate method. Patients who had fever of 38 centigrade or less on admission to hospital, and presented little or no prostration were considered mild. Cases with feyer up to 39.5 centigrade and moderate prostration were considered moderately severe, and those who had fever above 39.5 or who had very marked prostration were classed as severe. Complications were also arbitrarily divided into 'mild" or "severe." "Mild" includes otitis, sinusitis, cervical adenitis or transient arthritis. "Severe" consists of either multiple mild complications or pneumonia, severe and persistent arthritis, rheumatic fever, any evidence of renal involvement or any complication necessitating sur-gical intervention. While complications may have developed after our period of observation was over, their distribution should have been uniform between treated and untreated cases, and no follow-up study was attempted.

Treatment was identical in all patients save for the use of serum. Unless complications developed, patients were kept in bed until the 14th to the 21st day of disease. Fluids were forced during the febrile period and given parenterally if refused per os. Analgesics and ice bags were used to combat the pain of angina or cervical adenitis. Alkaline saline or aspirin gargle was used, and the diet, not restricted as to protein, was adapted to the general condition of the patient.

As a criterion of the effect of serum on toxic phenomena, we have analyzed our material for the duration of fever in Tables 1 and 2. The duration of rash followed closely that of fever, and malaise and prostration were similarly favorably affected by serum. These results seem partly a function of time of treatment: the duration of fever was decreased most when serum was given on or before the fourth day of illness. It also appears that hospitalization alone shortens the toxic period; those cases admitted on or before the fourth day and to whom serum was not given show a definite reduction in duration of fever as compared to those admitted later in their illness. In Table 2, it should be kept in mind that 40 per cent of untreated cases were classed as mild, as compared with 14 per cent of those who received serum.

In Table 3, the effect of serum treatment on complications is considered. While the percentage of complications in mild and severe cases is lower in the treated group, the number of observations is small and the differences doubtfully significant. In the moderately severe group, the

The unit of scarlet fever antitoxin is now standardized as the amount which will neutralize 50 skin test doses of toxin.

typical adult scarlet, the incidence is increased in the treated cases. An analysis of the results according to day of treatment gave no change in the figures: in patients treated on or before the fourth

TABLE 1

The Effect of Serum Treatment on the Duration of Fever						
erum Treate	Non Serum	Treated				
Number	Duration	Number	Duration			
Observed	of Fever	Observed	of Fever			
18	5.4 days	30	6.5 d ays			
91	6.9 days	39	9.5 days			
18	9.5 days	6	11.6 days			
	erum Treate Number Observed 18 91	reum Treated Number Duration Observed of Fever 18 5.4 days 91 6.9 days	rerum Treated Non Serum Number Duration Number Observed of Fever Observed 18 5.4 days 30 91 6.9 days 39			

TABLE 2

The Effect of Scrum Treatment and Hospitalization on the Duration of Fever

Serum Treated Treated or Number Du Hospitalized Observed of On or before		Duration	Non Serum Number Observed	Treated Duration of Fever
4th day	92 29	6.2 days	43	7.2 days
After 4th day	29	9. 7 days	23	10.4 days

TABLE 3

The Effect of Serum Treatment on the Incidence of Complications

	Serum Treated		Non Serum Treated			
Severity of lilness	Number Treated	Cplctns	%	Number Treated	Cpletns	%
Mild	18	4	22	30	8	26
Moderate	91	37	41	39	10	25
Severe	18	12	66	6	5	83
Totals	127	53	42	75 ·	23	31
c	f which	8 were se	rious	of which	10 were se	rious

ences can be found in the sporadic and epidemic cases.

Discussion.—It appears that the toxic features of the disease are lessened by serum treatment, especially if it be administered fairly early. In a similar group of patients treated in their homes, it might be expected that earlier diagnosis and treatment might increase this difference. Complications, taken as an index of the septic factors in the disease, were not influenced by specific therapy though emphasis might be placed on the lessening of serious complications: one patient in thirteen among the treated, as against one in nine in the untreated group suffered in this way. Mild complications are uncomfortable and not dangerous.

If we weigh the detoxification which can be almost uniformly expected from serum against untoward effects, we must consider four possibilities. First, anaphylactic shock is probably inexcusable, but we had two fairly severe instances, with vaso-motor collapse to such an extent as to arouse concern ad vitam. Second, over-emphasis on serum treatment is facile; scrupulous attention to septic foci is most important, and may be neglected unless it is clear that antitoxin does not relieve one of the likelihood of complications. Third, serum disease occurred in about 55 per cent of our patients, and while not dangerously ill, many of them suffered more than from their original scarlet fever. Finally, in the younger members of our group, or in younger children, sensitization to horse serum must be taken into account. The highly allergic individual will acquire sensitization

TABLE 4

		Serum Treated	_	N	Ion-Serum Treat	ed_
Cases prior to July, 1930	Number of Patients	Average days of Fever	Percentage of Patients with Com- plications	Number of Patients	Average days of Fever	Percentage of Patients with Com- plications
Mild	10	5.3	10%	11	7.9	15%
Moderately Severe	37	· 7.5	35%	19	10	15%
Severe	10	8,8	60%	0 .	-	
Mild	8	5.5	37.5%	16	6	35%
Moderately Severe	54	6.4	44%	20	9.9	35%
Severe	8	. 10.5	75%	6	11.6	83%

day of illness there were 38 per cent of complications. However, only 20 per cent of the complications in treated patients were "severe" as against 38 per cent in the controls. There were three deaths, two of them serum-treated, with broncho-pneumonia and empyema, and nephritis as cause, and one who received no serum, a mildappearing case, pregnant, who was delivered on the third day of illness and subsequently developed broncho-pneumonia and empyema.

In Table 4, it is seen that no essential differ-

in any case, but many border-line individuals will be the worse for having had serum.

Conclusions.—An analysis of 202 cases of scarlet fever in adults and older children, of whom 127 received antitoxin, shows a definitely favorable effect on the toxic symptoms of the disease. The high incidence of disability due to serum disease must be weighed against this effect. The incidence of complications is not affected by serum administration, although their severity may be lessened.

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TRIPLE ANNUAL MEETING

The great event of the Medical Society of the State of New York is its annual meeting, which took place this year on April third to the fifth While this event occupied only three days, preparations for it required three months and descriptions of the actual events will continue to appear during the rest of the vear There are, in fact, three meetings: that which is planned, that which actually took place, and that which will remain in memory and record. These three meetings were identical to an extent that was probably never before attained

A test of the value of an annual meeting is its adaptability to description after the event. The Journal of April fifteenth contained a balanced outline of all the various events, and the inaugural and exaugural Presidential addresses. That of May first recorded the minutes of the House of Delegates and the analytical addresses of Dean Schwitalla and Doctor Haggard. This issue begins with the address of Dr. E., H. Carey, which sets forth the essential activities of the American Medical Association. The Journal throughout the year will print the scientific papers

MEDICAL PROPHECIES

The address of Dr. Howard W. Haggard on "The Decline of Medicine as an Art," and that of Dean A. M. Schwitalla on "The Master in the House of Medicine," both of which were published in the May first issue of this Journal, elicited hearty commendation when they were delivered at the Anniversary Meeting of the Medical Society of the State of New York on April fourth; and many suggestions were made to the editors to be sure to publish them. These addresses have the rare quality of "Growing upon the reader," and of revealing new points of view with each reading.

This editorial is intended to be an appeal to each member of the State Society to preserve his Journal of May first for reading at his leisure when he can grasp and retain the facts and arguments as the authors have presented them.

Every physician is a philosopher at heart, and frequently voices his complaint that the people do not appreciate the scientific services which he renders. He is also painfully aware that every writer, and orator, and street corner philosopher assumes the prerogative of telling him about the limitations of his science, and of proposing alluring methods of bringing a perfect therapeutic system to every person. But very few physicians can explain why these facts are true.

Doctors Haggard and Schwitalla draw upon history and experience to present the pathology of the attitude of the people toward scientific medical service in new lights which suggest both the diagnosis and the treatment of the condition.

Dr. Haggard describes the standing of the physician in three periods of history,—in ancient times, as a priest; in the Middle Ages, as a tradesman; and in these later days, as a scientist. If the modern physician is to deliver maximum service to the people, he must still be a priest who

understands things hidden from common mortals; a tradesman who impresses the people with the social and economic benefits of his service; and the scientist who commands the resources of nature and they obey him. But added to all these the physician must be the artist,—the skilled hand-worker,—whose products appeal to the emotions and cause men to rise up and proclaim the greatness and the goodness of the doctor.

Dean Schwitalla, who was a member of the National Committee on the Costs of Medical Care, but who did not subscribe to the published reports, discussed the question, "Who is Master in the House of Medicine." He named three contenders for the mastery:

- 1. Efficient mass production
- 2. Organization
- 3. Professional evolution

Dean Schwitalla's clear thinking shows itself in his discussion of professional evolution, in which he sees a danger of self-destruction, when he says:

"The foremost requirement for adaptation is the organism's or profession's self-preservation. If the organism does not adapt itself to changing environment, it will destroy itself; if it overadapts itself, it will also destroy itself. The future of medicine demands that it be allowed to develop as medicine, and not merely as an adjunct to social science."

The fame of the Biblical prophets did not lie so much in their foresight of future occurrences, as in their addresses which interpreted contemporary events in the light of past experience. Doctors Haggard and Schwitalla are medical prophets whose words will be an inspiration to every practitioner of medicine.

LOOKING BACKWARD

This Journal Twenty-five Years Ago

Sputum Cups: A quarter century ago the window tent and the sputum cup proclaimed the presence of the tuberculous patient. This Journal of May, 1908, described a sputum cup substitute which would be inconspicuous.

"There are upon the market, handled by the drug and rubber goods trades, pouches of various sizes, made of silk or gingham, lined with adherent rubber tissue, called sponge bags, around the mouth of each of which is a purse string running under a band, attached upon the cloth side about one inch from the top. They may be had in different colors.

"One of these, about eight inches wide by nine long, into which has been placed a flat, two pound size paper bag, with its purse string slightly drawn, looks very much like a sewing bag, or even one such as is often carried upon the street with handkerchief, purse, etc.

"This outfit is to be used to receive the crumpled slips of toilet paper into which the patient has expectorated, and that should be provided as thick and as absorbent as the market affords. Or the material used in paper napkins, or even filter paper, or pieces of muslin, may be used if cost is not a consideration."



MEDICAL PROGRESS



The Treatment of Frostbites and Injuries from Cold-In the treatment of all acute injuries from freezing, says Max Grasmann, writing in the Munchener medianische Wochenschrift of January 6 1933, it is of first importance to avoid any sudden transition from cold to warmth It has been established experimentally as well as clinically that only upon gradual and slow thawing out can the cells again fully absorb the water that has been extravasated from them. If an individual is found frozen stiff, he should, provided he shows the least signs of breathing, be carried into a cold room, his clothing removed and his entire body rubbed with snow or cold wet towels, a cardiac stimulant should be administered intra renously and if necessary, artifical respiration performed. If circulation and respiration are reestablished, the prtient should be placed in a both at room temperature, if such is available, and mas-During the lapse of several hours the water should be slowly warmed to 30° C and the patient given hot drinks if he can swallow. In the absence of a bath the room is slowly warmed, and the patient's entire hody rubbed with wet tonels, after which he is placed in a warm bed Local frostbites of first degree in the stage of angiospasni must be rubbed with snow or cold water until the skin becomes red Light massage should be given twice a day, and ichthyol glycerme bandages applied at night Long exposure of any part of the body to cold injures the vessels and may cause histers filled with blood or serum. this is a second degree frostbite The affected part is treated as above, then after good circulation is restored, the skin is carefully disinfected, the blisters opened, and a powder bundage applied to the part, which should be elevated If suppuration should occur, suitable antiseptic treatment is In a third degree freezing, tissue is destroyed If the affected part remains blue and anesthetic without restoration of circulation after several hours have passed, incisions to reheve tension are in order These may be crescent shaped around a finger nail or in the case of a hand or foot 2.4 incisions may be made on the flexor and extensor surfaces or on each phalanx, as the case may require These may result in considerable outflow of serous fluid, followed first by dark and later by bright red blood Even if these measures fail to stimulate a part, it is still uncertain whether the tissue may not be merely ischemic. It is astonishing to see how much apparently dead tissue can be saved. For this reason primary amputation is a mistake Mutilating operations are permissible only (1) when demarcation of necrotic from sound tissue is complete, (2) in moist gangrene,

(3) in the presence of tetanus. Infection must be sedulously guarded against; absesses must be opened, phlegmons lanced, and appropriate antisentic dressings applied.

Multiple Glandular Sclerosis - Karl Heimin, writing in Endocrinology, January-February, 1933, vii, 1, reports an unusual case in which the patient suffered from both Addison's disease and Graves' disease The symptoms were extreme weakness, emacration, vomiting, thyroid enlargement with visible pulsation and prominence and glittering of the eyes Intractable insomnia, deliruim, and incontinence were also prominent symptoms As the patient was a woman 53 years of age, the ovaries, as endocrine organs, could not give rise to serious disorder The symptoms of Basedow's disease were comparatively mild, the diagnosis was concerned chiefly with the question as to whether the condition was Addison's disease or Simmond's disease The surest sign of Addison's disease pigmentation, was absent. To clear up this question the patient was given prolan, as experience had shown that this hormone had effected a rapid improve ment in cases of Simmond's disease. In the present case no improvement occurred. As the possibility of Addison's disease became increasingly apparent, the hormone of the adrenal cortex (un der the trade name "cortigen") was administered The first striking result was that the patient slept almost continuously for three days, and upon awakening was brighter. From that time her eondition improved, the delirium, comiting and in continence disappeared, and the anemia improved In six weeks there was a gain in weight of nine pounds In very severe cases two or three ampules of cortigen are sufficient, when improvement sets in this quantity can be reduced to two ampules and afterward to one ampule a day Herman is of the opinion that the hormone of the suprarenal cortex is an excellently effective remedy for Addison's disease, and also an extremely important aid in diagnosis So long as Addison's disease is atypical and without dependable symptoms, it is the duty of the physician, in cases of obscure cachexia, to employ the cortex hormone until it is quite clear whether the organism requires it or not

Infectious Pharyngeal Catarrh and Irritative Coughs—It is pointed out by R von den Velden that the infectious diseases of the upper air passages that have been prevalent this winter have presented 2 different clinical pictures In the first, which is characterized by fever, often up

to 39° C., with marked prostration, headache, loss of appetite, etc., there is sometimes no other local finding than a severe pharyngitis, generally purulent, more rarely associated with a stomatitis, but without angina. The sinuses should of course be watched, and the blood picture controlled with reference to a possible agranulocytosis. cases the patient should promptly be given large quantities of tepid alkaline water to drink, and the throat and nose rinsed with camomile tea to loosen up the mucus. It is also useful to lay strips of trypaflavine gauze in the cheek pouches for 15 minutes at a time, several times a day, where the buccal mucosa is involved. If swallowing is painful, the use of menthol preparations, dysphagin tablets and gargling with novocaine solutions gives relief. Under no conditions should remedies having a caustic or astringent action be employed. Warm moist compresses about the neck and over the face, leaving openings for mouth and nose, are These somtimes give even more relief than light baths or vapor baths for the head, the use of which has been too much neglected. The other respiratory affection of which numerous cases have lately been observed, is a "spastic" bronchial catarrh, which may be the sequel of a feverish bronchitis, or may appear unheralded by any preliminary stage. The fact that many persons cannot or will not rest in bed when they have a cold accounts for the development of many dry irritative coughs. Starting in the pharynx, then rapidly descending to the larynx and trachea, the cough takes on the character in predisposed persons of whooping cough and may exert a detrimental influence upon the cardiovascular system, as well as in the respiratory and cerebral regions. In such cases the avoidance of fresh irritation to the air passages is often more important than the use of cough remedies. Physical exercises performed in a closed schoolroom without proper means of warm air ventilation are to be deprecated, since the stirring up of dust particles may produce endemic catarrh among school children. Hot drinks, especially of viscous substances, such as sugar water, milk with sugar, honey with milk or hot cream, are among the best means of relieving coughing attacks. In making use of the host of excellent cough remedies available, one should not forget that suitable rest and maintenance of an even temperature in a room hygienically warmed and ventilated are often the best means of combating a persistent catarrh.—Deutsche medizinische Wochenschrift, February 3, 1933.

Inflammation.—In discussing the difficulty of defining inflammation, George Lenthal Cheatle says that many text-books accept Burdon Sanderson's definition that "inflammation is the succession of changes occurring in a part, as the result of injury, provided that that injury be not so excessive as to destroy the vitality of the part."

Lister, in describing the inflammatory process, shows that an injured blood vessel is dilated to the state of temporary paralysis, stasis occurs, and red and white blood corpuscles tend to adhere to each other and to the blood vessel walls. With this conception Cheatle agrees, but with two additions, namely, the immediate exudation of plasma and a limited emigration of red and white cor-Upon the resolution of these changes the process stops. Inflammation, therefore, forms only one of the effects that may occur after injury The nature, degree, and duration of the injury induce much more vast and complicated events which should not be included in inflammation. Infection and its consequences immunity and infection, the normal growth of tis sues, the repair of tissues, and the formation of neoplasms have become separate problems, and yet they are being described at present in the one inextricable tangle of "inflammation." When one cell begins to divide into two cells a fresh element has been established and, although it may be the effect of the injury, it is not necessarily the effect of inflammation. Going more into detail, Cheatle describes the successive microscopic pictures in the repair of tissues (bone and arteries), in the formation of fibro-adenomata and papillomata of the breast and in local abscess formation, showing that these processes are so complicated and controlled (irregularly controlled in fibro-adenomata and papillomata) that they cannot be considered to be a part of an inflammatory process. In studying the local aspects of infection, subcutaneous tissues were inoculated with Staphylococcus aureus, in sufficient dosage to cause localized abscess, and then examined microscopically during a period of ten days. The successive events in the formation of an abscess were found to be (1) death of tissue with which the infecting agents come in contact, (2) tremendous emigration of polynuclear leucocytes, (3) emigration of lymphocytes, and (4) hyperplasia of the normal strands of connective tissue. The emigration of leucocytes in a suppurating process may not be the same as in inflammation produced by mechanical injury. In fact, the whole of the first part of the formation of an abscess may be considered as concerned with immunity rather than with inflammation. Microorganisms at first multiply and are mixed, with no arrangement in the lesion. By the seventh day a definite arrangement has occurred; a dense mass of microorganisms completely encircles the abscess cavity in the form of a ring. While it is impossible to explain this, nevertheless it undoubtedly has something to do with the establishment of immunity. Again, in the development of hyperplasia of the connective tissue during abscess formation, the establishment of immunity transcends in importance any concurrent process of inflammation.—Surgery, Gynecology and Obstetrics, February 15, 1933, lvi, 2A.

The Etiology of Heart Disease.-Julian E. Gammon states that the great majority of patients who seek advice regarding their hearts have funetional heart disorders, such as systolic murmur or a rumbling murmur and snapping first sound, due to vibration of the thin chest wall under the stethoscope as a result of a forceful apex beat. During the World War many thousands of overaeting hearts were wrongfully diagnosed mitral stenosis, hyperthyroidism, or myocarditis, when they had the condition which came to be known as "effort syndrome." A reflex angina may have its eause in the gall-bladder, as in a case cited by the author, in which after cholecystectomy the heart symptoms subsided and the patient was well five years later. In congenital heart disease the factors involved are embryological maldevelopment and inflammatory reactions of uncertain eause. The most frequent causes of chronic organic heart disease are rheumatic fever, syphilis, vascular hypertension, arteriosclerosis, and senility. Rheumatic fever is the most common cause of mitral stenosis and aortic insufficiency in children. Congenital syphilis of the heart is not infrequent, and the most characteristic picture of the disease, sometimes called tiger heart, is due to arteritis and extensive necrosis of the heart muscle. Bacterial infectious diseases such as pneumonia, scarlet fever, diphtheria, typhoid fever, and sepsis with marked toxemia may produce acute myocardial degeneration and even toxic death. Acute and subacute bacterial endocarditis is most frequently a part of general bacterial sepsis. Purulent pericarditis is likewise a part of general sepsis. Fibrinous pericarditis is observed in the terminal stages of nephritis and leucemia. culosis often causes pericarditis. Physiologists have demonstrated that efficient cardiac function is dependent upon adequate supplies of glycogen and oxygen, and that insulin and glucose plus oxygen are necessary in maintaining an adequate glycogen supply. Defective glycogen metabolism may be due to anoxemia as in (1) congenital heart disease, (2) respiratory disease causing inadequate lung ventilation, (3) impoverished blood in severe anemia, (4) insufficient oxygen saturation as in carbon monoxide poisoning, (5) total cessation of oxygenation as in cyanide poisoning, (6) inability of an adequate blood supply to reach the heart muscle on account of coronary disease. Defective glycogen metabolism may also be due to thyrotoxicosis. - Southern Medical Journal. March, 1933, xxvi, 3,

Spasmodic Torticollis: Its Etiology and Treatment.—After reviewing various theories as to the etiology of spasmodic torticollis, R. Glen Spurling and Franklin Jelsma conclude that we know next to nothing of what causes the disease. They were able to find only one record of an autopsy on a typical case. In this case there

were degenerative changes involving the posterior column of the cervical cord. They add, however, some evidence in support of the infectious theory. In one of their eases coming to autopsy there was definite evidence of an old inflammatory lesion involving the pia-arachnoid of the cervical cord and the brain stem. The clinical history in this case failed to disclose a former illness which might have been responsible for these findings. In a second case there was a history of epidemic encephalitis four years prior to the onset of torticollis, but at operation no evidence of a former inflammatory lesion of the meninges over the cervical cord or brain stem was found. Since all of the muscles of the neck are involved in severe cases, nothing short of radical operation will relieve the symptoms. The Keen operation forms the basis of the treatment now generally employed. This eonsists in bilateral section of the first three cervical nerves and the spinal accessory nerve in the neek. McKenzie (1924) advocated the intradural section of the first, second and third cervical nerves and the spinal accessory nerve on one side. The authors believe that the operation can be performed safely by division of the first three cervical anterior and posterior roots and the spinal portion of the accessory nerve intradurally. It is unnecessary to remove a part of the occipital bone as originally advised by McKenzie in order to section the accessory nerve. It can be divided easily through the dural incision at the level of the foramen magnum. The incision is made in the midline from the occipital protuberance to the spinous process of the fifth cervical vertebra, the laminae of the upper three cervical vertebrae are removed, and the dura opened in the midline over the three eervical segments and up to the rim of the foramen magnum. The posterior and anterior roots are now identified and sectioned, and then the spinal accessory nerve bilaterally. cutting this nerve silver clips are applied to inelude the artery as well as the nerve trunk, thus avoiding troublesome bleeding. No restraining dressing is applied, but for two days the patient's head is kept immobilized with sand bags. Convalescence in two cases treated by this method has been rapid and uneventful. The authors believe this procedure is simpler than the Finney (1925) operation and that there is less liklihood of missing important nerve roots.-Southern Medical Journal, March, 1933, xxvi, 3.

The Emergency Treatment of Some Prevalent Types of Acute Poisoning.—Sir William Willcox reminds the physician that, when called to a case of acute poisoning, he should always carry with him the necessary appliances and remedies for emergency treatment: For example, a stomach tube, a suitable gag and tongue forceps, as these may be required in comatose cases; potassium permanganate crystals, stimulant and antidotal remedies for hypodermic use, such as caf-

feine-sodium salicylate, camphor in oil and ether, strychnine, atropine, morphine, pilocarpine and coramine, calcium carbonate, calcium hydrate, sodium bicarbonate, and magnesium carbonate. He should also carry with him a suitable mouthpiece with valve and rubber bag and tubing for administering oxygen or oxygen with carbon dioxide. When a poison has been taken by mouth the first thing to do is to thoroughly wash out the stomach with warm water until the washings come away clear. Gastric lavage usually does much good even if the poison has been taken three or four hours previously. Colon lavage, using about three pints of liquid slowly introduced with funnel and tube, is of value. When a poison has been administered by hypodermic injection shortly before, cupping may be applied at the site of the injection. In poisoning by gases, such as carbon monoxide gas and by poisonous vapors such as chloroform, its removal is greatly assisted by the administration of oxygen with 5 to 7 per cent of carbon dioxide. Among the useful chemical antidotes, sodium bicarbonate is indicated for corrosive mineral acids, citric acid or tartaric acid for the caustic alkalies, lime water and calcium carbonate for oxalic acid or salts of lemon, and lime water for lysol or carbolic acid poisoning. Permanganate of potassium in weak solution, or hydrogen peroxide well diluted are indicated in alkaloidal poisoning, such as morphine, cocaine, atropine, hyoscine, phosphorus, and possibly for prussic acid or potassium cyanide poisoning. Among the physiological antidotes (remedies which have an opposite physiological action to that of the poisonous agent) pilocarpine, morphine, and eserine hypodermically have an antidotal effect in poisoning by atropine or the belladonna alkaloids. Chloral and bromide in large doses by mouth counteract the effect of strychnine.

The excretion of absorbed poison is promoted by caffeine-sodium salicylate, 2 grains hypodermically, by hot coffee and diuretic drinks. Poisoning by barbituric acid compounds is becoming increasingly frequent. These compounds are used all too frequently as ordinary hypnotics when no hypnotic is needed or when aspirin or a small dose of bromide would be adequate. A new treatment for "veronal pneumonia," which the author has used with success in several cases, is lumbar puncture. About 30 c.c. of cerebrospinal fluid are drawn off and this may be repeated in twelve hours if required. Suppression of urine due to renal necrosis may occur in poisoning by menbutal, amytal, or pernocton. This complication is generally fatal. The treatment is lumbar puncture followed by measures to promote renal excretion, such as caffeine-sodium salicylate, hot coffee, alkaline drinks, and glucose given by the mouth or subcutaneously.-Abstracted from the Practitioner, March, 1933, cxxx, 777.

The Treatment of Acute Cardiac Failure.-Carey F. Coombs says that in considering the failing heart the tendency is to transfer the emphasis from structure to function; for this reason circulatory failure now engrosses attention. Acute cardiac failure may be auricular, auriculo-ventricular, or ventricular, the last being the most important. In the treatment of all three types the first essential is rest in bed in order to bring the cardiac load to the lowest level compatible with This means lying flat in one case, sitting up in another. In the first case the ventricular wall is so weak that its work of getting a sufficient supply of blood to the brain must be reduced to the minimum. In the second case the work is that of collecting the venous blood and distributing the arterial blood when the pumping action of the diaphragm is given its fullest scope; this is served best by a sitting position. The means adopted to encourage the outflow of water from the body, such as diuresis, are in reality efforts to decrease the load of the heart. This is one of the ways in which digitalis rests the heart. Opium is valuable for the same reason. Nitrites, caffeine, diuretin, and the like undoubtedly lighten the cardiac load by dilating the coronary arteries. In myocardial failure due to the acute infections, pulse pressure is a reliable index as to the severity of the condition. Here antitoxin in diphtheria and the salicylates in rheumatic cases must be withheld. It is wiser to give saline and glucose by rectum rather than by mouth, and thus to avoid the risk of strain by vomiting. Digitalis should not be given by mouth. Strophanthin, intravenously, is the best means of securing a digitalis effect; not more than 1/200 of a grain should be given to a child of 12. If the systolic blood pressure falls dangerously low, pituitrin, ephedrine, or adrenaline may be indicated. Cardiac stimulants and tonics are best avoided, unless auricular fibrillation or auricular flutter is present. With either of these conditions the rule is six weeks in bed and six weeks of further rest. During the latter period caffeine, diuretin, or lacarnol may help to restore the coronary circulation. Ir auricular fibrillation the urgent and immediat need is for digitalis (standardized tincture). 1 drachm at first, followed by 1/2 drachm at fourhourly intervals, until 4 drachms have been taken. If vomiting is severe strophanthin may be substituted, 1/100 of a grain for the average adult, but not immediately after massive digitalis administration. When the patient is out of immediate danger, quinidine may be given tentatively. Syncopal attacks are treated preferably with atropine, at least 1/100 of a grain, repeated in an hour if there is no relief. In ventricular failure threatened asphyxia is easily relieved by 5 to 10 minims of adrenaline 1:000. In suffocative edema of the lungs, the treatment is 1/3 of a grain of morphine, with 1/100 of a grain of atropine. Practitioner. March. 1933. exxx, 777.



LEGAL



HOSPITALS-CONDITIONS ATTACHED TO TESTAMENTARY GIFT HELD INVALID

By LORENZ J. BROSNAN, ESQ. Counsel, Medical Society of the State of New York.

Of general interest to the medical profession is the decision of one of the Surrogates of New York County in a ease recently before him for decision. A man set up in his will a trust for the benefit of his sister. Upon her death the will provided that the corpus of the trust should be divided into parts, and the income from each part should be paid to a certain designated charitable institution under certain conditions which we shall hereafter discuss at length. Two of the said institutions were wellknown hospitals.

Upon the sister's death, there arose in an accounting proceeding a question as to the validity of a clause in the testator's will which

read as follows:

"FOURTH: Each and every one of the Trusts created after the death of my sister, for the seven respective institutions set forth in the 'Third' Clause of this, my Last Will and Testament, is created upon the following terms and conditions, namely: That each such institution (in case it shall be one in which physicians shall practice at any time) shall make a binding rule to the effect that any and all physicians at any time practicing for remuneration. in the said respective institutions shall be required to and shall pay toward the maintenance and sup-port of the said institution a sum of money equal to 10 per cent of the gross fees which shall at any time be received by such physicians respectively for serv-ices performed by them in the said institutions. In the event that any one of the said institutions shall refuse to make such a binding rule or after having made such a binding rule shall thereafter abrogate the same or neglect to enforce it, then and in that the same of neglect to entorice it, then and it that event the trust so created shall cease to operate and the capital of the trust created for the benefit of such institution shall thereupon be turned over by my said trustee to the Salvation Army. My said trustee, however, shall be thoroughly protected as regards any payment made to any one of the said seven institutions until such time as it shall have actual knowledge that any one or more of the said seven institutions is not enforcing the rule above set forth covering the contribution by physicians."

The hospitals appeared in the proceeding and took the position that the conditions attached to the gift in the clause above quoted were unreasonable and against public policy and, hence, invalid and void. They sought to obtain a ruling from the Surrogate to the effect that the hospitals might benefit under the trust without being subjected to the conditions that had been written into the will.

At the hearing before the Surrogate, a number of prominent physicians testified that these

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conditions were violative of the Code of Ethics governing their profession and expressed the opinion that harmful results would follow if the court attempted to earry out the wishes of the testator. It was argued on behalf of the hospitals:

(1) That the physicians connected with the hospitals would probably relieve themselves of the burden imposed by the will, by raising their fees and making their patients involun-

tary contributors to the hospitals.

(2) That no physician of standing could or would submit to the rule prescribed by the trust, and that the physician's high regard for his reputation would necessarily result in his withdrawing from the hospital staff of a hospital having in effect such a rule as that contemplated by the testator.

(3) That the inevitable result of the enforeement of this rule would be that the institutions would lose their standing in the community, with a resultant falling off in donations, thus rendering the institutions

unable to earry on their charities.

(4) That the rule in question was in direct conflict with Article 32 of the Principles of Professional Conduct of the Medical Society of the State of New York.

The Surrogate in a very well-considered opinion ruled to the effect that the conditions attached to the trusts were invalid and void, and directed that the gifts to the institutions should be carried out as if the conditions attached to them had been omitted by the draftsman of the will. The Surrogate found that the evils described in the arguments advanced by counsel for the hospitals would undoubtedly result, and that the conditions imposed were against public policy and were unreasonable, impossible of performance and void. In part the court said:

"It is immaterial whether the division of medical fees occurs between a physician and a layman, or a physician and a physician in cases prohibited by the canons of chics, or, as is the situation here, between a physician and a hospital. In the latter case an outside agency participates financially in the compensation of the physician liceused by the state to practice medicine. Inevitably such a method of division would lead to deterioration in the medical staffs of hospitals with attendant injury to the public. It would likewise subject some physicians to the temptation of overcharging their patients in order to

meet the requirements of the hospital rule. It is conceded even by the Salvation Army, the alternative beneficiary, which would take in the event that the disputed gifts were ineffectual, that no reputable hospital in the United States has applied the rule of division of fees or compulsory charity sought to be enforced by the testator in his will. In the case of one of the hospitals which is a benchiciary here, it has been established that 280 physicians and surgeons give their services free for the treatment of indigent patients. At the same time most of them use the facilities of the hospital for treatments of or operations upon patients who can afford to pay. The revenue derived from the renting of the rooms, operating rooms and other facilities enables the institutions to support to a large extent, its charitable activities in the treatment of free patients in dispensaries or in the hospital wards. It is argued that serious difficulty would arise in the ascertainment, under the terms of the will, of the compensation received by the physician from paying patients for the services rendered in the hospital and those rendered before or after hospital treatment. It is urged that it would be impossible to properly allocate these charges so as to compute the basis upon which the 10 per cent is to be determined. Certainly there would be a practical difficulty in this process. Ordinarily the difficulty in enforcing a condition might not be a ground for a determination of invalidity, but where, as here, it is mingled with a requirement that is unreasonable, unethical and in violation of public policy, the court cannot sustain it.

The Surrogate suggested in his argument an interesting parallel in an assumed case. He stated a supposed case of a trust in favor of a

Bar Association, conditioned upon a requirement that all lawyers who used its library in connection with any of their cases should turn over to the Bar Association a percentage of the fees received from all cases worked on in the said library. Such a condition, the Surrogate contended, would be both unethical and illogical, and no one would dispute its invalidity.

The Surrogate's opinion continued:

"Similarly, the attempt of the testator here to fasten a new custom upon the medical profession is equally obnoxious and contrary to the best interests of the community. The charitable purpose of the testator is obvious and his intention to benefit the hospitals which he selected clear. The difficulty, however, that he attempted to impose a rule of compulsory charitable contributions upon others. However, the method which he devised to compel the physicians to be charitable is bad and not entitled to legal recognition."

The decision of the learned Surrogate is a most salutary one. The Surrogate saw clearly the evils resulting from upholding the trust as written by the testator. Public policy would seem to dictate that no one shall have a right to attach to a donation to a hospital conditions which would force its physicians to violate the ethics of their profession. It is to be hoped that if an appeal is taken, the decision of the Surrogate will be upheld by the higher courts.

PORTION OF PLACENTA RETAINED AFTER DELIVERY

A doctor who specializes in gynecology was consulted by a young woman whom he had previously attended in childbirth with respect to her condition of pregnancy. She was at the first consultation about two months pregnant and her condition was normal. He made arrangements to deliver her and give her postnatal care and treatment at a private hospital operated by him. He saw her monthly, examining her from time to time and taking various urine tests and blood counts. She finally entered the hospital, and he examined her and found a dilation equivalent to two fingers, and that part of the placenta was protruding out preceding the head of the infant. After carefully sterilizing his hands and putting on rubber gloves, he pushed back the placenta and delivered the child without difficulty. The child was normal. There was considerable hemorrhage but upon the administration of hypodermic injections it stopped in satisfactory time. He then carefully removed the placenta, which he took out in pieces as it was torn. The patient was put in bed and had an uneventful recovery. The ninth day she got out of bed but after she had been up for a time she developed a slight flow. The doctor ordered her back in bed for two more days and from that time she had no further discharge although she remained at the hospital for a few days more. During all her stay at the hospital the doctor saw her daily. Subsequent to her discharge the doctor never saw her again.

The claim was made that subsequently some other doctor removed a further portion of placenta which the doctor who delivered her had not found, and a suit was brought charging him with negligent treatment. The plaintiff claimed that four days after she left the hospital she underwent an operation to remove the retained placenta. She claimed as permanent injuries that she suffered from a fallen womb, inability to bear children, inability to perform her sexual duties, improper menstruation and nervousness.

The case was tried before a judge and jury and at the close of the testimony, the court, on motion of the defendant's counsel, ruled that the plaintiff had failed to prove negligent or improper treatment on the part of the doctor, and dismissed the

complaint.

661

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A general practitioner was consulted by a married wom in about 35 years of age, who complanted of back ache and vaginal discharge. He put her on his table and examined her. He found that she suffered from a badly eroded cervix which was bleeding and enlarged. The uterns was retroverted and irregular masses were de-There was a very foul discharge doctor explained to the woman that in order to he relieved of her condition she should submit to The operation was not consented an operation to for some months. During the interim the doctor was consulted several times and on each occasion the patient's cervix was eleaned out and argyrol was applied. Finally she consented to an operation, and at her request the general practitioner recommended a surgeon to her who un-His examination dertook the necessary work confirmed the diagnosis previously made. A com-

plete panhysterectomy was performed upon the patient under a spinal anosthetic. Exploration

showed that the appendix was influined the tubes and ovaries were inflamed and enlarged and adherent to the neighboring organs and intestines. Tumors were found in the interns. The complete pathysterectomy was performed and the appendix also removed. The incision was sutured up without a drain and the patient's recovery at the hospital was uneventful.

Sometime thereafter an action was brought against both of the dectors charging inalpractice. The complaint included allegations that the decidants had indertaken an operation which was minor in nature. The charge was made that due to their negligence the operation which was performed was much more extensive than intended. The case came on for trial some four years later and when it was called the plinitiff's attorney failed to appear to proceed. The attorney for the doctors made a motion for judgment of dismissal, which was granted terminating the initter thereby.

PLASTIC OPERATION UPON THE NOSE

A doctor who specializes in nose and throat work and plastic surgery was consulted by a middle aged man who complained of a nasal de-The doctor found upon examination that he had an oversized nasal deformity with a pendulous septum Arrangements were made for an operation, which was performed at a sanitarium, under a local anesthesia. The doctor incised from the inside of the nose, on both sides, and separated the skin from the underlying boney structure He then removed the oversized boney and cartillaginous portion of the back of the He shortened the septum and the lateral side of the nose and narrowed the nose at the tip end and bridge He then firmly sutured up the inside and packed the nostrils The operation was performed entirely from the inside without disturbing the skin on the outer portion of The patient remained in the sanitarium for a couple of days and then went home in an excellent condition. Following this the patient came to the doctor's office for removal of In a few days the nosc was healed without infection A few weeks after the operation he came to the doctor's office and examination showed that a condition of active acne had developed on the left side of the tip of the nose He punctured the pimples and removed a small amount of pus. When the patient again re-

turned the pimples had healed and two small sears were noticeable in their place. These scars were similar to other acid scars that were all over the patient's face before the operation. The doctor administered a local anesthesia and incised and cut out the two scars. A few weeks later the man returned complaining of lines where the sears had been. The scars at that time were healed. The doctor refused to do any more operating. A considerable period of time later the patient again came back to the surgeon, and requested an operation. His nose was excellent, but he still had the two lines. The doctor declined to operate and the min left.

The next thing heard of the matter was when a summons was served upon the doctor. The patient's complaint charged that the operations were so negligently performed that certain large ugly scars remained on the plaintift's face. The complaint made no allegation of negligence at a later date than about two years and eleven months prior to the date the suit was commenced.

The defendant's attorney made an application to the Court at a Special Term for an order directing judgment of dismissal on the grounds that the action had not been brought timely under the statute of limitations. The plaintiff's attorney realized the ment of the application and consented to discontinue the action by stipulation.



NEWS NOTES



MEETING ON ASPHYXIAL DEATH

An all-day conference on the subject of Asphyxial Death will be held on Wednesday, May 24, 1933, in the building of the New York Academy of Medicine. This meeting has been arranged by the Society for the Prevention of Asphyxial Death which was organized in February, 1933, for the purpose of promoting a knowledge of the newer methods of treating asphyxia by physicians, and of securing their adoption by utility companies, ambulance services, and other organizations interested in artificial respiration. The application of the newer methods to resuscitation was demonstrated at the meeting of the Medical Society of the State of New York, on May 25, 1932, in Buffalo, by Dr. P. J. Flagg, whose paper was published in this Journal of March 15, 1933, page 395.

The conference on May 24 will be held in two sessions,—the morning one being largely on the economic and social aspects of resuscitation, and the afternoon on its medical phases. Physicians will find the afternoon session of special interest. The speakers at the confer-

ence are as follows:

1. Vital Statistics and Asphyxia. Dr. Shirley W. Wynne, Commissioner of Health, New York City.

2. Medical Examiners' Findings Relative to

Asphyxial Death: Dr. Harrison P. Martland, Medical Examiner, Essex County, New Jersey.

3. The Economic Aspects of Asphyxial Death: Albert W. Whitney, National Bureau of Casualty and Surety Underwriters, New York City.

4. First-Aid Methods of Resuscitation in the Police Department. Motion Pictures. Dr. Daniel J. Donovan, Chief Surgeon, Police Department, New York City.

5. Fundamentals of Peroral Endoscopy: Dr. Chevalier Jackson, Philadelphia, Pa.

6. Fundamentals of Gas Therapy as Related to the Use of Oxygen and CO₂: Dr. Yandell Henderson, Yale University Medical School.

7. The Practical Application of Laryngoscopy and Gas Therapy in the Treatment of the Asphyxiated. Dr. Edmund B. Piper, Obstetrical Department, University of Pennsylvania Medical School.

8. Principles and Applications of Differential Pressures:—(Negative Pressure Cabinet). Dr. P. N. Coryllos, Cornell University Medical College.

9. Practical Application to the Hospital and the Public: Dr. John F. McGrath, New York

City.

HERKIMER COUNTY

A meeting of the Herkimer County Medical Society was held in Herkimer at 3:00 in the afternoon on April 11th. Twenty-eight members were present.

A resolution was adopted to send a letter to the Superintendent of the Utica State Hospital requesting him to notify, by mail, the physicians on the committing commission, when an inmate or patient is paroled or discharged from the institution. Some unpleasant features have occurred when a patient has been paroled or escaped from such an institution and returned to his home town. Such patients quite frequently have a real or fanciful grievance against the physicians making the commitment.

The existing executive committee was, instructed to meet and select a list of names to present to the County Board of Supervisors for the selection of a member of the County Poor commission.

The T.E.R.A. resolutions were read and adopted to apply to the care of indigents within the county. No physician is to do charity work for any city or village under contract.

After the business session the first of a series of six postgraduate lectures was given by Dr. Greene of the University of Buffalo Medical School. The topic was "Angina Pectoris, and Coronary Occlusion." Dr. Greene presented this subject in an interesting manner and elicted much discussion. We are to have five more lectures in the next five weeks, all on some form of heart disorders.

The lecturers are from the University of Buffalo. F. C. Sabin,

Chairman of Publicity Committee.

WASHINGTON COUNTY

A special meeting of the Medical Society of the County of Washington was held in Fort Edward, N Y, at 3 30 P M on March 28, 1933, with 20 members present, as follows Doctors Macarthur, Preseott, Borrowman, Hultz, Farrell, Rogers, Leonard, Holmes, Park, LaGrange, Pashley, Jr, Bennett, Banker, Tillotson, Wlute, Falkenbury, Joshn Orton, Casey and Cuthbert The object of the meeting was to consider the question of nucleal care to the poor of the county

The President took up the different clauses of the rules and regulations governing medical care as published in the New York State Health News Dr Presented the matter of the treatment of veneral diseases Doctors Bennett, Rogers and Hultz, were appointed a commuttee who drew up the following resolutions

WHEREAS, the Commissioner of Public Welfare of Washington County has instituted contract medicine in the town of Whitehall, Washington Co, and in so doing his forced the physicians of that town, in their treatment of all welfare charges, to accept compensation of approximately twenty per ecut of the regular fees as established by the Washington County Medical Society; and

Whereas, this action was earried out and enforced upon the physicians of Whitehall by means of the threat to bring into the town of Whitehall a physician who was not a resident of the town or county, and to employ said physician to care for all welfare cases, and

WHEREAS, this procedure is directly contrary to the code of ethics of the American Medical Association and the Medical Society of the State of New York, and not conducte to the maintenance of cordial relations between the medical profession and the general public, be it therefore

Resolved, that we, the members of the Medical Society of the County of Washington, State of New York, go on record as condemning the action of the Commissioner of Public Welfare especially since he did not first consult the Committee on Public Relations of the Washington County Medical Society and advise them of his proposal, and be it further

Resolved, that this matter be brought to the attention of the Public Relations Committee of the State of New York and to the attention of the Micheal Society of the State of New York for their consideration

These resolutions were adopted

Dr Falkenbury moved that, with the exception of initernity eases, we reduce our bills from our regular prices for welfare eases thirty three and one-third per cent, rendering our bills in the regular prices, with the reduction for the present emergency only

This resolution was adopted

The following resolution was adopted at a later special meeting

Resolved, That home calls to Welfare Department be charged at \$2.00 and office calls at \$1.00, twenty-five cents additional for each mile covered (one way) outside the village limits. For calls between 9 P M and 7 A M the above fees shall be doubled. Maternity cases, \$25, including three post-partim calls.

S J BANKLR, M D, Secretary

RENSSELAER COUNTY

The regular monthly meeting of the Medical Society of the County of Rensselaer was held on the evening of Tuesday, April 11, in the Health Center, with the President, Dr W W St John in the chair The scientific program consisted of a symposium on eancer, and was as follows

"The Relation of the General Praetitioner to the Cancer Problem," Dr John M Swan of Rochester

"The Relation of the Pathologist to the Cancer Problem," Dr Steplien H Curtis

"The Relation of the Surgeon to the Cancer Problem," Dr Peter L Harvie and Dr E F Connaily "The Relation of Pathology to Surgery in the Caneer Problem," Dr. Russell S. Fergison of New York

"The Significance of Radio Sensitivity," Dr Ellis Kellert of Scheneetady

"The Relation of Radiation to the Cancer Problem," Dr H W Carey, Troy, and Dr A F Holding of Albany

Each speaker limited his paper to ten minutes, and active discussion followed the concluding number of the symposium

WM B D VAN AUKEN, Reporter pro tem



BOOKS RECEIVED



- Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.
- THE COSTS OF MEDICAL CARE. A Summary of Investigations on the Economic Aspects of the Prevention and Care of Illness. By I. S. Falk, Ph.D., C. Rufus Rorem, Ph.D., and Martha D. Ring. Octavo of 623 pages. Chicago, The University of Chicago Press, [c. 1933.] Cloth, \$4.00. (Publications of the Committee on the Costs of Medical Care: No. 27.)
- A Companion to Manuals of Practical Anatomy. By E. B. Jameson, M.D. Third Edition. 16mo. of 654 pages. New York, Oxford University Press, 1932. Cloth, \$5.00.
- Outline of the Cranial Nerves. By John Favill, M.D. 12mo. of 106 pages, illustrated. Chicago, The University of Chicago Press, [c. 1933]. Cloth, \$1.50
- ELEMENTS OF ELECTROCARDIOGRAPHIC INTERPRETATION. By Louis N. Katz, M.D., and Victor Johnson, Ph.D. Octavo of 38 pages, illustrated. Chicago, The University of Chicago Press, [c. 1932]. Paper, \$1.00.
- PRACTICAL HEMATOLOGICAL DIAGNOSIS. By O. H. PERRY PEPPER, M.D., and DAVID L. FARLEY, M.D. Octavo of 562 pages. Philadelphia, W. B. Saunders, 1933. Cloth, \$6.00.
- OPERATIVE SURGERY. Covering the Operative Technic Involved in the Operations of General and Special Surgery. By Warren S. Bickham, M.D., and Calvin M. Smyth, Jr., M.D. Vol. VII. Octavo of 849 pages, illustrated. Philadelphia, W. B. Saunders Company, [c. 1933]. Cloth, \$10.00
- Abortion: Legal or Illegal? By A. J. Rongy, M.D. 12mo. of 212 pages. New York, The Vanguard Press, 1933. Cloth, \$2.00.
- CLINICAL ASPECTS OF THE ELECTROCARDIOGRAM, Including the Cardiae Arrhythmias. By HAROLD E. B. PARDEE, M.D. Third Edition. Oetavo of 295 pages, illustrated. New York, Paul B. Hoeber, Inc., 1933. Cloth, \$5.50.
- LIGHT THERAPY. By FRANK H. KRUSEN, M.D. Oetavo of 186 pages, illustrated. New York, Paul B. Hoeber, Inc., 1933. Cloth, \$3.50.
- TEN YEARS OF OBSTETRICS AND GYNECOLOGY IN PRIVATE PRACTICE. By JOHN L. ROTHROCK, M.D. Oetavo of 209 pages. New York, Paul B. Hoeber, Inc., 1933. Cloth, \$3.00.
- What to Tell the Public about Health. A collection of short articles aimed to present in simple terms the facts about the prevention of disease and the promotion of health. Octavo of 255 pages, illustrated. New York, The American Public Health Association, 1933. Cloth, \$2.00.
- A New Approach to Dietetic Therapy in Epilepsy, Eelampsia of Pregnaney and Infaney Migraine, Angina Peetoria, Bronehial Asthma, Allergie Diseases, Gout, Essential Hypertension, Pernicious Anemia, Polycythemia, Aene Vulgaris, Nervous and Psychic Disturbances, Constitutional Changes, Aging, etc. By Eugene

- Földes, M.D. Octavo of 434 pages. Boston, Richard G. Badger, The Gorham Press, [c. 1933]. Cloth, \$5.00.
- OBSERVATIONS OF A GENERAL PRACTITIONER. By WILLIAM N. MACARTNEY, M.D. Octavo of 478 pages. Boston, Richard G. Badger, The Gorham Press, [c. 1932]. Cloth.
- CHININ IN DER ALLGEMEINPRANIS UNTER BERUCKSICHTI-GUNG PHARMAKOLOGISCHER BEFUNDE. Von Dr. Fritz JOHANNESSOIIN. Amsterdam, Bureau Tot Bevordering van Het Kininc-Gebruik, 1932. Octavo of 176 pages.
- The Practical Medicine Series. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Series 1932. Chicago, The Year Book Publishers, [c. 1933]. General Therapeutics, edited by Bernard Fantus, M.D., and Louis B. Kartoon, M.D. 12mo. of 448 pages, illustrated. Cloth, \$2.25.
- THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Series 1932. Chicago, The Year Book Publishers, [c. 1933]. Dermatology and Syphilology, edited by Fred Wise, M.D., and Marion B. Sulzberger, M.D. 12mo. of 471 pages, illustrated. Cloth, \$2.25.
- THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Series 1932. Chicago. The Year Book Publishers, [c. 1933]. Urology, edited by John H. Cunningham, M.D. 12mo. of 464 pages, illustrated. Cloth, \$2.25.
- THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Scries 1932. Chicago, The Year Book Publishers, [c. 1933]. Neurology, edited by Peter Bassoe, M.D., and Psychiatry, edited by Franklin G. Ebaugh, M.D. 12mo. of 488 pages, illustrated. Cloth, \$2.25.
- THE NERVOUS CHILD AT SCHOOL. By HECTOR C. CAMERON, M.D. 12mo. of 160 pages. New York, Oxford University Press, 1933. Cloth, \$1.50. (Oxford Medical Publications.)
- THE PRINCIPLES OF TREATMENT OF MUSCLES AND JOINTS BY GRADUATED MUSCULAR CONTRACTIONS. By MORTON SMART, M.D. Octavo of 217 pages, illustrated. New York, Oxford University Press, 1933. Cloth, \$3.75. (Oxford Medical Publications.)
- BINOCULAR VISION AND THE MODERN TREATMENT OF SQUINT. By MARGARET DOBSON, M.D. Octavo of 107 pages, illustrated. New York, Oxford University Press, 1933. Cloth, \$2.75. (Oxford Medical Publications.)
- OPERATIVE SURGERY. By ALEXANDER MILES, M.D., and D. P. D. WILKIE, M.D. Octavo of 590 pages, illustrated. New York, Oxford University Press, 1933. Cloth, \$5.25. (Oxford Medical Publications.)
- INHERITED ABNORMALITIES OF THE SKIN AND ITS APPENDAGES. By E. A. COCKAYNE, M.D. Octavo of 394 pages, illustrated. New York, Oxford University Press, 1933. Cloth, \$8.00. (Oxford Medical Publications.)



BOOK REVIEWS



COLONIC IRRIGATION. By W. KERR RUSSELL, M.D. Octavo of 191 pages, illustrated. Baltimore, Williams & Wilkins Company, (William Wood & Company), 1932. Cloth, \$3.00.

With the great increase in the popularity of this procedure with patients and its widespread administration by laymen, this study from a physiological and anatomical standpoint by a qualified physician is timely. The willingness of lay agencies to irrigate the colous of all who apply for it without adequate diagnostic preliminaries has done much to bring this valuable therapeutic method into disrepute in the United States. "Colon filling stations" so named by Dr. Basler, appear on every hand. With proper regard for the scientific medical principles involved this form of treatment is valuable.

Dr. Russell has presented the result of his study simply and directly, comparing the advantages of the methods with which he is familiar. He seems to prefer the Borosini Treatment, although in this country the large colon tube with a too and fro current is more favored. No adequate justification for the elaborate "subaqueous intestinal bath" is supplied. Perhaps there is none.

Many conditions are mentioned in which colonic lavage is beneficial and many useful formulae are given.

Because colon therapy lends itself so easily to quackery it should receive more serious attention from responsible clinicians.

This little book supplies many facts which should be helpful in such a study.

HENRY F. KRAMER.

PARENTS AND SEX EDUCATION. By BENJAMIN C. GRUEN-BERG, M.D. Third Edition, 12mo of 112 pages. New York, The Viking Press, 1932. Cloth, \$1.00.

The author maintains that ignorance on sex matters is responsible for many of our social woes, such as, divorces, illegitimacy, prostitution, sexual perversion, delinquency, and anxiety neuroses. That these conditions are even more prevalent in recent years in spite of increasing sex education he does not mention.

However necessary some knowledge of sex may be, one may not accept the author's contention that the preschool clild should be taught the names of the different sex organs, and that it should be given frequent opportunity to see the unclothed body of the opposite sex in both young and old so as to reduce the embarrassment and euriosity which would necessarily follow when such observations were inadvertently brought to its attention. In other words, the author is a confirmed nudist representing the last word in social faddism. The reader may wonder whether the author is a parent, and what success he has had with his own children.

The care of the child is not based on any uniform plan, but on methods which become more and more complicated and discordant with each additional publication on that subject. After reading some of these books one realizes more and more that common-sense and sympathy are more important for the ueeds of the individual child than the stereotyped directions of an impractical author.

This book bears the endorsement of the American Social Hygiene Association and the Child Study Association of America.

EMANUEL KRIMSKY.

CHILDREN'S TONSILS IN OR OLDT. By ALBERT D. KAISER, M.D. Octavo of 307 pages, illustrated. Philadelphia, J. B. Lippincott Company [c. 1932]. Cloth, \$5,00. For more than twenty years it has been increasingly emphasized that tonsils must come out. That the theory of focal infection has not been very dependable in its practical results has only recently been brought to our attention and largely through the intensive investigation by Kaiser. In this book he tells us in a conclusive manner what may be expected from a tonsil operation. These conclusions are based on careful observations of thousands of children. This book should serve indispensably in impressing on physicians that tonsils should not be removed nuless there is a definite indication for their removal; that wholesale removal of tonsils in hospitals should be stopped; and that the family physician or pediatrist should assume the responsibility of deciding when an operation is necessary. That the results of tonsil operations have not been entirely satisfactory is being nore and nore brought to our attention by a number of workers.

Doctor Kaiser has made the tonsil problem a complicated issue and if we follow suit in his researches the patient will no doubt be the beneficiary.

EMANUEL KRIMSKY,

Oral Spirochetes. By David T. Smith, M.D. Octavo of 243 pages, illustrated. Baltimore, The Williams & Wilkins Company, 1932. Cloth, \$4.50.

This book represents an enormous amount of investigation with the fusiform bacilli and spirochete. It is written in a very interesting manner, lucid and clear. The literature has been gone over in detail. The role of insospirochetes in local and focal infection is discussed thoroughly. The reviewer, however, is left with the impression that the pathogenecity of these organisms, has perlaps, been somewhat overemphasized. Naturally, a goodly portion of text, is devoted to the mouth and teeth, but many chapters describe spirochetal infections of the various organs in the body, and the final chapter describes such infection in other animals. The book is well worth reading and should serve as an incentive to stimulate anaerobic cultural studies, where only acrobic cultures are now done.

AN INDEX OF PROGNOSIS AND END-RESULTS OF TREAT-MENT. Edited by A. RENDLE SHORT, M.D. Fourth Edition. Royal octavo of 599 pages, illustrated. Baltimore, Williams & Wilkins Company (William Wood & Company), 1932. Cloth, \$12,00.

The Index of Prognosis is a volume of 900-odd pages, constituting the third of a series by British writers, the other two volumes being the Index of Differential Diagnosis, and the Index of Treatment. The list of contributors includes such well-known names as Sir Humphrey D. Rolleston, Poynton, Coombs, Gnlland, and many others. The subjects treated are alphabetically arranged, from abdominal injuries to yellow fever. The papers are for the most part discussions on the course and outcome of various diseases, written from the standpoint of the broad clinical experience of the authors, rather than the statistical studies to which we are growing accustomed in this country. Such an outlook is more valuable in judging the chances of any individual patient than the method of cataloging his diagnosis and determining the mortality percentage of his particular pigeon inhing the mortality percentage of his particular pigeon look, important as the statistical method is to health officers and actuaries. There is much clinical wisson in the Index to Prognosis.

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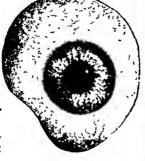
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(Continued from page 666)

medical care until the patient recovers. If found unworthy of public relief the doctor would treat the case as any other private patient. At the end of the month he sends an itemized statement to the Auditing Committee of the Academy. This bill for service is rendered at the usual prices for such service in this city."

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"During the month of January we had some \$4,600 worth of bills and we had less than \$1,000 with which to pay them. We have a contract with one or two of the surrounding towns, from one of which we get \$100 and from another \$75, I think. We paid twenty cents on the dollar during January. We are checking on this thing because we want to know what the indigent costs in our county are going to be. We never were able to get accurate figures on it. We are paying an accountant to run the accounts of the association, and in another year we will be able to stand our ground and tell the supervisors or city commission what sort of contract we are willing to make with them. At the present time we are not kicking. A \$3.00 call we make for sixty cents but this is going to give us some facts on which to base future work."

The following subjects were also discussed at considerable length:

Radio broadcasting Health Insurance Challenge to the county society Mobilized forces

Dr. Olin West, Secretary of the American Medical Association, said, in discussing the independence and leadership of the county society:

"The local County Medical Society must study its own problems, secure all the information that it can of a general nature, in the hope that it may find some information that will immediately apply to its particular problems, and deal with them to the best possible advantage, always with the earnest conviction that they must be dealt with in a manner that will first serve the public interest and the interests of the individual patients."

SECRETARIES' CONFERENCE IN MINNESOTA

The April number of Minnesota Medicine contains the following description of the conference of County Secretaries which was held in St Paul on February 18:

(Continued on page 669-adv. xiii)

(Continued from page 668-adv. rii)

"The question of state dues received considertable attention. Dr. Savage of St. Paul, one of the state enuncillors, outlined the activities and the accomplishments of the State Society and explained the budget requirements for 1933. While this budget includes some economies, it does not contemplate a reduction of the present dues. In spite of this convincing recital and the assurance that vital activities could not be maintained on cless income, a very determined effort was made by the representatives of two county societies to siving the sentiment of the meeting toward a reduction. The debate became rather noisy and bitter, but the overwhelming sentiment as expressed by speeches and ballnt seemed to be that while the society as a whole would welcome the assurance of its officers that its dues could be reduced without harm to its important activities. since that assurance was not forthcoming and most obviously could not be given, state dues should be maintained as they are. As expressed 1 by one member—if the present and contemplated activities of the State Society cost two or three z times as much as they have they would still be t worth it.

"Having safely passed this hurdle, the meeting next viewed with horror the growing incidence of malpractice suits and the imminent danger of a i' rise of insurance rates. Legal representatives from various companies outlined the causes. Greater activity on the part of hungry attorneys explains the increased incidence, and growing resentment of the average juror toward any organization with money explains the larger verdicts. For the most part, malpractice suits grow out of eareless or vindictive comments made by physicians themselves about the work of others. It was suggested that the Golden Rule might be applied here, for without the assistance of physicians no malpractice suit could be successfully prosecuted Physiciaus were warned never to belittle the work of a fellow practitioner in the presence of the patient.

"The various methods of caring for the indigent by county societies were discussed. Theodore Sweetser outlined the various plans now contemplated or in operation. Dr. Collins of Duluth described a program practically adopted in St. Louis County whereby a lump sum was paid to the county society. This was pro-rated to the members contributing the service on the basis of the number of calls or office consultations rendered. Mr. George B. Larson, secretary of the Polk County Medical Society of Wisconsin, described a plan which has been in operation for some time. In this admittedly successful scheme, the members contribute the service and the lump sum received from the county carries on the activities of the society and pays the state dues. It was pointed out that no one plan meets the requirements of all counties and that each county

(Continued on page 670-adv. xiv)

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(Continued from page 666)

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(Continued on page 669-adv. xiii)

(Continued from page 670-adr 217) the general appropriation bill The item referred to is the sum of \$76500 for state aid

to local county health units

"The Medical Association does not oppose The Medical Association local health units does not oppose the system that is in opera tion in Tennessee The system is as follows

"According to the Bichmal Report of July 1, 1931, \$549,079 84 was spent in the operation of full time county health units in one year This sum of money was derived from three sources as follows

\$298 747 09 The Counties Appropriated State Aid Funds Allocated to

127,569 12 Counties

Extra State Tunds (Foundations,

122,763 33 etc)

"This half million dollars in a year was spent in the operation of thirty seven units touching forty-five counties

"The state and fund is allocated to counties by the Commissioner A few received sums

as follows

Rutherford	\$6 090 00
Williamson	8,490 00
Davidson	4,980 00
Montgomery	2 850 00
Dyer	1 618 00
Giles	1,250 00
Maury	5,616.67
Sullivan	5,000 00

"Cheatham got nothing Trousdale got nothing A majority of counties got nothing

"These are a few of the countries which have enjoyed state aid. These figures show that under this system the arbitrary conclusions of one man determine the distribution of finids paid by all the taxpayers of Tennessee cited above the wealthier counties are aided by the state If anyone were to suggest that the counties of Williamson, Maury, Rutherford, Giles, and Montgomery are objects of charity and deserve state aid for any local purpose, the citizens of these counties would There certainly is no objection be outraged to these counties operating whatever health departments their communities seem to need The state, through its various bureaus could cooperate with their local units in whatever way may seem necessary

"If it is sound public policy for the state to aid in local county activities, the aid should go to those counties without adequate medical care and without the financial ability to finance their own local activities and it should be distributed on some sound, fixed basis which would make its distribution independent of the whims and caprice of any one man"

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(Continued from page 669-adv. xiii)

society must study its own peculiar problem and

model its system accordingly.

"Of such value did the members of this society regard the present radio broadcasts sponsored by the state society that Dr. William A. O'Brien in his usual lucid and fluent style told how to build interesting and worthwhile society programs. The text of his theme was that the subject was more important than the man and should be chosen first, and afterward the best speaker.

"The afternoon conference was devoted to a consideration of the effect of workmen's compensation on medical practice and to some of the 1933 legislative problems. A representative of one of the large insurance companies handling compensation insurance presented the insurance side of the controversy, while Dr. C. B. Wright and Dr. J. M. Hynes presented the physicians' point of view.

"Dr. Herman Johnson discussed some of the bills to be presented to the 1933 legislature which

have a direct effect on medical practice. There was the usual chiropractors' effort to get out from under the basic science law. The naturo paths surprised everyone by securing the services of ex-Judge of the Supreme Court Hallam to represent them. Dr. Johnson urged everyone to communicate immediately with their representatives in an effort to offset the considerable influence of Judge Hallam.

"Whereas we have already disclaimed any responsibility for having failed to dispose of any momentous question, the meeting was eminently worth while in promoting an understanding the other fellow's problem and in developing united front as an organized society. The grow ing threats to the continued enjoyment of the practice of medicine call for a unity of effort greater than ever before achieved. The relative youthfulness of the majority of the secretarie and the keen interest shown in economic matte suggest that these matters will continue to recei attention."

STATE AID TO COUNTIES IN TENNESSEE

The Journal of the Tennessee State Medical Association discusses state aid to counties in public health work as follows:

"Several county newspapers in the state

have criticized the members of the Medi Association for appearing before a commit of the legislature in opposition to one item

(Continued on page 671-adv. xv)

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The Countries Appropriated \$298,747 09
State Aid Funds Allocated to
Countries 127,569 12

Countres
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127,509 12
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122,763 33

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-Adv.

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NEW YORK STATE JOURNAL of MEDICINE

PUBLISHED BY THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

Vol 33, No 11

Nrw York, N Y

June 1, 1933

APPENDICITIS. GENERAL SURVEY AND STATISTICS

By THEW WRIGHT, M D, BUFFALO, N Y.

Read before the Buffalo Surgical Society on February 18 1937 in a round table discussion on Appendicitis

THAT a disease which if promptly recognized and properly treated should be practically free from mortality nevertheless does show an annual death rate in the United States of 18 per hundred thousand, thus equiling the combined death rates from ectopic pregnancy, pyosalpinx, gall stones, surgical diseases of the pancies, spleen and thy roid, and nearly equaling that from gastric ulcer, duodenal ulcer, intestinal obstruction and gall stones, and exceeding that from measles, scarlet fever and whooping cough to gether, as well as totaling that from automobile accidents, and nearly equaling that from diabetes is a fact sufficiently striking to warrant our most serious and thoughtful consideration

Although all of its aspects are of interest and the question of diagnosis and the best methods of handling the various types and manifestations of the more advanced stages of the disease may still present some opportunity for argument, the factor of prime interest it seems to me should be what can be done to lower this death rate to the almost negligible figure where it belongs. Of the many compilations of statistics and reports which have been published it seems to me the only figure of any real value is the actual number of those who die of the disease Compilations of the mortality rate in any particular series of cases operated upon are of some interest but accurate con clusions from most of such compilations are difficult to obtain The reason for this fact is the difference in nomenclature used to describe the various types of appendicitis and the various complications which present themselves at different stages of the disease Whereas certain methods of handling the later stages of the disease may give a lower death rate than certain other methods, there is really very little difference in the statistics among operators of experience even though their methods differ, and it is not by any change in the handling of late cases that we are going to cut down appreciably the number of deaths from the disease It is only by bringing cases to operation in the earliest stages that much can be accomplished When one reviews the various sta tistical reports from different hospitals and different operators one finds oneself in such a jumble that relatively little of value is gleaned from the study The one fact which stands out clearly and undisputed and runs through all reports is that cases operated upon early, that is within the first eighteen to thenty-four hours of the disease show a mortality around one per cent Whereas cases operated later show rates from five to ten at the end of forty-eight hours or eight to twenty at the end of seventy-two hours. I think we will all agree that operation while the infection is confined to the appendix is attended by practically no mortality. If we are to stop the toll which this disease exacts it must be by means of educating both the physician and the layman to the appreciation of this fact and I would like to see our Society mangurate some movement for the education of the public in our State such as that which is being carried out in Pennsylvania.

If none but surgeons of the highest skill had operated on all the cases of appendicitis which were operated upon last year the death rate would. I believe, still be far in excess of what it should be, although considerably lower than what it was Although I am strongly opposed to having un skilled operators open the abdomen under any circumstances the mortality would be undoubtedly lower if all cases were operated during the first eighteen hours even by mediocre surgeons than would be the case if handled by the most skillful forty-eight hours later We must continue to preach early operation and no cathartics, for in spite of all that has been written the administration of castor oil is still altogether too frequent both in adults and in children, and not only are the lasty themselves guilty but, unfortunately, too many physicians still fail to recognize the danger in administering cathartics in the presence of ab dominal pain

A starthing fact about the present death rate from appendicitis in the United States is that it is almost one third higher than it was ten years ago. There must be some explanation for this and in my opinion there is a very simple one and I have before this expressed my views in print. I will quote a few paragraphs from a book which I

published several years ago in an effort to do my bit towards educating the laity.* "Because of the fact that operations performed early in an attack of acute appendicitis, as well as interval operations, and those performed for chronic appendicitis, are attended by an almost negligible mortality, the impression has arisen that operations for appendicitis are simple, and can be performed by any one who can use a surgeon's knife. It is true that operations under such circumstances are as a rule simple, and can be successfully made by operators of limited experience; but when the disease has progressed to any extent, and especially when any of the numerous complications exist, it may require the very highest degree of surgical skill and the benefit of long surgical experience to handle the case properly, and bring about its successful termination.

"The abdomen has been likened to a grab-bag; one never knows exactly what one is to find until it is opened, and no one should open it unless prepared and qualified to meet and handle properly any of the complications that may be found, or

emergencies that may arise.

"One of the three important factors in the explanation of the fact that the death rate from appendicitis is still many times higher than it should be, is that the seriousness of the operation is under-estimated, both by the laity and by many physicians, and occasional operators undertake cases that are beyond their ability to perform, and on attempting them find themselves confronted with conditions with which they cannot successfully cope.

"The actual death rate from appendicitis is higher in this country today than it was ten years ago. This can only be explained by the undeniable fact that a constantly increasing number of operators with insufficient surgical experience have been undertaking surgical procedures for which they were not adequately prepared; for, of the other two prime factors in mortality, namely: delay in operation, and the administration of cathartics, certainly the former is met with less often, while there is little reason to think that the latter is more frequent.

"The death rate among the larger clinics and hospitals does not show such increase. This does not mean that operations for appendicitis should be performed only in such centers, or by eminent or distinguished surgeons, for there are today qualified surgeons and excellent hospitals in nearly all communities. It does mean, however, that care should be exercised in selecting a competent surgeon, and that unless such care is taken, many cases will die which could and should be saved."

There is no gainsaying the fact that there are from ten to twenty operators in the United States today for every one of fifteen years ago, and unfortunately a large percentage of these operators have not had the requisite training to make them real surgeons. How else are we to explain the fact that our death rate from appendicitis is twice that of Switzerland, three times that of Germany, more than double that of England and Wales, and six times that of Italy, in which countries operating is only permitted to those who have had adequate special training in surgery and not as it is in most States of this country where the mere degree of M.D. carries with it the right to operate upon any condition regardless of the operator's ability to handle it or any special training in surgery.

It does not fall in the scope of my remarks to take up the diagnosis of the disease; that will be ably handled I know by one of the speakers who follows, but I do wish to call attention to two factors which I believe to be of importance—one is that the highest mortality rate of the disease is in children, practically fifty per cent of the reported deaths being in childhood. The disease running a more rapid course and complications being more frequent should make us most alert in our diagnosis and make us ready to operate in every case of suspected acute appendicitis in children when we cannot definitely exclude its presence. This will, of course, lead to an occasional unnecessary appendectomy but it will also save many lives which would be lost by procrastinating until the diagnosis could be unrefutably made. I have operated upon a large number of young children in which it was difficult to make an absolutely positive preoperative diagnosis but who were found to be suffering from the disease. I am myself firmly convinced that acute appendicitis is much more frequent in infancy than has been realized, the difficulty and, in some cases, the impossibility of making a positive diagnosis having misled us. The finding of an acutely inflamed appendix in cases subjected to operation upon merely a strong suspicion when the risk of operation seemed less than that of watchful waiting and the indisputable evidence of previous attacks of acute inflammation found in appendices removed from children never known to have had the discase before, has steadily strengthened this conviction. Each year, study at the operating table, in the pathological laboratory, and of the pre- and post-operative histories of my patients, has made me realize more fully that both acute and chronic appendicitis is far more common in children than it is usually thought to be; that many cases of acute and subacute appendicitis pass unrecognized and that a large number of children have suffered and are suffering from unrecognized chronic appendicitis.

The second point is the frequency with which a chronic appendicitis may exist for some time prior to an actual acute attack. So often at operation for acute inflammation we find constrictions or kinks which interfere with the emptying of the

^{* &}quot;Appendicitis," Allen Ross & Co., New York.

appendix that I believe we should urge a prophylactic appendectomy in any case in which x-ray shows an abnormal retention of barium even in the absence of other evidence of chronic appendicitis.

Chronic appendicitis is a most unfortunate term and its use has caused an endless amount of discussion and waste of words and energy because those discussing have usually been talking at cross purposes, due to the fact that neither has understood what the other has meant by the term. The suffix "itis" of course denotes the presence of an active inflammatory process, and the absence of any such process in the appendix when studied by the pathologist has led to confusion.

I am including under this term not merely the occasional cases in which a subacute or chronic inflammation does exist, but the large number of cases in which mechanical irritation either from within the appendix or its immediate neighborhood is producing ill-health. This mechanical

irritation with its consequent varied reflex manifestations may be produced by concretions within the appendix, by acute kinks due to a short or distorted meso-appendix, or by adhesions or congenial peritoneal bands, or by constrictions produced by scars resulting from previous acute inflammation. It seems to me that it must be admitted that an appendix showing any of these conditions is more liable to acute inflammation than is a normal one and, therefore, I always advise its removal.

I believe that our only hope in reducing the mortality rate of this disease lies in the education both of the laity and the physician; first to the understanding that appendicitis is absolutely a surgical disease requiring prompt operation; second that there is great danger in the administration of catharsis in the presence of abdominal pain, and third that care should be exercised in choosing the operator to whom the patient's life is to be entrusted.

DIAGNOSIS OF APPENDICITIS

By EARL P. LOTHROP, M.D., BUFFALO, N. Y.

Read before the Buffalo Surgical Society on February 18, 1932, in a round table discussion on Appendicitis.

THE classical sequence of symptoms and physical findings of this disease furnish a standard by which all cases are to be judged. Fortunately most cases conform to type—some vary sufficiently to make diagnosis difficult while a few present baffling phenomena.

The history of sudden acute abdominal pain, usually epigastrie, possibly centered about the navel or rarely in the left abdomen, followed in an hour or two by nausea or vomiting, suggests disturbance in the mid-gut. If some hours later pain is transferred to the lower right quadrant and, upon examination, hyperaesthesia, tenderness or rigidity with peritoncal rebound in this region accompanied by slight rise of temperature, increased pulse rate and moderate leucocytosis are established, the diagnosis of acute appendicitis is justified.

While the symptoms may vary in intensity, the regular sequence of pain, nausea, localization is fundamental in diagnosis and particularly so in differentiating between simple inflammatory and obstructive types. In the former or those associated with infection of the upper air passages, the symptoms may be so nild as to escape observation. Pain may be described as discomfort, nausea absent or transient, tenderness at McBurney's point indefinite, and pulse rate little disturbed, it is true that, with very gentle finger manipulation, mild degrees of muscle spasm can be elicited and accompanying hyperaesthesia. In the obstructive type pain is usually more severe, retching or vomiting is protracted, tenderness, rigidity,

hyperaesthesia marked and pulse rate full and bounding. Doubtful cases should be examined at frequent intervals as obstruction may occur during the course of an apparent simple attack.

There is relative safety when pain is present, sudden termination of pain suggests perforation or the drainage of the appendiceal contents into the cecum. This is followed by subsidence of clinical symptoms which obscures the picture and taxes the diagnostic acumen of the examiner.

One may be permitted to reiterate that study of the pain symptom is most important.

Epigastric pain followed by nausea suggests inflammation or obstruction in the mid-gut, it is colicky in character and not referred, but rather

it is a referred pain.

It must be differentiated from that of biliary colic which is referred to the back and increased by pressure on the ninth costal cartilage; perforated ulcer which is ushered in by sudden severe pain with collapse and rigidity above the navel, rapid pulse and subnormal temperature; acute pancreatitis and mesenteric thrombosis both of which are marked by extreme collapse, exaggeration of pain and vomiting; intestinal obstruction in which, at first, pulse and temperature are rarely disturbed, pain is general, vomiting persistent, abdomen distended not rigid except during spasms of pain and at times bowel picture. It is to be recalled that intestinal obstruction may be caused by the appendix but, as in other cases of obstruction, the cause remains unknown until the abdomen is opened. In general the sequence of

symptoms as they appear aids differential diagnosis. If the patient is seen late with board-like belly wall and peritonitis, the problem is more difficult but that question is not pertinent to my

topic.

In certain cases pain and nausea may be so mild that only when pain shifts to the lower right quadrant does the patient become aware of trouble. He may admit discomfort rather than pain and forget or not have nausea. If a history of previous attacks can be obtained, conclusions may be drawn but it is well to recall that pain beginning at McBurney's point or in the lower right quadrant should be regarded as a reflex until other causes are eliminated.

Alan Lee compares "McBurney's point to a cross-road where intestinal, renal and pelvic systems converge and the site of referred symptoms from numerous distant foci," e.g., sinusitis, tonsillitis, pneumonia, pleurisy, right-sided tubal pregnancy, hemorrhage into ovarian cyst, ovarian cyst with twisted pedicle, Dietl's crisis. Confusion may occur and appendicitis complicate some of these conditions but careful review of symptoms and thorough physical examination will, in most instances, lead to proper dagnosis.

When epigastric or general abdominal pain localizes in the lower right quadrant, superficial hyperaesthesia can be demonstrated in the majority of instances. This is a confirmatory, not

diagnostic symptom.

Tenderness and rigidity are in direct proporton to the location of the appendix, greater if near the abdominal wall, less so if deeply seated,

often absent when located in the pelvis.

Although pain is usually referred to McBurney's point, the point of greatest tenderness is over the location of the appendix, e.g., at costovertebral angle if near the kidney, in the loin if retrocecal or to the right of the rectum in the pelvic variety.

It is well to recall that the appendix is supplied with fibers from the superior mesenteric plexus of the sympathetic and that the reflex may affect the nerves from the 11th and 12th dorsal or the 1st and 2nd lumbar segments of the cord. Usually it follows the 11th dorsal nerve which supplies filaments to the skin near McBurney's point. This reflex may affect motor as well as sensory nerves as seen in local spasm of the abdominal muscles or the psoas with contraction of the leg and pain referred to Scarpa's triangle. The complicated hook-up of those four nerves may produce reflex pain or spasm difficult to unravel.

Why this reflex is ofttimes absent when the appendix is in the pelvis is an unsolved question.

Elevation of temperature usually appears a few hours after the onset of the attack-its presence or absence is not of great importance except in differential diagnosis.

The pulse rate is proportionate, but the volume, quality and rate are most important in estimating

the severity of the infection. Pulse is a friend of the educated finger.

In conjunction with the previously mentioned symptoms, differential leucocyte count is of value as a corroborating factor. In general, the total count indicates degree of resistance, the poly percentage the degree of infection. So many factors may affect the count that it is not to be depended upon as the final word in diagnosis.

Constipation, once considered a symptom associated with appendicitis, must be acquitted because many patients have normal evacuation while some have diarrhoea. In the latter case, enterocolitis must be considered and eliminated.

Hematemesis or hematuria with frequent and painful urination may occur without gastric or renal pathology to complicate the picture. Urinary symptoms simulating renal or ureteral disease occur late in the history of the attack. Strangury is an early symptom in renal or ureteral colic. The latter begins with pain in the lumbar or sometimes epigastric region with nausea or vomitng. Pain travels along right side of abdomen to bladder, testicle or penis. There is frequent and painful micturition and hematura During attacks of pain abdominal muscles become tense but relax during the intervals and, while tenderness can be elicited, there is neither muscle spasm or hyperaesthesia in lower right quadrant.

Repeated urinalysis showing blood, negative blood count, absence of temperature and, in doubtful cases, ureteral catheterization and x-ray of abdomen should make the diagnosis clear. Difficulty is encountered when urinary symptoms are caused by retrocecal appendix attached to renal pelvis or adherent to brim of or located in pelvis.

It is not impossible for both lesions to occur simultaneously. Cases are reported of perioration of appendix into ureter and this complication might prove undiagnosable. Ureteral calculus has been misinterpreted often as appendicitis and is the constant joke of the G-U men but should present no particular difficulty if the case is properly studied.

In the study of each case a careful history of previous illness or attacks and a detailed history of the present attack, noting the order in which the symptoms appeared and their duration, is of primary importance.

Observation of the patient's posture and reaction to pain and respiratory movement are valu-

The physical examination should be general In the approach to the abdomen gentleness in manipulation will be rewarded. Ofttimes slight spasm of the right rectus and oblique muscles can be detected by gentle finger pressure, deep-seated tenderness by firm gradual pressure. In cases of doubt, rectal examination is always in order. Where intestinal obstruction or ureteral calculus is suspected, the flat x-ray plate, properly interpreted, is helpful.

CHRONIC APPENDICITIS?

By GEORGE R CRITCHLOW, MD, BUFFALO, N Y

Read Lefore the Buffalo Surgical Society on Letruary 18, 1932 in a round table discussion on Appendication

PRESUME that the interrogation point punctuating my title is to indicate the skeptieism on the part of someone as to the existence of chronic appendients as a clinical entity I et us define our nomenclature so as to clarify the discussion. The conditions long spoken of as relapsing and recurrent appendicitis are mainfes tations of chronic inflammation having their inception in a primary acute attack. While these conditions are chronic in the sense that they are of indefinite duration they are really a succession of acute attacks with distinct lesions Between such seizures the patient may or may not be free from symptoms. Our present discussion concerns that class of cases with no history of a frank acute attack of appendicitis, but presenting a rather indefinite and variable group of symptoms involving the gastro intestinal tract and tending to focus in the right lower quadrant. Thus our topic is limited to a brief consideration of the question "is the appendix subject to a chronic form of inflammation not a sequella of an acute infection and independent of other intra-abdoini nal pathology?"

It is charged by those who would answer this question in the negative that many appendices are removed that show no pathology and whose possessors experience no relief from the symptoms for which the procedure was undertaken. While this eriticism is doubtless valid regarding a large number of appendectomics, it can be shown, and some of the few case reports later quoted will show, that the converse is true, the pathological findings far exceeding in degree the chincal picture Nor is the absence of demonstrable path ology in the member after removal a proof of failure if there be found unquestioned improvement in the patient's condition post operatively 100% results are rare in the statistics of any surgieal treatment. Some of these failures may be due to madequate preliminary study of the case, resulting in faulty diagnosis. Then again there may be co existing disease elsewhere, not cvi dent at the time but progressing later in spite of the appendectomy Such a situation argues for a proper exploration of the whole abdomen in the absence of acute infection

While the discussions in this symposium are intended to be a reflection of the contributor's personal viewpoint based on first-hand experience, a brief reference to the literature may be allowed A writer in one of our western journals analyzes 100 cases of so called ehronic appendicitis all of which had had a post operative follow up. Thirtyfour gave a history of a previous acute attack, which leaves 66 to be considered as strictly chronic cases according to the terminology postu

lated at the outset of the discussion Ot these 66 all had the symptom of pain in the right side, 50% had nausca and vomiting, 50% had indefi nite indigestion, all had meager abdominal findings on examination, with slight tenderness on deep palpation over the right that fossa. Of these 66 appendices 28 showed no pathology. In the follow-up 427% had the same symptoms as before operation. Many of these patients were opcrated upon with a buttonhole incision, and only a few had preliminary Roentgenological studies This report is quoted to illustrate the point stressed a moment ago, viz, the necessity of eareful examination and differential diagnosis supple mented by thorough exploration on the operating Only by such precrutions will the surgeon best serve his patient and at the same time sparc himself the possible embarrassment of having an other surgion re operate his patient for an illeer or other upper abdominal lesion

Let us try to draw a composite picture of chronic appendientis—one that will not fit every individual case but which will include the essen tial features of the group First, the patient has what Longuet termed "appendicular dyspepsia," a full feeling in the epigastrium coming on with in a half-hour after eating, possibly dependent on the ileo pylorie reflex, the spastic action on the pyloric sphineter eausing retention and acidity. We have all observed at operation the hypertroplied pylorie ring in patients with long standing chronic appendiceal irritation Second, abdominal distress consisting of pain aching or lameness and stiffness in the right lower quadrant, intestinal flatulence, constipution or diarrhoea (if an entero colitis is added to the pathology) Third, sensitiveness to pressure over the lower ab domen, sometimes even to the pressure of clothing, usually elicited by deep pressure over Mc-Burney's, often more marked on pressure with the extended thigh and leg slowly flexed on the abdomen Fourth, toxic symptoms, such as head aches, general malaise anorexia, coated tongue, etc Given a patient with such a chinical picture our first step is to rule out all other likely or possible explanations for the symptoms. If a child we must beware of the ordinary and frequent colics of digestive origin, the occasional painful or sensitive lymph glands of the lower abdomen, and the reflexes from remote conditions in the cliest If a woman it may be difficult to differentrate between a growling appendix and a patho logical tube or overy. In this connection let me remind you of the tremendous help to be gained from a rectal examination. Undoubtedly many an appendix has been condemned for the sins of a ureteral stone on the same side, and many another for the guilt of an ulcerated stomach or duodenum, or a chronically infected biliary tract.

Fortunately we can appeal with great confidence to the radiographer to help us run down the real criminal. Given by the Roentgenologist a negative report on a g.i. series, negative cholecystography, a negative g.u. tract, together with definite and constant visualization of the appendix persisting after the emptying of the cecum and we are not likely to go far wrong in apprehending the miscreant. Larimore of St. Louis contributed to Surgery, Gynecology & Obstetrics, November, 1930. a most convincing article on "Roentgenology of the Appendix." In a reported series of over 4,000 complete gastro-intestinal examinations significant appendiceal findings occurred almost five times as often with visualization as without visualization.

Attention has been called repeatedly to the prevalence of chronic appendicitis in children. Watkins in the Ohio State Journal last June reported a series of 111 cases of appendicitis in children, classified as follows: acute simple, 38; acute suppurative, 19; chronic, 54. We have already noted the great importance of excluding certain conditions peculiar to childhood in making a differential diagnosis. A writer in London Lancet three years ago stressed the fact that chronic appendicitis occurs much more frequently in children than is generally supposed. According to this writer 33% of all cases occur in children.

Mention might be made of a diagnostic sign of chronic appendicitis reported by a writer in one of the French journals, viz., a dilated right pupil. He states that it was observed in 88% of one series and in 93% of another. We have never happened to observe this alleged phenomenon.

McClure of Detroit writing in Annals of Surgery last August discusses the role played by diet and habit in the production of this condition. He calls attention to the fact that while retention of inspissated matter in the appendix is a common finding in this country it is almost never met with in India and Arabia. This he considers to be due to several factors,—food, bowel habits, nerve tension, for example. The natives of these countries eat more roughage, no refined sugar and no canned goods. They are not bound by civilized habits regarding passing of gas, time and place of bowel movements. Another writer calls attention to the fact that in reports of 40,000 Rumanians under medical observation in the rural districts of that country not a single case of appendicitis was seen, while in the cities where more meat and other foods of modern civilization were used the disease was about as common as in European countries generally. Another factor in causation, according to McClure, may be the frequent transient stomach-aches and cramps of adults which may be mild attacks of appendicitis that are undiagnosed. Aschoff and other pathologists agree that recurrence of such attacks causes so-called appendicitis.

Case 1. L.B. F.S. 21. Clerk. Admitted October 5, 1931. Trouble dates back 6 years when she began to have gastric distress with pain and discomfort in the right side. She never had an attack to make her acutely ill, but the symptoms became more constant, she was constinated and had occasional nausea and vomiting. Yesterday taken with rather severe pain in r.l.q. and came to my office in the afternoon. T. 99.6 P. 90 Very sensitive to deep pressure over McBurney point, worse by flexing thigh. No rigidity. Sent to hospital with diagnosis of sub-acute appendicitis. At operation appendix was found long. nodular, non-adherent. Pelvis negative Gall bladder and stomach negative. Laboratory report: size 8 by .5 c.m. congestion of the superficial blood vessels. Wall unusually thin, lumen large, filled with fecal matter. Microscopically the serosa is very slightly thickened and contains a few small congested blood vessels around which was very mild infiltration with lymphocytes. Diagnosis: mild chronic appendicitis. This girl went back to work in two weeks and has lost all her abdominal symptoms of six years' standing.

Case 2. D.B. M.M. 28. Secretary. Father died of appendicitis. Always been in good health. For past two months has had abdominal pain, stabbing at times, usually a dull ache, localized in the r.l.q. Quite sensitive to pressure on deep palpation in that region. Sent to hospital with diagnosis of sub-acute or chronic appendicitis. T.P.R. normal, no blood record, no x-ray. Appendectomy, May 14, 1929. Appendix very long, 5 inches, swollen and injected to gross appearance no adhesions. Pathological report: App. 10 c.m. with very little congestion of superficial vessels; lumen unusually large filled with fecal material; wall correspondingly thin; microscopic section shows nothing of interest. Diagnosis: no pathological lesion.

Schoolmaster. 39. M.S. Case 3. T.T. Office examination, May 5, 1931. Complaint of headache and vertigo for past six weeks or more In the March preceding he had had some pain in abdomen with slight fever, the attack lasting a week, but not keeping him at home. Not seen for 4 months, then re-examined. Headache still present. Abdominal examination elicits tenderness at McBurney point. Seen a month later the tender-Patient is sure he has apness was increased. pendicitis and demands operation. Complete gi series at City Hospital gave negative findings throughout with no visualization of appendix Appendectomy was performed October 3, 1931 Appendix was found kinked, congested in its dis tal third, veil adhesions around the head of cecum Pathologist's report: Marked congestion of superficial blood vessels, walls usual thickness, lumer

small and filled with pus Microscopically, serosa slightly thickened and contains dilated blood vessels around which there is mild infiltration with lymphocytes and pus cells. In mucosa there is moderate infiltration with lymphocytes and pus cells, and a large number of them free in the lumen. Diagnosis acute appendicitis.

In conclusion, to summarize the matter, we be lieve that our own experience furnishes strong evidence of the existence of a clinical syndrome which may be properly termed chronic appendi-While it is a fact that that the pathology is sometimes difficult to demonstrate, yet the results of appendectomy in relief of the symptom-complex in the absence of other treatment justify the diagnosis. On the other hand the pathologist's report will frequently show tissue changes out of proportion to the clinical picture We believe that a preoperative diagnosis of chronic appendicitis should be made only after a most careful exclusion of all other possible conditions, using all the diagnostic facilities at our command. Even when this has been done, it is highly important to check such findings by thorough exploration of the abdominal cavity at time of operation For this reason we believe in an adequate incision

We will not bore you with a lot of monotonous

case reports, but wish to present a few that may illustrate the points discussed. It sho ld be understood that pathologists are not all in agreement as to what constitutes a pathological picture of chronic appendicitis, many of them denying the existence of such an entity at all. There are certain eriteria, however, by which a pathological diagnosis is arrived at by certain groups of pathologists that should be postulated in order to clarify the laboratory reports Briefly, then, an appendix with a histological picture showing injection of the superficial vessels of the serous coat with extravasation of lymphocytes around the vessel walls denotes chronic appendicitis Second, should there be found extravasation of lympho eytes into the walls of the viscus, with or without an occasional polynuclear the report is sub acute Third, swelling and injection of appendicitis the vessels beneath the mucosa with many polynuclears extravasated is the picture of simple acute influmention. Fourth, when these polynuclears are found penetrating from the submucosa into all the walls of the structure, usually with many pus cells in the lumen also, we have a suppurative lesion. The cases now to be cited were all examined by Dr Warwick and classified by the criteria just stated

COMPLICATIONS OF APPENDICITIS. IMMEDIATE AND REMOTE

By M A SULLIVAN, MD, LACKAWANNA, N Y

Read lefore the Buffalo Surgical Society on February 18 1912 in a round table liseussion on Appendicution

AUSCH states, in his opinion, that the appendix is a fiend, and should be abolished at every reasonable opportunity. During la parotomy, right sided hiermotomy, and in those people chronically affected, who anticipate locating in regions lacking surgical facilities, the appendix should be excised as a precaution to a later catastrophy. I am sure all agree that this would prevent many of the complications.

Complications Immediate

Peritonitis—localized Gangrene Rupture Acute gastric dilatation Hemorrhage

Complications Remote

Residual abscess (pelvic, subphrenic, hepatic, subdiaphragmatic)

Embolic abscess (hepatic, pulmonary, cerebral, nephritic, mesenteric)

Pneumonia (lobar or lobular followed by empyema, massive collapse of lung)

Thrombo phlebitis either in portal or general circulation

Involvement of adjacent structures by contact as the adnexae, urmary tract or mac vessels

Intestinal obstruction mechanical or paralytic Acidosis or alkalosis

Lesions of epiploica appendix

Phlegmonous infiltration of the abdominal wall Hernin, abdominal or diaphragmatic

Hemorrhage

Early home treatment is a factor in causing

many of these complications

H A Rayster states that in 1926 seventeen thousand deaths occurred from this disease, twelve thousand of these received cathrities. This fact emphasizes the danger of the old fashioned remedy, namely, castor oil for any intestinal upset and I believe it is a factor in causing rupture with peritonitis, particularly in those cases where the appendix contains a fecal concretion or a foreign body. Murphy states that 38% of his acute appendicitis cases harbored a fecal concretion.

Wilke describes these cases as appendicular ob struction where the outlet becomes obstructed by stricture or kinking, there is putrefaction of the fecal matter distal to the obstruction with disten-

sion causing gangrene and rupture

Pertonulis —True primary pathological conditions of the peritoneum are rare, but there are few if any intraabdominal diseases which at some period during their course do not affect this mem

youngster would have developed a peritonitis and in all probability would have died. This procedure warranted in many doubtful cases will cause no harm to the patient and in many instances be a life-saving measure.

There is difficulty in differentiating between this discase and idiopathic peritonitis and secondly, pneumonia. In so far as pneumonia is concerned it can be eliminated by careful examination including x-rays. In simple pneumonia not clear with the stethescope, x-ray must be relied upon. Where idiopathic peritonitis is concerned if you can make the diagnosis or if not, you have not hurt the child by absolutely determining the type of lesion.

I sometimes wonder whether appendicitis isn't so common that it is overlooked in our efforts to find something more difficult and unusual.

Dr. G. IV. Cottis, Jamestown, N. Y.: I do want to express to you my gratitude for the complimentary invitation to be here tonight. Wright's paper is a masterpicce of conciseness and merit. While the mortality has increased enormously during the last ten years we know that the giving of castor oil and delay has not decreased during that time-the people and the medical man must be better educated. I think the mortality is due to two common causes. First: That the medical profession is not dealing with it as well as they did ten years ago. Second: It seems to me that there are too many men doing surgery today who ought not to be doing it; men who are not eapable of doing it well, and not knowing when they should operate or what they should operate for. I think that many deaths are caused by removing the appendix when the cause was a perforated uleer, etc.

Dr. Critchlow spoke of chronic appendicitis being an inflammatory condition. Without obstruction of the appendix we seldom see chronic appendicitis. In ordinary cases if you watch the pathology, 90 per cent have a fecolith present.

We know it hasn't formed in a few hours of the present attack and that it must have been there a long time, and constitutes in my mind a chronic appendicitis. Most of these patients present gastric symptoms.

I like the way Dr. Lothrop gave the sequalae of symptoms. We all know the sequence of symptoms but don't realize why. The first pain is epigastrie—why. That is the location of all pains coming from the mid-gut. Second, nausea, also a symptom of obstruction of the mid-gut. Then pain and tenderness in the right lower quadrant and by that time inflammation has started up. They become tender because they have a localized peritonitis. You should think of the sequalae of symptoms associated with the sequalae of pathology.

In 1904 Wyeth reported two hundred cases treated without burying the stump of the appendix. It has been shown time and time again if you put in a purse string suture you pass in and out an infected suture and it will eause trouble later on. I hope to see the day when men will

never bury the stump.

Dr. J. M. Mesmer, Buffalo, N. Y.: I know nothing of surgery except the diagnostic points, and it has impressed me tonight that the surgeons are becoming as good diagnosticians as the mediance.

cal men. An appendix can present many, many symptoms and it is with difficulty sometimes that a diagnosis can be made and a decision reached regarding operation.

Dr. Barnes, Buffalo, N. Y.: The question of what, from the x-ray standpoint, constitutes a pathological appendix is frequently raised. The best answer to the question is a definition of the normal appendix.

A normal appendix should fill and empty with, or shortly after, the cecum; it should be movable throughout and should present no greater tender-

ness on palpation than do other portions of the abdomen. Palpation should produce no reflex gastro-intestinal manifestations. Its lumen should be of uniform tapering character. Segmentation and smooth coiling are probably without pathological significance. Kinks, angulations, narrowings, fixations or ovoid filling defects (fecoliths) are abnormal findings.

Dr. H. R. Trick, Buffalo, N. Y.: Before closing the discussion the Chair would like to say that probably each of us has derived definite impressions, but it occurred to me as a result of these papers and discussions that each of us is quite alert to the needs of the occasion, but we haven't explained why the mortality rate is increasing. Some time ago one of the younger men

called my attention to the fact that he had never seen a case of acute appendicitis throughout its entire clinical history and that he had to be at this job for considerable time before he could recognize a case of acute appendicitis. Possibly part of the fault comes back—maybe we haven't been sufficiently thorough in our teaching the undergraduate medical students.

Dr. J. S. Regan, Buffalo, N. Y.: I would like to make a point about the poly and white count. We have seen cases with 8.000 w.b.c. and 84% polys and in cases with 6,000 w.b.c. and 85% polys and the appendix when taken out was covered with fibrin and there was a lot of free fluid in the belly. I saw three cases at the Children's Hospital of acute appendicitis proven at operation and the

white count was only 3,000. I do think the value of the white count lies in its poly count.

Spasm does not need to be present in appendicitis. If the appendix is behind the cecum it will not cause spasm, or if it is in the pelvis it will not cause spasm. I have seen a number of cases missed because the lack of spasm misled the examiner.

Dr. G. R. Critchlow, Buffalo, N. Y.: A good deal has been said about appendicitis in children, but we have on record a case in a man of 85 years of age with acute appendicitis. He had rather a typical picture. He did not want to go to the hospital; he had a blood pressure of 220 and a fibrillating heart. The question was should we kill him or let him die.

Concerning chronic appendicitis—I want to

cite a point brought to my attention by Dr. Warwick, our pathologist. Dr. Irving Potter removes the appendix in every case of Caesarean section he performs. In the course of years he has done hundreds of Caesareans. All these appendices are sent to the laboratory for examination. There has never been an instance in any of these where the signs of chronic appendicitis or appendical irritation has been demonstrable in any degree whatsoever. I think this is very interesting.

Dr. Thew Wright, Buffalo, N. Y.: Don't take it for granted that because Dr. Potter has done a Caesarean section that the appendix is out. It took a great deal of nerve on my part a few weeks ago, when a

patient, who had had two Caesarian sections at his hands, to insist that she had an appendicitis, and at operation I removed a perforated gangrenous appendix that required immediate appendectomy.

Dr. R. R. B. Fitzgerald, Lockport, N. Y.: I want to thank you for the privilege of attending this meeting; I have certainly had my eyes opened. I cannot add, in discussion, anything more than has already been said. In the last ten days I have had two acute cases—one I took to

be influenza. I saw this patient in the morning and in the afternoon had his appendix out and found it to be gangrenous. The other case was one in which the patient had had pneumonia for a couple of days. Under spinal anesthesia we removed a gangrenous appendix.

SCARLET FEVER CONTROL

By FRANK W. L'AIDLAW, M.D., MIDDLETOWN, N. Y.

From the February tenth issue of the Bulletin of the State Health Officers for the District Composed of the Counties of Sullivan, Ulster, Orange, Rockland and Westchester.

The prevalence of Scarlet Fever in a number of places in the district again impels us to devote some space to some commonplace well-known phases of the subject.

Reports of Cases: "No report" is not a good alibi. There are several methods of encouraging failure to report cases.

Doing Too Much: When a family is penalized for being unfortunate enough to have one or two of its members down with scarlet fever, by drastic and unnecessary restrictions, that family and neighboring families will do what can be done to

avoid a repetition of the process. Restrictions imposed upon wage earners engaged in occupations not involving handling of food, 16 by 20 placards, devoting a great deal of attention to the activities of adult members of the household in response to suggestions of officious and vindictive neighbors, encouraging the idea that law, placards, noise and main force directed toward reported cases will control an outbreak, are some of the ways to insure failure to report.

Not Doing Enough: When a physician knows that making a report terminates the incident with the exception of the 20c fee the health officer

charges for reporting the case to the Albany office, can he be criticized real consistently for concluding, "What's the use"?

The First Case: There may be some uncertainty as to just what constitutes an outbreak, but it is obvious that in the beginning the number is mighty small. Devote some time to the FIRST case. After scarlet fever has existed in a community for some time, the "no time," "no help" alibis are good, of course,-the public not realizing that some real work with a definite object done in the beginning probably would have limited the The number of atypical cases as an outbreak continues, becomes a most formidable problem. game.

It is a good idea in the midst of the hullahaloo over closing the school, the location and color of placards, the complaints that quarantined families are "running all over," and that the dog belonging to a family in which scarlet fever exists was scen fraternizing with a neighbor's cat,-to reflect that a few hours work in the heginning might

have prevented the whole affair.

Don't Depend on Alibis: When a case of Scarlet Fever is reported, investigate it. If it isn't reported, investigate it just the same. Cases will be reported if it is known that they will be discovered anyway. Unless you know scarlet fever well enough to make your opinion respected by the other physicians, you shouldn't be a health officer.

See That a Real Investigation is Made: A visit to a communicable disease case is made for three purposes:

To determine the source.

To ascertain to whom the disease may have been communicated by that case.

3. To instruct, and reasonably restrict the family, so that further exposure does not occur.

If you have a nurse who visits cases for the purpose of filling blank spaces on a card, and who cannot be instructed otherwise,-fire her.

If the inquiry indicated that the neighbor's child may also be a case, investigate that case also,-perhaps calling on Dr. - first.

Notify the School: Give the names of the cases and the excluded household contacts, and have it thoroughly understood that these cases and contacts need the Health Officer's certificate to return to school.

School teachers should never fuss about 30- or 7-day exclusion periods; cases and contacts should be excluded until their re-admission is authorized by the Health Officer. Don't try to pass the buck to the school medical inspector,-he has no authority in the matter.

The Education Law: During an outbreak, Sec.

575 of the Education Law should be utilized. A lot of Education people don't know about this section,-and a lot of Health Officers as well. Here it is:

"Whenever upon investigation a pupil in the public schools shows symptoms of any contagious or infectious disease reportable under the public health law, he shall be excluded from the school and sent to his home immediately, in a safe and proper conveyance, and the health officer of the city or town shall be immediately notified of the existence of such disease. The medical inspector shall examine each pupil returning to a school without a certificate from the health officer of the They make good alibis, later in the veity or town, or the family physician, after absence on account of illness or from unknown cause."

Suspects: The first sentence requires the exclusion of suspects. The health officer is to be notified of such exclusions. It is obvious that such pupils should return to school with the O.K. of the health officer. A number of opinions are prevalent as to the impracticability of this provision. none of which are any good. Of course the health officer may need an assistant if the check-up is not started until practically every pupil in the school is involved.

Absentees: The second sentence is an important one,-so important that we repeat it:

"The medical inspector shall examine each pupil returning to school without a certificate from the health officer of the city or town, or the family physician, after absence on account of illness or from unknown cause."

If the pupil returning without a certificate from the Health Officer is one included in the list of cases and household contacts furnished the school by the health officer, he leaves promptly, and stays out until he has the health officer's certificate.

If the pupil is one the school authorities have excluded under the first part of the section as a suspect and of which the health officer has been notified, the procedure is the same,-the pupil goes home, and comes back when he has the Health Officers' certificate.

The child who has been home sick from a nonreportable condition, comes back to school with a physician's certificate. If he has no certificate, the school medical inspector examines him. If the school medical inspector has reason to believe that the pupil may have been sick with scarlet fever or any reportable disease, it is very obvious that he should refer the case to the health officer.

Of course there are many reasons advanced to demonstrate the impracticability of the foregoing, none of which are sound, and all of which relate to the period after the outbreak has gotten out of hand.

LICHENOID SARCOID (BOECK)

Report of a Case with Review of the Literature By JOSEPH L. MORSE, M.D., NEW YORK, N. Y.

From the Department of Dermatology and Syphilology, N. Y. Post-Graduate Medical School and Hospital, Dr. George M. MacKee, Director. Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

CINCE Boeck's notable paper in 1899, the sarcoid group has been of great interest to dermatologists. He originally recognized and described three types of this group, the large nodular, the small nodulo-papular, and the diffuse infiltrating form. In his original description, Boeck mentioned groups of numerous, very small, bluish or brownish-red papules on the left thigh of his patient. They resembled lichen planus to, It is remarkable that, altho Boeck's first case had these "lichenoid" lesions, so comparatively few other cases of this type have been reported since. However, I am of the opinion that this form of sarcoid may not be as rare as the number of reported cases would lead one to believe; and it is highly probable there are more cases than I have been able to discover which have been reported as lichen planus or otherwise that were in reality this lichenoid form of Boeck's

Hallopeau and Eck² in 1902 reported a case of Boeck's sarcoid. They did not describe lichenoid lesions, but later in a report³ on the progress of the patient under treatment with Fowler's solution, tell of the improvement and modification of the original eruption with the appearance of many lichenoid lesions resembling lichen planus. Unfortunately they did not do a biopsy on these new lesions and the question is whether they were lichen planus papules following arsenic medication or the lichenoid form of sarcoid. This case must therefore remain doubtful.

Winkler⁴ in 1905 wrote a rather extensive paper on Boeck's sarcoid, with a report of a case proven microscopically. In his description of the eruption, he stated that there were also present superficial papular lesions, arranged in groups and lichenoid in appearance.

Zeisler⁵ in 1915 reported a case of generalized multiple benign sarcoid in which he described lichenoid papules on the legs and several flat

lichenoid lesions on the glans penis.

Kuznitzky and Bittorf's⁰ case, the same year, was one of Boeck's sarcoid with involvement of the internal organs, proven at autopsy. There were, besides the typical sarcoid lesions, numerous disseminated papules, brownish in color with bluish and yellowish centers. These looked, for the most part, like lichen planus, but also simulated a papular syphiloderm.

In 1919, Bruusgaard⁷ reported five cases of Boeck's sarcoid. The fourth case of the series was one in which there were typical nodular lesions on the face along with a group of lesions of

the lichenoid form on the right leg.

Fox⁸ presented a case with a questionable diagnosis of lichen planus at the dermatological section of the New York Academy of Medicine in 1921. There were lichenoid lesions on the nape of the neck, along with lesions on the face and backs of the hands. It happened that Dr. D. L. Satenstein, dermato-pathologist at our clinic, had a slide of that case which showed nothing suggestive of lichen planus. There were, however, in the mid and upper cutis isolated tubercles with a moderate inflammatory reaction about them. The tubercles were composed of epithelioid and giant cells. These histological findings fit in with that of a superficial sarcoid and I am therefore including this as a case of lichenoid sarcoid.

Rischin's case, in 1922, presented a universal eruption which he at first thought was lichen ruber. This case also had involvement of the internal organs. The diagnosis of sarcoid was

made histologically.

In 1925, Wright¹⁰ published his unusual case under the title of Lichenoid Sarcoid. This case is unique in the literature, in that it appeared first as areas of depigmentation in which lichenoid papules later developed. There were no other sarcoid lesions. A biopsy revealed the diagnosis of sarcoid.

Kissmeyer, in 1930, wrote an excellent article on the lichenoid form of sarcoid. It was of great help to me in writing this paper and I hereby wish to acknowledge my thanks. He reported two cases of lichenoid sarcoid both of which were proven histologically. The first one consisted entirely of a large group of yellowish lichenoid papules on the sternum. As in Wright's case, there were no typical lesions of sarcoid. In the second case, there were infiltrations on the nose and cheeks, typical of Boeck's sarcoid, with a group of lichenoid papules, resembling lichen planus on the right knee. This case closely resembled Bruusgaard's. It is also of interest to note that this second case, on x-ray examination of the phalanges of the fingers and big toes, revealed the cystic bone changes which are thought to be pathognomonic of sarcoid.

Report of Case*

History.—Mrs. J. S., age 53, widow, born in Italy, was referred to Dr. George M. MacKee. She had an eruption of two years duration. It had first appeared as "red spots" on the arms and similar lesions continued to develop on the fore-

^{*}This case was presented October 23, 1928, by Dr. George M. MacKee at the New York Derm. Society; Arch. Derm. and Syph. 19, 515, 1929.

head, nose, cheeks and ears. About a year after onset, many smaller lesions appeared on the back of the neck. These were quite different from the others. There were no subjective symptoms and



Figure 1
Nodular lesion on nose and annular lesions on cheek;
also shows infiltrated lesion on forcheod.

patient felt well generally. Some of the lesions on the arms had been treated with an acid, otherwise she had had no treatment and the lesions had not changed in appearance. There was nothing significant in the past or family history.

Examination.—The patient was very well nourished and seemed to be in good health. Physical examination was negative except for the following. There was some diffuse enlargement of the right lobe of the thyroid which was freely movable. The lungs showed dullness in the left apex posteriorly and broncho-vesicular breaching in the left infraclavicular region. There were no râles. She had some tenderness in the gall-bladder region and the liver was felt two fingers below the costal margin. There was no adenopathy. The reflexes were normal.

The eruption occupied the forehead, nose, cheeks, ears, back of neck and extensor surfaces of both forearms. In each of these locations the eruption presented an entirely different appearance. On the forehead there were several violaceous plaques, varying in size from a dime to a quarter, infiltrated, smooth, and slightly elevated. The lesion on the nose was a violaceous, oval, quarter-sized tumor, more elevated than those on the forehead. The eruption on the ears consisted

of several small, scaly, violaceous lesions, slightly infiltrated, with some atrophy, suggestive of lupus erythematosus. On the cheeks and extensor surface of each forcarm were many violaceous, oval and round, dime-sized, flat, slightly infiltrated lesions. The centers of most of these were slightly atrophic and had less color. The



FIGURE 2

Annular lesions on forearms.

appearance of the lesions on the forearms was probably partly, if not entirely, due to several acid applications patient had previously received. The margins of these lesions were very slightly elevated and consisted of tiny, flat-topped, shiny papules, giving the appearance of annular lichen planus.

On the back of the neck there were a large number of closely crowded papules, ranging in



Figure 3
Lichenoid lesions on back of neck.

size from a pinhead to a small pea. They were flesh colored, that is they were about the color of the normal skin of the patient, who was a decided brunette. On diascopic pressure they were yellowish in color. The lesions were flat-topped, shiny and some of them were umbilicated. Where

lesions were very close together there was a suggestion of a mosaic or lichenification. With the exception of the color and the hard consistency, the eruption on the whole looked like lichen planus. The only lesions typical of sarcoid were those on the forehead and nose. There were no lesions in the mouth.

Laboratory Examination.—Wassermann and Kahn tests were negative. An ordinary specimen of urine was negative except for a very slight trace of albumin. The red, white and differential blood counts were normal. Graded tuberculin tests were negative in dilutions of 1:1,000,000, 1:100,000, 1:10,000 and 1:5,000; 1:500 and 1:100 both gave +++ reactions. A small piece of tissue from one of the lesions was excised, under sterile precautions, ground up and suspended in salt solution and injected subcutaneously into a At the end of six weeks, the pig showed no enlarged glands or loss of weight and three months later was living and perfectly well. Several examinations of the tissue excised were negative for tubercle bacilli.

Dr. William H. Meyer, Director of the Department of Roentgenology of the New York Post-Graduate Medical School and Hospital, reported on the x-ray examination of the chest and bones of the hands as follows: "The lungs showed advanced second stage tubercle infiltra-

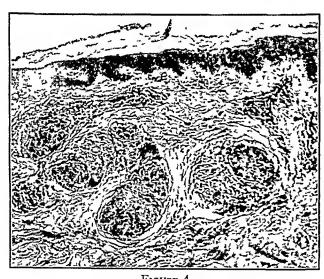


Figure 4

Low power of lichenoid lesion from back of neck.

tion of both upper lobes, in transition to third stage or fibro-bronchiectasia at the apices. There was no gross abnormality in the position, detail or outline of the bones of the hands, except prominences at the bony ridges and tendon insertions, changes frequently noticeable with advancing years."

Histologic Examination—Biopsies were taken from lesions on the back of the neck and right forearm. Dr. David L. Satenstein reported:

"Lesion from the neck: Low power examination revealed in the upper cutis, to one side of a follicle, a number (4) of fairly sharply defined cell accumulations without any relation to the vessels. To one side and above these cell groups are somewhat dilated small vessels with a cell accumulation in the perivascular lymph space. In the remaining portions of the upper cutis the vessels are dilated with some cells about them,

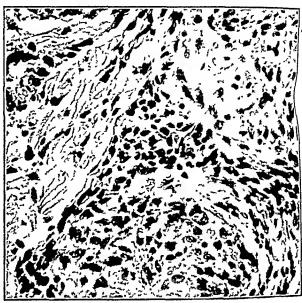


FIGURE 5
High power of tubereles (lesion from the neck).

Throughout the entire cutis there is a definite interstitial edema. The epidermis is apparently unchanged except that portion overlying the cell accumulations which is somewhat flattened out. There are no cell accumulations either about the follicle, sebaceous gland, coil gland or its duct The deeper vessels are not involved.

High power showed the cutis framework (collagen bundles) twisted aside by the cell accumulations to form a suggestion of a capsule. There are no fibres or bundles of connective tissue between the cells. These accumulations are polymorphous in character. The predominant cell is the so-called epithelioid cell, which in this specimen is fairly large. The cell-body is in part margined, in part indistinct; variously shaped, from polyhedral to elongated spindle in outline. In places it is somewhat homogeneous, but in greater part is finely granular. Some of these large polyhedral cells possess dendritic processes which appear to join on to neighboring cells The majority of these cells contain one nucleus, a few larger ones contain numerous nuclei (giant cells). The nuclei are of the so-called vesicular type (fairly sharply margined, with a loose chrematin network and visible nodes). Between these so-called epithelioid cells are densely stained roundish nuclei with hardly any noticeable rim of cell body. In the collagen, outlying the cell groups, are elongated connective tissue cells with elongated nuclei. The vessel walls are swollen, the endothelial lining projecting into the lumen. The cells in the perivascular lymph spaces are mostly of the small lymphocytic type. There are no plasma cells visible anywhere. There is no evidence anywhere, either in the cell accumulations or in the cutis framework, of any type of degeneration or necrosis.

Résumé: The cell accumulations (tubercles) are similar to those noted in various types of tuberculosis but differ markedly from those noted in tissue other than the skin. The inflanmatory reaction present is of a mild type and is apparent-

ly not in relation to the tubercles.

Lesion from the arm: Low power examination showed in the upper cutis, reaching up to and apparently pressing on the epidermis, both discreet and confluent accumulations of cells which is suggestive of a broad band infiltration directly under the epidermis. The connective tissue bundles are pressed aside with slight tendency to form distinct capsules. To one side and apart from the cell accumulations are somewhat dilated vessels and cellular infiltrations about them. To one edge of the section and entirely separated from the previously mentioned cell groups are a few isolated discrect similar cell groups. vessels in their neighborhood are also somewhat dilated; there is a moderate cellular infiltration about them. There is an interstitial edema throughout the cutis. The epidermis is unchanged except over the cell accumulations where it is flattened out and definitely thinned.

Under high power it is seen that the discreet cell accumulation (tubercle) is composed predominantly of very large, irregular and multi-nucleated cells (giant cells). The cell bodies are distinct in outline, have many fine projections and are in part finely and in part coarsely granular. The nuclei are of the vesicular type. Some of the lymphocytic type are also present (probably inelusions). There is a considerable degree of vacuolization. About the giant cells are numerous so-called epithelioid cells of varying sizes and shapes. Scattered among them are some lymphocytes. Plasma cells are not present. There are no blood vessels in this zone. In the zone where the cell groups are fused together as a band, one can note the definite limitation of the tubercles. The cells are predominantly of the epithelioid type, few of the multi-nucleated cells being pres-

ent. The outline of most of the cells is rather indistinct. In this zone there are no plasma cells. There are no connective tissue fibres or bundles between the cells. There is no evidence of degeneration or necrosis in any part of the tissue. The epidermis overlying the so-called tubercles is flattened out to a thin plate, composed of a few parallel rows of cells.

Résumé: In the lower portion of the upper eutis are isolated tubercles (in all probabilities the last to develop), whereas in the sub-epidermic zone the tubercles show a tendency to run together, encroaching on the epidermis. In this specimen the inflammatory reaction is in the surrounding cutis and not in relation to the tubercles.

Conclusion: From the character of the component elements of the tubercles, we may assume the slow but fairly progressive development of the clinical lesions. There apparently is little evidence of any local tissue reaction (from the lack of inflammatory or degenerative manifestations), nor is there evidence of development of a local immunity (absence of plasma cells). The histologic evidence is that of tuberculous type tubercles with little inflammatory reaction. Diagnosis-superficial sarcoid (Boeck).

Treatment: Patient first received four exposures of one-fourth of an erythema dose of unfiltered x-rays, given at weekly intervals, without any improvement in the lesions. She was then put on gold sodium thiosulphate intravenously, injections given once a week. We were using larger doses of gold then and began with a dose of 50 mg. gradually increasing to 100 mg. She showed improvement after the eighth injection and the eruption was entirely gone two weeks after the twenty-sixth injection. There has been no recurrence since.

SUMMARY

1. A review of the literature revealed ten cases of Boeck's sarcoid with lichenoid lesions. In only two cases, Wright's and Kissmeyer's, were there lichenoid lesions alone without other lesions typical of sarcoid.

2. This rare form of sarcoid should be kept in mind in atypical lichenoid eruptions. Biopsy and careful histologic study are of paramount importance in these cases.

3. Another case of Boeck's sarcoid with lichenoid lesions is reported.

4. Gold sodium thiosulphate intravenously cleared up the eruption.

Discussion: Dr. Louis Tulipan, New York, N. Y. There is no question of the case presented by Dr. Morse, being one of Lichenoid Sarcoid. The only objection I have, is the fact that we are cluttering up our literature with unnecessary names. Boeck himself in his first publication in 1899 mentioned an eruption consisting of groups of small pinhead sized papules in some places grouped, resembling Lichen planus, Hallopeau and Eck (1903) presented a similar case, while MacKee in (1929) showed one in New York.

Of course this type of sarcoid is uncommon and has been thoroughly worked up by the presenter in the case reported today.

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A SUMMARY OF THE PHYSIOLOGY OF THE FEMALE REPRODUCTIVE SYSTEM

Some Clinical Observations*

By NATHAN P. SEARS, M.D., SYRACUSE, N. Y.

THE history of our present understanding of the physiology of menstruation dates from 1896 when Knauer discovered that the ovary was a gland of internal secretion and that it controls menstruation by such a secretion. To enumerate all the events that have taken place since then would be far beyond the scope of this paper. It is my purpose only to bring before you in a brief manner the facts as they appear today.

Soon after Knauer's work appeared, Hitschman and Adler demonstrated the changes which take place in the endometrium during the menstrual As soon as these fundamental processes were established, attention was directed to the histology of the ovary, the origin of the lutein cells and the correlation between the follicle cycle and that of the endometrium. During this period the corpus luteum held the stage of investigation and by many it was considered to be the essential structure of the ovary. This opinion seemed logical since its structure so closely resembled that of some of the already familiar ductless glands. Frank's discovery in the Graafian follicle of a hormone which produced changes in uterine contraction similar to those seen at normal oestrus brought attention to this substance. After it had been discovered by Stochard and Papanicolaou and Allen and Doisey that the vaginal epithelium of certain rodents hypertrophied during oestrus, this phenomenon was used as a test to determine the presence of follicular hormone. Frank then found this substance not only in the follicle but also in the corpus luteum and placenta, and applied to it the term female sex hormone.

The finding of female sex hormone in the corpus luteum was rather confusing since Leob, Novak and others still believed that this body had a separate hormone. This question was solved in 1929 by Corner who found in the corpus luteum another secretion, progestin, which he proved

* Read at the Annual Meeting of the Medical Society of the State of New York, at Buffelo, N. Y.; May 24, 1932.

stimulated the premenstrual hyperplasia of the endometrium.

The following sequence of events can, for the present, be considered as facts, although it may be possible that some of them are open to question and future investigation may necessitate a change of opinion.

The pelvic structures most important in the physiology of menstruation are the graafian follicle (including the corpus luteum stage) and the The life history of the graafian endometrium. follicle begins with the primordial follicle, a small vesicle, containing the primordial ovum and lined with small spindle cells. As development proceeds, the lining cells lose their connective tissue character, become pale, cuboidal granulosa cells and are arranged in a multi-layered membrane, the membrana granulosa, lining the cavity of the Extending into the follicular graafian follicle. fluid, as a peninsula, is a group of cells, the discus proligerous, which surround the ovum. As the graafian follicle ripens, it enlarges and finally 15 forced to the surface of the ovary where it rup-From histological tures liberating the ovum. study it has been estimated that rupture takes place on or near the fifteenth day of the cycle. Recently Pratt and Allen have obtained ova from tubal washings and their appearance seems to indicate that they were released between the fourteenth and sixteenth day.

Just before the rupture of the follicle, the proliferative stage of the corpus luteum begins, the granulosa cells increase in size and show signs of activity. Mitosis may be seen and the granulosa layer is separated slightly from the theca interna. After rupture of the follicle the proliferative stage continues, the cells taking on a faint yellow color and becoming the lutein cells. This origin of lutein cells is generally accepted, but some believe that the theca interna which immediately surrounds the membrana granulosa also plays a part. Grossly the freshly ruptured follicle (corpus

luteum) is a thin walled, collapsed vesicle lined with a thin pale yellow layer of lutein cells.

The second stage of corpus luteum development, the vascular stage, is characterized by the extravasation of blood into the yellow substance and the appearance of capillaries between the columns of cells. The lutein layer becomes thicker and the cells more yellow. When fully vascularized the corpus luteum has reached the stage of maturity. It now presents a deep wavy yellow wall and the V-shaped columns of para-lutein cells dip into its substance from above. If the expelled ovum has been fertilized, the corpus luteum continues to develop as the corpus luteum of pregnancy. If it is a part of an infertile cycle it soon regresses, is replaced by connective tissue and in a few weeks becomes a pale fibrous body, the corpus albicans.

Concurrently with the life history of the follicle, the endometrium is undergoing changes. There are three layers of the uterine mucosa, from the lumen to the muscularis they are as follows: the compacta, a shallow layer made up principally of stroma and containing a few narrow glands; the spongiosa, a soft layer, rich in glands, which undergoes the greatest changes during the cycle; and the basalis, a compact glandular layer next to the muscle.

The normal menstrual cycle requires twentyeight days. For convenience, the first day of the bleeding period is accepted as the first day of the cycle. As the corpus luteum of the last cycle regresses, desquamation of the upper two layers of the uterine muscosa occurs, leaving the basalis ' from which regeneration takes place. Desquamation requires three days but bleeding normally lasts five. By the fifth or sixth day of the cycle regeneration has taken place and there are again the three layers of endometrium but in miniature form. At this time a new follicle is developing in the ovary and under its stimulation the endometrium develops. During the stages of proliferation and vascularization of the corpus luteum, the endometrium is gradually changing. glands, especially of the spongy layer, increase in length and width and begin to show some tortuosity. When the corpus luteum has reached the stage of maturity the endometrium shows the active secretory or pre-menstrual condition. This phase is characterized by great activity of the glands. They are long and tortuous with papillary buds of epithelium extending into their lumina so that they present on section a wavy, feathered appearance. Thus the uterine mucosa is prepared for the reception of the fertilized ovum. If fertilization has not taken place, regression begins and a new cycle is in progress. (The relation of the follicle and the endometrium in the infertile and fertile cycles is seen in the first two groups of Fig. 1.)

What initiates this complex process of coordi-

nation between the action of the ovary and the changes in the uterine mucosa? Fröhlich, Cushing and others have noted the effect on genital function of disease and of removal of the anterior pituitary body. Some fifteen years ago, by feeding anterior lobe to immature rats, Emil Goetsch produced in them marked changes in growth and sexual development. Recently, Long and Evans, and Zondek and Aschheim, by injection and transplantation experiments, respectively, showed that the anterior pituitary is vitally important to ovarian function. As a result of their work it is now believed that there are two hormones in the anterior pituitary that affect the action of the ovary; Prolan A, stimulating follicular development and ovulation, and Prolan B, stimulating the luteinization of the follicle.

To summarize the physiology of menstruation, we can say that there are three structures necessary. In the chronology of their activity they are as follows: first, the anterior pituitary producing its secretions, Prolan A and B; second, the ovary, producing the secretions of the follicle and the corpus luteum; and third, the endometrium, upon which these actions finally take place. This activity can be visualized in Figure 2. Prolan A acts on the follicle which in turn stimulates the early development of the endometrium; Prolan B stimulates the formation of corpus luteum which in turn produces the premenstrual hyperplasia.

During the study of the physiology of menstruation, the tests used on the animal to determine the function of the ovary and pituitary body were applied clinically. It was found that in normal women female sex hormone appeared in the blood for five or six days before the onset of menstruation and that it could be obtained from the urine at certain phases of the menstrual cycle. It was also noted that in pregnancy there were large amounts of the luteinizing hormone of the anterior pituitary substance in the urine. These reactions then became of clinical importance. can now, by injecting treated blood or urine into the spayed mouse, be determined whether or not the individual has the normal amount of female sex hormone in the blood and if it is properly excretcd in the urine. These findings are helpful in determining the basis of dysfunctional bleeding and giving a prognosis in prolonged amenorrhea. The fact that the luteinizing substance of the anterior pituitary is greatly increased in the urine during pregnancy makes this a valuable test for this condition. Other uses for these procedures have been mentioned but are not as yet sufficiently standardized to be generally relied upon.

It is not strange that errors of function may occur in one or more of the phases of the complex mechanism of menstruation. It is now supposed that certain types of functional bleeding are due to such a lapse of function. This condition may occur any time between puberty and the menopause. The bleeding in these cases is almost constant, each period lasting with a bloody discharge for many days, even continuing into the next

cycle.

The present explanation of this bleeding; namely, the absence of corpus luteum formation, is based on the appearance of the endometrium and of the ovaries. The former shows an exaggerated mid-period reaction with none of the premenstrual characteristics produced by the action of the corpus luteum. The ovaries contain no corpora lutea but many graafian follicles in an equal stage of development. Within the limitation of our present knowledge, we may, therefore, assume that this type of bleeding is due to the absence of corpus luteum and the excessive production of follicular secretion. Fig. 1 demonstrates diagrammatically the present conception of the physiology of function bleeding (Sub. Fig. 3), as compared with the normal physiology (Sub. Fig. 1).

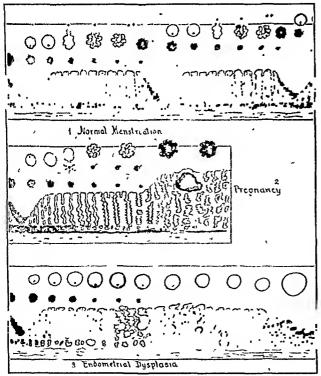


FIGURE 1.
Physiology of reproduction.

The first duty to women suffering from this malady is to rule out, with certainty, any pathological condition. Their study, besides a complete physical examination, should include a basal metabolism determination, a curettage and complete blood studies including blood calcium. If facilities for determining the female sex hormone in the blood and urine are available, this should be done. The diagnosis after finding no pathological condition capable of producing uterine bleeding, rests on the characteristic hyperplasia of the mid-

period endometrium with its "Swiss cheese" pattern, and an excessive amount of female sex hormone in the blood.

Treatment of this condition has been difficult. If the above theory be right, it would be possible to correct the faulty action by the use of progestin. Since this substance is not available for clinical use, another plan must be devised. Novak has reported a group of cases in which he successfully used the luteinizing hormone of the anterior pituitary (Prolan B). Theoretically this substance should produce luteinization of the follicle and thus complete the cycle. However, Samuel Geist in discussing Novak's paper stated that he had had the opportunity of observing the ovaries of women who had received large doses of luteinizing substance and has failed to see any histological change in them. He stopped the bleeding, however, in six of fourteen cases to whom he administered this substance.

In studying thirty-one cases of functional bleeding, I found twenty to have basal metabolism readings of from minus 10% to minus 30%. There were eleven with normal basal readings. Of the former, seventeen remained well while taking thyroid extract. One was unrelieved, refused complete study and would not return when luteinizing substance was available. The other two received thyroid and luteinizing substance. One had bled almost constantly for eleven years. After one course of luteinizing substance and taking three grains of thyroid a day, she had eight normal periods. The ninth was prolonged and profuse but she is now normal again after another course of luteinizing substance." The last of this group had thyroid for a time, it was then discontinued and luteinizing substance was given with very little improvement. Lately she is receiving both and is very much improved.** The eleven patients with normal metabolism stopped bleeding promptly when given luteinizing substance.

Another group of patients falling under the heading of deranged function are those having long periods of amenorrhea. Their inter-menstrual intervals vary from three to eighteen or twenty months. Their condition is evidently due to failure of follicular function. Many of the mild cases can be helped by the oral use of anterior pituitary and thyroid, but the more persistent ones need more potent treatment. The use of the newer ovarian products is helpful but at best it is a substitution therapy. It seems more rational to stimulate, if possible, the patient's ovaries. The following case report exemplifies Miss A. I., age 21, was first seen this idea. Jan. 19, 1931. Her menses began at 13 and

^{*} Because of only partial relief and extreme worry about her condition this patient has recently had a partial hysterectomy in another city.

^{**} Since this paper was read, it has been necessary to use x ray in an attempt to regulate this patient's bleeding.

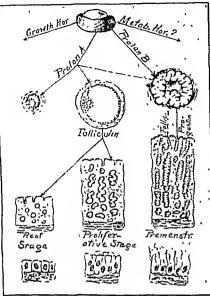


FIGURE 2.
Physiology of reproduction.

were always scant and irregular, appearing at three to five month intervals. Her last period was in July, 1930. Six months before she consulted me, her basal metabolism was minus 40%. The rate was minus 10% when I saw her, Physical examination was negative, body contour, primary and secondary sex characteristics were normal. Anterior pituitary grs. 15 q d was added to the thyroid grs. 11/2 which she had been taking She flowed one day in March, 1931. Later she received 1000 units of theelin with no effect. On Dec 12, 1931 I saw her again. She had had no period since March. From Dec. 12th to 30th she received 120 R.U. of anterior pituitary. On Dec 30th she began a four-day period. On Jan. 15th and Jan. 16th, 1932, she received 50 R.U. each There was a one-day period on Feb 3rd: March 10th and April 13th each started a five-day period Her general condition and mental attitude are excellent, she was recently married and is quite normal and happy.

SHMMARY AND CONCLUSIONS

(1) Menstruation depends on a coordinate relation between the anterior lobe of the pituitary, secreting Prolan A and B, the ovary with its follicular and corpus luteum hormones, and the endometrium.

(2) Derangements of this mechanism result in

functional disorders of menstruction.

(3) We are beginning to understand this intricate process, our goal is not yet reached, but if we go on carefully and judiciously we can in time solve this question and by its solution correct in a retional manner many conditions now treated by radical and empirical methods

Description of the Figures

Figure 1. (After Schroeder, recopied from Graves' Hormonology) consists of three parts. In each is seen a diagram of the endometrium under different conditions. Above the endometrium is represented the stages of follicular development corresponding with the different phases of the endometrial cycle.

In the upper group are represented two complete menstrual cycles. The complete group of follhele figures belongs to the first endometrial cycle and represents the enlargement of the follicle, its rupture at about the mid-menstrual period, the corpus luteum coincident with the premenstrual hyperplasia and the regression of the corpus luteum corresponding, and the desquamation phase of the endometrium. The small black spots inducate the continued regression of the corpus luteum.

In the middle group is shown a fertile cycle The follicle rupture, fertilization of the ovum, the true corpus luteum and the embedding of the embryo unto the prepared endometrium.

In the lower group is seen the supposed behavior of the follicle and endometrium resulting in dysfunctional bleeding. There is no follicular rupture and no corpus luteum. The endometrium shows a persistent exaggerated mid-period reaction; and no secretory or premenstrual phase is seen.

Figure 2. (After Zondek, recopied from Graves) Here is represented the relation between the anterior pituitary, the follicle, corpus luteum, and the different phases of endometrial function. The broken lines indicate that the corpus luteum also contains besides progestin, follicular secretion.

STRUCTURAL CHANGES OF THE AORTA DUE TO ARTERIOSCLEROSIS, AS OBSERVED ROENTGENOLOGICALLY

By WALTER W. FRAY, M.D., and JOSEPH H. GREEN, M.D., ROCHESTER, N. Y.

From the Division of Radiology, Department of Medicine of the University of Rochester School of Medicine and Dentistry, and Strong Memorial Hospital, Rochester, N. Y. Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

A RTERIOSCLEROSIS produces definite morphologic changes within the aorta which can be identified roentgenologically. It is the purpose of the present paper to describe these changes, illustrating each with typical roentgenograms of subjects who have been autopsied. The gross and microscopic appearance of the pathological lesions of these aortae have been studied in detail.

Arteriosclerosis of the aorta characteristically begins in the intima as slightly raised plaques, representing a thickening of the intimal layer due to a proliferative growth of the connective tissue of this layer, with subsequent fatty degeneration, hyalinization, and often necrosis. As a result of these later changes, the plaques may become considerably elevated, soften, and eventually slough, leaving a frank ulceration of variable shape and size. During the more advanced stages, the elastic tissue elements disappear and calcification of the scarred areas may ensue. The media, if involved at all, shows changes mainly of the degenerative type, with fatty degeneration, calcification, and destruction of the muscular tissue elements. Bands of dense fibrous tissue may penetrate even the deeper portion of the muscularis, replacing the destroyed elements of muscular and elastic cells.

A consideration of these changes is important because they lead to a progressive loss of elasticity and contractility of this vessel. The aorta may dilate, producing some increase in its transverse diameter, but more commonly elongation, the result of longitudinal stretching, is the main effect observed.

The changes resulting from this elongation can be determined with considerable accuracy by roentgenological means. Some of the features of this elongation have been emphasized by such writers as Dann (1930), Sproull (1931), Rösler (1931). Recently, Fray (1932) has shown that the altered spatial relationships of the aorta within the thoracic cavity can be demonstrated by comparative measurements of the aortic arch and the chest cage. The manner in which this can be done will be illustrated in the present study by specific cases which have recently been studied at autopsy.

Method of Examination

A complete roentgenological examination should consist of fluoroscopy and at least two roentgenographic films of the heart and aorta. The fluoroscopy is of particular value in giving information concerning the dynamics of the aorta, its size, degree and type of pulsations, abnormal expan-

sions, etc. It enables the examiner to turn the patient at various angles, thereby permitting a general orientation of the arch within the chest cage, and to select the most favorable position for the left oblique film. The arteriosclerotic aorta is quite frequently particularly well seen during the fluoroscopy because of its greater density. Often calcium plaques within the wall of this vessel are clearly visible when seen in profile as at the aortic knob.

The posteroanterior film is obtained in the usual manner, with the anterior aspect of the chest against the plate changer employing at least a 6-ft. distance between the target of the X-ray tube and the film. The patient is instructed to take a moderate inspiration without straining. For the purpose of examination of the aorta only, the exposure time is not important, provided the other factors have been properly selected.

The left oblique film is of even greater importance in a study of the aorta. By turning the patient so that the left anterior aspect of the chest is in contact with the plate changer, the two limbs of the aortic arch are separated and are brought into full salience. The degree of turn necessary varies in different individuals, but is commonly close to 45°. The exact amount of turning is best determined by carrying out the fluoroscopy Under fluoroscopic control the patient can be turned gradually until the two limbs of the arch show maximum separation. The attempt is then made to duplicate this same position for the film exposure. Greater accuracy can be achieved if this angle is measured at the time of the fluoroscopy; exact duplication is then possible for the film technique.

This film is secured at the end of a moderate inspiration. To avoid the superimposed shadows of the arms, the left arm is placed behind the body, while the right arm is elevated by placing the hand on the upper edge of the plate changer. The kilovoltage, and often the time, must be considerably increased in order to obtain a film with good detail at this angle. In a limited number of cases it will be found advisable to secure a right anterior oblique film. This film, as a rule, is not of great importance, although at one time it was used extensively in a futile attempt to determine the calibre of the ascending aorta.

The posteroanterior and left anterior oblique films usually give all the information necessary. The complete analysis of these films requires both direct inspection of the films and mensuration—particularly of the left anterior oblique film. The usual inspection of the film commonly gives information concerning two outstanding charac-

teristics of arteriosclerosis: (a) the presence of calcium plaques, and (b) tortuosity.

The former is usually identified on the posteroanterior film at the aortic knob. Calcified plaques may be caught "on edge" in this location, which can be readily recognized on the posteroanterior film, but often a Bucky technique is required to outline them clearly. Positive identification of these plaques gives indisputable evidence of arteriosclerosis (Lantern slide). This is a local film of the aortic knob region, taken with a Bucky technique. The patient was an elderly woman who subsequently died at the hospital, and the presence of calcium in this region was verified at autopsy.

Tortuosity is the direct result of diffuse aortic elongation. It may produce an unusual prominence of either the ascending or descending aorta on the posteroanterior film, resulting in an increase in the measurement of the great vessels. An abrupt turn in the descending limb of the aortic arch results in an accentuated aortic knuckle. The descending aorta may swing far out of its normal course and be seen behind the heart in the posteroanterior film far to the left of its usual course, or may swing medially to cross the midline, in which case the outline of the descending aorta may be actually observed on the right side of the body. The actual course of the aorta is often more easily followed in the left anterior oblique film, comparing the appearance with that observed in the postcroanterior film.

The following case demonstrates the marked tortuosity which may occur. J. C., age 93, was admitted to the hospital complaining of pain in his left leg and foot. The cardiac rhythm was regular except for frequent extra-systoles. The peripheral arteries were thickened, beaded, and tortuous. The dorsalis pedis and posterior tibial pulsations could not be felt.

The posteroanterior film of the cliest shows a marked prominence of the ascending aorta and aortic knob.* There is a sharp bending of the upper descending aorta in the posteroanterior film. In the oblique film the aorta is markedly tortuous, taking an "S" shaped bend in its descending portion.

It is interesting to note that, although the posterior tibial arteries and portions of the dorsalis pedis arteries showed a marked degree of calcification, no calcification is seen in the aorta with the usual chest technique, and this in spite of his advanced age. This is the only case in this series in which an autopsy was not performed.

The diameter of the aorta is usually not greatly altered in arteriosclerosis. On occasion, slight local dilatations may occur as the result of the destruction of the elastic and muscular elements of the wall of the aorta, and rarely actual aneurism

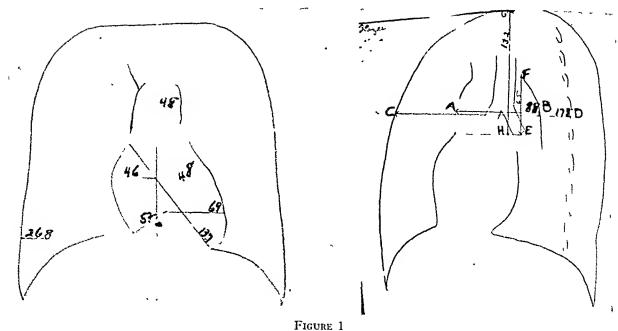
may be observed. The measurement of the transverse diameter of the aorta is often very difficult to determine from the left oblique film because of the failure of the inferior margin of the arch to outline. At times, however, this measurement can be obtained accurately, as in several of our cases. This measurement is usually best made at the descending limb of the arch.

The spatial relationships of the aortic arch within the chest cage can he determined with considerable accuracy by comparative mensuration. The elongation of the aorta produces either an increase in the height or the width of the swing of the aortic arch, or both. The effects of this elongation are easily measured in the following manner: A line is drawn from the ascending limb of the arch to the descending (outside dimensions) immediately below the transverse portion of the arch. This measurement is compared with the measurement of the chest cage taken at this same level from the right anterior chest wall to the left costovertebral articulations. If the width of the swing is within normal limits, the quotient obtained by dividing the chest measurement by the measurement of the aortic arch will be two (2) or over in most instances. This quotient, representing the transverse index of the arch, presents a range for normal individuals of 1.9 to 2.3, or over. An index below 1.9 is strong evidence in favor of aortic elongation.

A vertical index is also obtained by measuring the height of the aortic arch (above the level of the base of the heart) and comparing this with the height of the chest above this same level. The manner in which these measurements are obtained is best explained by examining the traeings of a normal aortic arch. These tracings of a youthful individual of 16 years show the general configuration of the aortic arch as observed on the left oblique film. The line AB, which represents the width of the swing of a normal aortic arch, measures 8.8 cm. The measurement CD of the chest (from the right anterior chest wall to the left costovertebral articulations) is 17.8 cm. The latter divided by the former results in a transverse index of 2.0. Similarly, for the vertical index a line is drawn from the top of the arch to the base line at the base of the heart. This is compared with the height of the chest (GH) above the base line by dividing the latter by the height of the arch EF. In the present case of the normal youth, the chest measurement is 13.2 cm. and the height of the arch 6.5 cm., which yields an index again of approximately 2.0.

A height-width index may also be obtained by dividing the height of the arch by its width. In the case of a normally proportioned arch, the two measurements of the arch are nearly equal, and hence an index obtained as a quotient approaches unity. In cases of arteriosclerosis, the index is commonly less than one (1), but because of the wide variations in normal cases this index has

Abnormal radiographic findings of this and subsequent cases were illustrated by lantern slides.



Iracings of a youthful individual showing general configuration of the acrtic arch as observed on the left oblique film.

not been found to be of much value in diagnostic work.

It now becomes of considerable interest to compare the transverse and vertical indices in cases of arteriosclerosis. In our first case (C.B.) arteriosclerosis is indicated by an elevation of the arch without any increase in the width of the swing of the arch. This was a male of 57 years, who entered the hospital with a typical history of duodenal ulcer. His heart was essentially normal on physical examination. The blood pressure was 105 mm. of mercury systolic and 65 mm. diastolic. The Wassermann test was negative.

The posteroanterior film shows relatively little except for a slight prominence of the ascending aorta and the aortic knob. The oblique film shows the typical effect of elongation with increase in the height of the swing, as indicated by an index of 1.5 (15.5 \div 10=1.5). The transverse index of the arch is normal—1.9 (19.0 \div 10=1.9). This patient died following a gastroenterostomy, and at autopsy a moderate arteriosclerosis of the arch was found. The process was more extensive in the abdominal portion, with cholesterol and calcium deposits.

Arteriosclerosis may alter the transverse index without producing any very pronounced change in the vertical index. This is very apt to occur if the process is not extensive, but is noted occasionally in relatively advanced cases of arteriosclerosis. This latter feature is illustrated by the following case (F. D.) of a woman of 61 years, who entered the hospital because of metastatic invasion of the lung by mammary cancer. The heart was not enlarged. A soft systolic blow was noted over the entire precordium. The peripheral vessels were tortuous and felt sclerosed.

The blood pressure was 184 mm. of mercury systolic and 100 diastolic. The Wassermann reaction was negative.

The posteroanterior chest film shows a prominent shadow at the aortic knob suggesting calcification, but the width across the great vessels appears within normal limits, and there is no evidence of tortuosity. The left oblique film illustrates a definitely widened swing, with a low transverse index of 1.6 (14.0 ÷ 8.8 = 1.6). The vertical index is but little altered, with an index of 1.8. The two main findings of this examination indicating arteriosclerosis are calcification and a definitely low transverse index.

At autopsy the changes in the aorta were found

to be due entirely to arteriosclerosis.

The common finding in advanced arteriosclerosis is to note a lowering in the value of both the vertical and transverse indices, and usually the latter is more profoundly altered. cases follow. The first case (J. A.) is a man of 65 years, who entered the hospital with a complaint of weakness and dyspnoea. Clinically he showed evidence of an enlarged heart (particularly enlarged to the left), a soft systolic murmur at the apex, and a diastolic murmur over the aortic area. The blood pressure was much elevated (220 mm. of mercury systolic and 130 diastolic), with a high pulse pressure. His blood showed a positive Wassermann reaction, and it was believed during his clinical course that much of the cardiovascular picture was best explained on the basis of syphilis.

The posteroanterior film shows a marked increase in the width across the great vessels, due to a prominence of both the ascending and descending aorta. The aortic knob is not prominent,

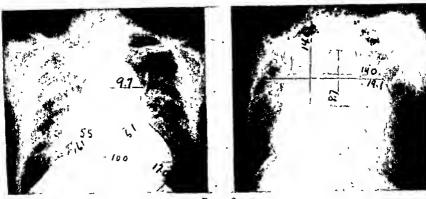


FIGURE 2
Illustrating alteration in both indices of the aortic arch

and there is no radiological evidence of calcification. The left oblique film shows an extremely wide swing to the acrtic arch, with a very low transverse index of 1.3 (19.1÷14.0=1.3), and also a fairly low vertical index of 1.6 (14.0÷8.7=16). The extremely wide swing of this arch produces a very low index; it approaches the lower limit for advanced arteriosclerosis. At autopsy an advanced arteriosclerosis without evidence of syphilis was found. The aorta was inelastic, with numerous atheromatous patches.

Similar cases, showing low transverse and vertical indices, follow. S. R. was a woman of 67 years, who entered the hospital complaining of dyspnoea, edema, and nocturia. Clinically the heart was much enlarged, with totally irregular rhythm. The peripheral vessels were thickened. The blood pressure was 170 mm. of mercury systolic, and 100 mm. diastolic. The Wassermann reaction was negative.

Examination of the posteroanterior film shows a marked increase in the width across the great vessels, with prominence of both the ascending and descending aorta. The aortic knob is not prominent, and there is no definite radiological evidence of calcification. The left oblique film shows a distinctly low transverse index of 1.4 $(17.7 \div 12.9 = 1.4)$, and a low vertical index of 16 (15.9 \div 9.7=1.6). At autopsy the arch showed numerous small atheromatous plaquesmore extensive in the distal portion. Only a slight amount of elasticity remained. The microscopic examination showed a characteristic thickening and hyalinization of the intima, without marked changes in the media or adventitia.

Case A. B. was a male of 52 years, who gave a history of precordial pain, shortness of breath, and edema for five months. Examination of the heart showed the rate to be regular and the sounds to be of good quality. There was a

systolic murmur at the apex, not transmitted. The blood pressure was 210 mm. of mercury systolic and 120 mm. diastolic.

The postcroanterior film of the chest shows marked widening across the great vessels (90 cm.). The aortic knob is not prominent. The left oblique film shows a definite increase in the width of the aortic swing (12.0 cm.), with a chest measurement of 19.0 cm. (transverse index 1.6). There is also an increase in the height of the aortic arch. This measurement is 12.4 cm., with a chest measurement of 19.5 cm. This gives a vertical index of 1.6.

At autopsy there was dilatation with hypertrophy of all of the chambers of the heart. There was also an early fibrinous pericarditis. The arch of the aorta showed numerous atheromatous patches, with some calcification Almost all of the elasticity of the aorta had been lost. The coronary arteries were not tortuous.

G. H. was a man of 62 years, whose chief complaint related to an asthma of 25 years duration Clinically the heart borders were difficult to percuss, due to emphysema. The peripheral vessels appeared sclerotic. The blood pressure was 180 mm. of mercury systolic, and 110 mm. diastolic. The Wassermann reaction was negative.

The posteronterior film shows some prominence of the ascending aorta. The width across the great vessels is not appreciably increased, although the mediastinum is displaced toward the right, probably due to the fibrotic process (Tbc.) of the right upper lung. The left oblique film is of greater interest in showing the arch and descending aorta very clearly. The swing of the arch is widened with low transverse and vertical indices of 1.8 and 1.7, respectively. The patient died suddenly as the result of coronary occlusion. At autopsy the aorta was inelastic, with numerous intimal plaques, some of which showed cal-

cification. Ulceration was also present over many of the plaques. The coronaries showed numerous plaques with calcification. The anterior descending branch of the left coronary was occluded, and an infarct was found in the left ventricle.

The last case (J. C.) was a younger individual of 51 years, who entered the hospital complaining of weakness and edema. For several years she had suffered from dyspnoea and palpitation. The heart was noted to be enlarged clinically, and over the apex a systolic and short diastolic murmur were heard. The blood pressure was 200 mm. of mercury systolic and 105 diastolic. The Wassermann reaction was negative.

The posteroanterior film shows an enlarged heart, with marked increase across the great vessels. Both the ascending and descending portions of the aorta are prominent. The knob is absent. Calcium deposit is not detected. The left oblique film shows the widened swing, with a low transverse index of 1.4 (17.5÷12=1.4). The vertical index is less affected (13.4÷7.3=1.3). At autopsy the usual findings of arteriosclerosis were present, with numerous atheromatous plaques throughout, becoming more frequent and advanced in the abdominal portion. Some of the plaques were ulcerated.

In summary, it may be said that both the posteroanterior and left anterior oblique films are of value in the identification of arteriosclerosis. A prominence of the aortic knob is not a very reliable criterion of arteriosclerosis as evidenced by its frequent absence in many cases, particularly in the cases which clinically showed evidence of hypertension. Calcium deposits are often not noted on the usual chest film, although autopsy may demonstrate its presence in abundance. The increased width across the great vessels, as noted in the posteroanterior film, may even be absent. A fair indication of aortic elongation can be obtained from an analysis of the left anterior oblique film. A low value (below 1.9) of the transverse or vertical index constitutes strong presumptive evidence of loss of elasticity. process is generalized and aneurism is ruled out, arteriosclerosis will be found to be the basis of the

pathology in most instances. Elderly individuals with syphilis may show a combination of both arteriosclerosis and syphilitic aortitis. It becomes extremely difficult to recognize both processes in such cases, unless actual eneurysmal dilatation is present. The case of D. K. illustrates this point. This patient, 54 years of age, entered the hospital because of weakness and edema. Clinically the heart was noted to be enlarged, with a systolic murmur over the aortic area transmitted downward and to the left. The blood pressure was 105 mm. of mercury systolic and 55 mm. diastolic. The Wassermann reaction was negative when non-cholesterinized antigen was used, and 3 plus with the cholesterinized antigen.

The posteroanterior film shows a marked prominence of the ascending aorta, a large but not prominent aortic knuckle, and several heavy calcium plaques of the ascending aorta and arch. The left oblique film showed a widened and elevated swing, with low transverse and vertical indices of 1.7. In this case the presence of heavy calcium plaques suggested arteriosclerosis, but the dilatation of the aorta observed in the left oblique film made a diagnosis of aneurysm very likely. Without this dilatation; i.e., in the case of syphilitic aortitis, the luetic involvement would have been entirely missed. Both the arteriosclerosis and aneurysm were verified at autopsy.

Conclusions

In conclusion it may be said that there are two main types of radiological evidence of arteriosclerosis: (a) the presence of calcification, and (b) evidence of aortic elongation. The former is often not observed on the usual chest film, even when present to a considerable degree. The diagnosis is commonly made by evidence indicating aortic elongation, such as tortuosity; a conspicuous aortic knob; or the widened great vessels of the posteroanterior film. Of particular value in gaining an estimate of aortic elongation are the transverse and vertical indices of the aortic swing as observed on the left anterior oblique film. Indices below 1.9 are commonly found in cases of arteriosclerosis.

TWO SERIES OF CASES OF FOOD POISONING

From the Departments of Pathology and Pediatries of Gouverneur Hospital.

By LAWRENCE HENRY COTTER, M.D., NEW YORK, N. Y.

THE diagnosis of "Ptomaine Poisoning" is still occasionally met with, although all careful bacteriological investigations show that these cases belong to the group of the colon-paratyphoid infections. The term dies hard. The original conception was that the protein molecule was capable of being broken down into toxic substances or "ptor.aines," which reacted

on the human system with varying degrees of violence. It is now known that the chemistry was at fault as methyl alcohol was extensively used in making the extracts and the resulting methiclates were poisonous, rather than the original constituents of the protein. The cases range from mild disability of a few hours' duration, to the fulminant and trequently fatal at-

tacks formerly labeled "Ptomaine Poisoning," and in this connection the following series occurring in the "G" family may be of interest

Case I Female child five years old, taken ill November 23, 1932, with abdominal cramps and severe diarrhea. She showed marked prostration and a temperature of 106° F within twenty-four hours of the onset, but she was kept in the house for only three days, and made a complete recovery.

Case II Female child, eight years old, taken ill November 25, 1932, and admitted to Gomer neur Hospital at 4 A M on the 26th suffering from almost continuous vomiting and diarrhea Examination showed a temperature of 107° F. heart 160, scaphoid abdomen, extreme pallor, and a palpable spleen The child was in a stupor verging on coma, and developed general convulsions with extreme opisthotonous as the temperature gradually rose to 109° and she died at midnight The total duration of the illness was 35 hours The laboratory findings were as follows WBC 23000 with Polys 85%, Lymphnevtes 14% and Monocytes 1% R B C 4,000,000 with 70% hemoglobin The stools looked like oatmeal gruel flecked with blood, and on culture showed paradysentery B Flexuer type An autopsy performed by the Medical Examiner's office revealed an acute unflamm itory colitis involving the whole colon from the ileocecal valve to the rectum

Case III Male child four years old admitted to Gouverneur Hospital on November 28th, complaining of cramps and diarrhea Examination showed a temperature of 105° F, pulse of 140, and a pulpable spleen two inches below the costal margin. The temperature gradually came down to normal, the acute stage having lasted 36 hours. The laboratory findings were as follows W B C 20,000. Polys 84%, Lymphocytes 16% R B C 4,000,000 with hemoglobin 65%. The numerous stools were of the same type as in the preceding case, and paradysentery B Flexner type was recovered on culture. The stools became negative during the ten days the patient remained under observation.

Case IV Female twelve years old, admitted to Gouverneur Hospital November 28, 1932, with a history of diarrhea for two days Her tempera ture was 100° F with a normal pulse and her physical examination reverled nothing unusual with the striking exception of a spleen easily felt three inches below the costal margin. This grad ually receded and was no longer palpable when the patient was discharged on December 9th. The white and red cell counts were within normal range, and though the stools were of the general character of those in the preceding cases, they were consistently negative on culture.

All available food used in family 'G' was cultured, particular care being given to the examination of some candy which the family was inclined

to blame for the infection, but no organism of the type found in the stools was recovered. The variation in the severity of the attack as displayed by the different members of the group was probably due to the difference in the amount of material ingested. Four members of the family who are at the common table were not affected, which ruises the question of personal immunity to the group of organisms.

The foregoing series may be profitably com pared with an outbreak affecting eleven cases which occurred six years ago. The latter were attacked simultaneously after having partaken of a meat stew about five hours previously. Nine of the eleven cases were admitted to Gouverneur Hospital at the same time, displaying the same symptoms of vomiting, diarrhea, and enlarged spleens In no case did the temperature exceed 101° F The examination of the stools gave negative results in five cases, and the Mouse Para typhoid Bacillus b was recovered from the other four It may be noted that the tenth case was admitted to Bellevue Hospital, with findings practically identical to the nine, while the eleventh was admitted to another hospital where a diagnosis of acute appendicitis was made on the physical findings, without the history of the other cases being investigated At operation the case was identified with the other ten, and the appendix was found to be normal

The stew was brought into Gouverneur by the ambulance surgeon at the same time as the patients, with the story that it had been cooked three days previously and left standing around the apartment until eaten simultaneously by the eleven B mouse paratyphoid b was recovered from it as from the four stools. The point of contact with the mouse was not clear but was assumed to have been during the period when the food was not refrigerated after being cooked.

A few general conclusions may profitably be drawn from these two outbreaks. In regard to diagnosis, the importance of the history cannot be too strongly emphasized. The enlargement of the spleen with subsequent recession presented the most striking feature of the physical examination, and in the differential diagnosis especially in ruling out the metallic poisonings it is of great value, in the absence of laboratory findings

It is significant that these outbreaks occur every year on the lower East Side of New York after a religious holiday entailing the cooking of all food some days previously to the celebrations. The most common organism to be recovered is the B Mouse Paratyphoid b, while the Flexner type is comparatively rare. Both are difficult to culture, and are rarely recovered in every case of a series and are therefore frequently overlooked. This is the explanation of infections reported as due to the Hay bacillus which may be recovered from the majority of stools, with similar saprophitic organisms.

ARRESTED SHOULDERS IN VERTEX PRESENTATION By MARK HORNSTEIN, M.D., NEW YORK, N. Y.

This is an abstract of Dr. Hornstein's paper which was published in this Journal of May 15, 1933, page 639, and is printed in order to correct figures 3 and 4, which were inverted in the printed article

of the shoulders at the superior strait of the pelvis after the head is born. The author's technique is based on the principle of transmitting the force of traction to the posterior shoulder through its trapezius muscle, thereby avoiding stretching the cervical nerves and paralysis of the arm.

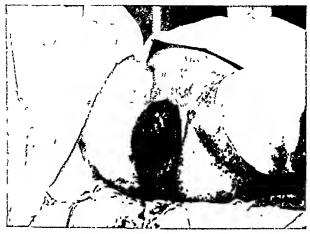


Figure 1.

All of the head, except the chin, is born in the left oeciput anterior position, with the shoulders arrested at the superior strait of the pelvis.



FIGURE 2.

Left occiput anterior position. The wrong method of delivery, consisting of restituting the head before pulling. Irrespective of which shoulder is pulled first, there is danger of brachial paralysis because the pull elongates the neek and stretches the cervical pleaus.

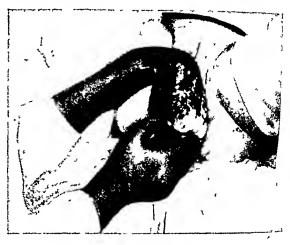


FIGURE 3.

Left occiput anterior position. The ehm has been delivered by increasing the extension of the head. The head is drawn up against the maternal soft parts by the fixed position of the shoulders at the inlet.

The figure shows the correct manner of grasping the head. The hands are crossed so that the left hand grasps the head over the occiput. The right hand five the chin. The pull of the left hand is downward and to the mother's right, thereby making the trapezius tensi The trapezius therefore transmits the force directly to the left or posterior shoulder.



FIGURE 4.

The beginning of the delivery of the posterior should. The head has been rotated so that the face looks over t left shoulder, and the force of traction is transmit along the left trapezius musele, to the posterior should which is emerging at the perineum

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NECESSITIES AND LUXURIES

There are necessities in the care of the sick, and there are luvuries It is the object of medical relief to the poor to supply the medical care that is necessary, and to omit the luxuries tendency of the people in the care of their sick is to spend money on luxuries thinking that they are essential to recovery. The doctor does not object to luxuries in moderation, but he does object when the bill is greater than that for medical necessities

The doctor is willing to make liberal contributions of necessary medical service to the sick poor; but he is dissatisfied when families, friends and social workers bestow luxuries on the sick whom he treats at reduced rates The florist, the taxi driver, and the special nurse all receive their pay before the doctor is remembered. The doctor would be gratified if every dollar paid for luxuries were duplicated with an extra dollar to him for the necessities of medical service

THE PRESIDENT OF THE COUNTY SOCIETY

Physicians render medical service collectively as well as individually. When their service was rendered only to sick persons to whom they were summoned, each doctor was a complete unit in himself, and could give excellent service without regard to his colleagues. The activity of the Medical Society in those days was almost purely scientific, and the discussions in the meetings dealt with the technical work of the physician with little said about the duties of lay persons. The people expected that operations and drugs were by far the most essential agents and cures, and therefore there was little need of hospitals, or nursing, or laboratories, or other collective activities by the community.

As medical knowledge has progressed, it has reached the people to the extent that they now know the causes of sickness and realize their responsibility for seeking preventive service and providing the means of applying therapeutic measures. Hospitals, laboratories, nurses, and public medical education are among the essential services which the community must supply in order that the doctor may make an effective distribution and application of his medical skill. The rise of a popular conception of the duty of the community to place medical service within the reach of all the people is one of the most striking developments of modern medicine.

Social medical service has developed to such an extent that it has developed its own practitioners who are largely independent of the medical profession. First came departments of health and then public nurses, social workers, statisticians, endowments, and lay health associations. All these forms of organizations developed under the advice and assistance of individual physicians, while the great majority took little part in the movement. It seemed natural and proper that the people of a community should be able to organize themselves independently of the practice of physicians; but when the lay organizations began to function on a large scale, three fundamental principles became clearly apparent:

1. Every application of a medical service, preventive as well as therapeutic, is given by an individual doctor to an individual patient.

2. All methods of giving medical service satisfactory to both the patient and the physician have developed spontaneously as the result of years of experience; new ones planned on theory cannot be substituted.

3. Physicians are the medical advisers to the community as well as to the sick individual.

The practical question before the medical profession is, how shall practicing physicians as a group give medical service to a community apart from the individual sick of that community? The answer is that the County Medical Society shall be the medical adviser of the community.

This function of the County Society is now established throughout the nation, and great progress has been made in developing standard methods of giving medical advice by a County Society similar to that followed by physicians in private practice:

1. In the first place, the medical society must have its central office, which may be that of its president or its secretary; but it is essential that the existence of the office shall be widely known, and that when calls come to it they shall be answered promptly.

2. In the second place, when a call comes requesting advice, the officer receiving it shall feel a personal responsibility for answering it either personally or by assigning it to an assistant officer or committeeman.

3. In the third place, the officers of the County Society shall devise standard forms of practice, and shall develop plans for applying these forms in dealing with actual conditions in their own counties.

The president of the County Medical Society is the leader of the Society during his term of office. He is the commanding officer and the chief-of-staff of the Society. He also represents the rank and file of the members, and has his own circle of friends who are anxious to support him in his plans. He will be a busy man during his term of office; and at the end of a year or two he will yield his place of honor and service to another who will bring new ideas and enthusiasm to the office. But as an ex-president he will be able to put his experiences to use by directing the work of a committee. Service as a president of a County Medical Society is a most valuable initiation into the methods of society leadership in all forms of community medical service.

It is customary to speak of the secretary as the most essential and powerful officer of a county medical society. A secretary renders indispensable service through his knowledge of the routine work of the society and of the temperaments and peculiarities of its members. He stands for permanence of policy, for consistency of action, and for order in the proceedings of the society. His leaning is toward conservatism and the preservation of all that is good in the older methods.

On the other hand, the president is expected to try innovations and to appoint committees whose members will cooperate with him in an honest endeavor to carry out his policies. It is by a trial of innovations that progress is made.

The presidency of a county society is no longer an honor conferred for past services or personal geniality, but is an opportunity for constructive action and leadership. There is a growing sentiment to carry out this principle in the election of presidents.



MEDICAL PROGRESS



A Simple Test for Capillary Resistance: 'he "Flicking" Test,-Harold W. Jones and eandro M. Tocantins, writing in the American ournal of the Medical Sciences, April, 1933, lxxxv, 733, call attention to the difficulty that as been experienced in differentiating between n individual with purpuric manifestations and me infested with fleas. Following the bite of hese insects, petechiae and at times ecchymoses ind hematomas develop. Efforts have been nade by a number of investigators to make this distinction by means of the capillary resistance This consisted in applying a tourniquet and then making multiple punctures with a needle, after which, in certain cases, petechiae appeared. The authors have found that this test is positive in a large percentage of supposedly normal individuals. They propose the "flicking test" which is performed by applying a tourniquet two or three inches above the elbow for five minutes as for the tourniquet test. After four minutes, by flicking the middle finger against the distended vein three or four times, petechiae appear in cases of purpura. In active purpura flicking may produce petechiae in almost any part of the body. This test was performed in 108 normal individuals on whom the capillary resistance test was performed. A comparison of the two tests showed that 55 of the 108 individuals gave both negative capillary resistance and flicking tests; 33 had a negative capillary resistance test and also a positive flicking test. In each instance of a positive capillary resistance test there was also a positive flicking test. The advantages of the flicking test are that it is easy to perform, yields more positives than the capillary resistance test and is positive after the capillary resistance test is negative. In every patient with acute purpura hemorrhagica the flicking test was positive; in some of these cases the tourniquet test was negative. The positive flicking test indicates that the capillaries or venules rupture or become permeable, resulting in the appearance of petechiae. About 49 per cent of supposedly normal persons show this phenomenon in the spring of the year.

The Concept of Occupational Deformation.

—In a general medicolegal sense, says Rinaldo Pellegrini, the term deformation means exclusively an injury to the face, such as causes in those who see it a sense of repugnance. Compensation may be awarded for a deformation, provided the disfigurement limits the worker's productivity or his capacity for securing gainful occupation. Hitherto the attention of insurance companies has not been drawn to occupational deformation,

which is to be considered correlated to esthetic deformation. By occupational deformation is understood a deformity resulting from any kind of injury (due to violence in the course of work), which is expressed in an evident anatomic change such as betrays the state of incapacity of the person undergoing examination, and which, therefore, makes it reasonable to presuppose a greater or less diminution of capacity for work. It means accordingly an injury resulting in a decreased capacity for competition, and so, a lessened earning capacity, the handicap being the greater, the larger the room for choice on the part of the employer among individuals physically or productively fit. In order to constitute an occupational deformation, the injury must be by its very nature quite evident, and incapable of being concealed by any means that will not attract the attention of others. Thus there will be no occupational deformity in such cases as cardiae insufficiency from accident, large cicatrices on the abdomen, scar following incision for empyema, hernia, etc. But we shall have occupational deformation in such hypothetical cases as ankylosis in marked flexion of the limbs; amputation of a thigh or of several fingers of the hand; physiopathic contractures; claw hand, or a hand atrophic through a Dupuytren contracture or the scare of a phlegmon; tuberculous cachexia, or premature senility from accident. Especially is there a difference hetween occupational deformation in a strict sense and esthetic deformation in that, in the former there is also a real and direct incapacity for work, from anatomo-functional unfitness, while there is none in the latter. With reference to the effects of incapacity for entering into competition, occupational deformation is of much greater importance than esthetic. Consequently the percentage of damages should be estimated as greater than would be the case on the basis of a medical examination with merely biological and clinical criteria. This means that the computation of the total causes of incapacity must take into account not only the influence, in an anatomic and functional sense, that an earlier lesion, now healed, may have had upon the out-come of a later accident, but also the aggravation of an occupational deformation that may result, so that the latter takes on such a dignity as to betray itself on its own account in a diminution of earning capacity.—Riforma medica, February 25, 1933.

Atropine as a Diagnostic Aid in Appendicitis.—Francis M. Findlay states that the gradual increase in the mortality from appendicitis is largely due to delay in operation. Much

of this delay may be attributed to failure to recognize early the obstructive type of appendicitis. In this type symptoms are variable, pain being the only constant symptom. Atropine is of great value in differentiating the pain and tenderness due to acute appendicitis and that due to other In any suspected case of appendiconditions. citis, the patient, if an adult, is given 1/100 of a grain of atropine sulphate by mouth. If nausea is present it may be administered subcutaneously. One-half hour later an enema of two quarts of warm soap suds is given. After the enema is expelled the abdomen is carefully palpated, and if an area of distinct localized tenderness persists in the region of the appendix a positive diagnosis should be made. If the enema has been only partially expelled, another may be given. In the type of appendicitis due to an infective inflammation of the wall of the appendix atropine is helpful in differentiating the colic due to enteritis, colitis, or food poisoning and that due to a real inflammatory process. It is in the diagnosis of the obstructive type of appendicitis that atropine is of the greatest value, as the pain is often very transitory, and vomiting also may be absent. For these reasons an acute attack of appendicitis is often overlooked when the patient is first seen. Tenderness is frequently the only positive physical finding and failure to detect it spells disaster. Persisting tenderness over the appendix in an adult male after the use of atropine and an enema should never be disregarded. If the tenderness has been preceded by sudden onset of pain, appendicitis is present in at least 90 per cent of the cases.—New England Journal of Medicine, March 23, 1933, ccviii, 12.

Five Years' Experience with Hyperthermia Treatment.—The results of a physical method of producing therapeutic hyperthermia are reported by Franz Walinski in the Deutsche medizinische Wochenschrift of March 17, 1933. His method, published in detail in 1928 on the basis of his first experiences, consists, briefly, of giving the patient an intravenous injection of 10 c.c. of a 20 per cent saline solution, followed in 5 minutes by immersion in a bath at 37.5-38° C., the temperature of which is increased in the course of 12-30 minutes to about 41-42° C., according to the tolerance of the individual. Almost without exception the body of the patient reaches the desired thermic elevation in this time. Care must be taken not to allow it to rise too high, for fear of a subsequent unfavorable reaction to the congestion. On the first occasion it is inadvisable to allow the patient's temperature to exceed 39.5° C. The effect of the saline injection is to diminish sweat secretion, and its use (except in kidney cases, where it is contraindicated) not only causes a more rapid rise of temperature during the course of the bath, and a prolongation of its duration, but also has the distinct advantage

of nearly always making the hyperthermia more easily tolerated by the patient. After the bath the patient is immediately put to bed in a wet pack and covered with 5 woolen blankets. During the pack he is given drinks of hot tea or coffee, at a temperature 5-10° C. in excess of the body temperature. Scarcely ever has it been necessary to employ any cardiac stimulants. There has been no death among the 353 patients thus treated, whereas malaria treatment has resulted in 8-14 per cent of deaths. Patients with a blood pressure of 190 or even 200 mm. Hg have tolerated perfectly a body temperature of 40.5° C. The number and duration of the treatments must depend on the nature of the disease. In addition to increase in the blood chlorides, a simultaneous increase in the protein metabolism of the body was observed. Blood sugar values and the alkali reserve in the blood fall during the first part of the hyperthermia, to rise again later, and a leucocytosis appears in the blood picture. Diseases more or less favorably influenced were: tabes dorsalis, cerebrospinal syphilis, progressive paralysis, multiple sclerosis, postencephalitic parkinsonism, myelitis, polyneuritis, sciatica, chronic arthritis, pyelitis, bronchial asthma, and inflammatory conditions of the adnexa. No effect was observed in amyotrophic lateral sclerosis, gonorrhea (except in 1 case), herpes zoster, psoriasis, or nephritis.

The Relation of Herpetic Virus to the Results of Fever Therapy in General Paralysis. -According to O. Naegeli, the hypothesis that the presence of herpetic virus in the fever blisters accompanying fever therapy of general paralysis bears a relation to the favorable results of such therapy is based on the following grounds: Such an hypothesis is consistent with the almost exclusively regional effect of the various fever methods. Upon mobilization of the virus, a marked increase of the latter frequently occurs in the brain, and it can be readily understood that syphilis in the rest of the body would be but little influenced by a virus present there in only small quantity. The hypothesis explains clearly the uniform results in the various types of fever therapy, for these types play only the rôle of activators for the herpetic virus; the active principle, the virus, is always the same. The favorable prognosis of certain acute infectious diseases, upon outbreak of an attack of herpes, has been confirmed on the basis of experience in croupous pneumonia, by statistics covering a long period. Herpetic virus has the effect of inhibiting locally for a strikingly long time the colonization of pyococci, even in herpetic vesicles that are already suppurating. Hence it may be regarded as demonstrated that this virus must, in general, be able to influence the course of infec-The clearest tious diseases, including syphilis. and most rapid results of fever treatment, especially in progressed general paralysis and as a general rule in cerebrospinal lues, are observed in those cases in which herpes simplex has appeared during the fever. In cases in which no herpetic eruption accompanies the fever, results vary; in these, there is seldom if ever such an extensive curative result as appears in activated herpetics. However, cases have been confirmed in which there has been a cleaning up of the cerebrospinal fluid. But these are fewer than in the herpetic cases, and the somatic deterioration may rapidly increase here. Possibly the improvements may be accounted for on the supposition that there is an activation here of the herpes virus without a cutaneous cruption, perhaps in the purely neurotropic stocks. So far as ease histories can be trusted, one may conclude that there is less frequently an infection of the cerebrospinal fluid in those patients who have at an earlier period observed herpetic eruptions, especially during their syphilitic illness, than in those who never had any fever blisters. Syphilities who exhibited herpetic manifestations during the first years following infection seem to be especially protected against infection of the cerebrospinal fluid. This observation must, however, be accepted only provisionally, since such statements do not seem to be entirely reliable. The fact that the female sex is much more frequently subject to herpes simplex than the male, and that, conversely, tabes and general paralysis are decidedly less common in females than in males, appears to be of great significance in this connection. It is also true that syphilitie infection of the cerebrospinal fluid is less common in women than in men. The herpetic hypothesis may, therefore, serve at any rate to throw some light on the hitherto unexplained and very marked difference in the incidence of metalnes in males and females,-Schweizerische medizinische Wochenschrift, March 18, 1933.

Tibial Apophysitis or Schlatter-Osgood Disease.-There has never been complete agree ment, says V. Maselli, with regard to the etiology and pathogenic mechanism of the Schlatter-Osgood disease, possibly because the majority of writers have thought it necessary to commit themselves to an opinion whether a preponderant part in its causation should or should not be attributed to trauma. Maselli thinks it unnecessary to insist on this point, in view of his findings in 2 personal cases which form the basis of this study. These cases, although the symptomatology was grossly rather similar, presented entirely different anamneses and different radiological findings. In the first case the tibial lesion was bilateral, and was of pathogenetic interest because of rarefying changes observed not only in the tibiae themselves but also in other segments of the bony system as well as changes in the genital apparatus (hypogenitalism). In the second case the lesions were localized solely in one limb, where they presented all the characteristics of a detachment of the anterior apophysis of the tibia, without any change

in the consistency of the bone. The author's studies lead him to conclude that detachments or fractures of the anterior apophysis of the tibia should be considered under the single denomination of Schlatter-Osgood disease, irrespective of whether the trauma has been superadded to a constitutional lesion or has acted as the sole exciting element upon a normal bone. He proves that, contrary to the opinion of most writers, there exist cases in which the skeletal lesions are of Schlatter type, yet which differ substantially from this type in both their clinical course and the radiological picture. Such lesions, which have been regarded by some authors as constituting a single morbidentity (tibial apophysitis) are the result of various etiopathogenic mechanisms, such for example as infections from latent micro-organisms, heredosyphilis, tuberculosis, late rickets, and, as Maselli's first case shows, developmental disturbances of ossification of cartilage, probably connected with endocrinosympathetic imbalance. Treatment should in all cases be by bloodless methods, since highly satisfactory results have been obtained by immobilization in plaster casts, combined with general treatment by calcium preparations, pluriglandular extracts, or arsenobenzol, according to the etiologic judgment in each individual case.-Riforma medica, February 18, 1933.

Tannic Acid Treatment of Burns .- J. D. Martin, Jr., states that tannie acid alone is not sufficient in caring for burns, but it is a great aid when used in combination with measures for combating the toxic substance which develops following the injury. In his clinic the tannic acid method has not given the marked reduction in mortality which is reported in other clinics. However, the morbidity has been markedly reduced. The stay in the hospital has been shortened in almost every The complications treated are fewer. particularly the respiratory infections and general sepsis, and there is a lessening of scar formation Other advantages are that it lessens the pain and prevents loss of vital body fluids which escape from the wound surface. Epithelialization is hastened and the burns are much cleaner than those treated by wet dressings and some of the oily preparations. The necessity of frequent and painful dressings is removed, which is an important economic factor. In extensive burns the first consideration is the treatment of primary shock. Morphine is administered in doses sufficient to make the patient comfortable. External heat is applied by the use of blankets and a canopy with electric light bulbs. Stimulants are administered early. An infusion of 1000 c.c. of normal saline is given immediately and is repeated every six or cight hours. Saline and glucose are administered routinely. When the patient has reacted from the shock, all loose skin is removed and the surface cleansed with saline or some mid non-irritating antiseptic. An aqueous solution of

2.5 to 5 per cent tannic acid is then applied to the surface by an ordinary atomizer every thirty minutes until a good tannate is formed, which usually requires from six to eighteen hours. In first and some second degree burns the coagulum begins to come away in eight to twelve days, leaving a dry layer of epithelium. In deeper burns the tannate must be removed, usually by softening the edges with dichloramine gauze and wet dressings of saline. After all the coagulum is off the raw surface is prepared for grafting by applying saline dressings. The most comfortable procedure is to place the patient in a tub of warm water two or three times daily for twenty to thirty minutes. All burns should be grafted rather than allowed to heal by granulation. During the entire treatment consideration must be given to the position of the patient in order to prevent contractions.— Southern Medical Journal, April, 1933, xxvi, 4.

Lead Poisoning and Gastric Ulcer.—The possibility of an etiological relationship between lead poisoning and gastric ulcer is discussed by Albrecht Peipers in the Deutsche medizinische Wochenschrift of February 17, 1933. The question has more than an academic interest, since upon its answer hinges the patient's right to claim compensation under the social insurance laws. An illustrative case history is presented, of a locksmith, aged 46, who after working for 10 years upon lead castings with hammer and chisel, began to suffer with abdominal pains, which were diagnosed by the house physician at the Marburg University hospital as lead poisoning—a diagnosis which was later confirmed by the industrial physician on the basis of anemia, a blue line on the gums, and stippled erythrocytes in the smear. An application for compensation made somewhat later on grounds of chronic lead poisoning was denied, since an official examination, although revealing signs of vegetative stigmatization, failed to demonstrate the persistence of any typical signs of lead poisoning. An x-ray examination the following year for colicky pains and vomiting with which the patient had suffered for two years, revealed the presence of a duodenal ulcer and signs of spasm of the colon. Schiff in a little known work pointed out in 1919 that in chronic saturnism, in addition to typical colics, there also appear uncharacteristic conditions of pain, of long persistence. From the debate with reference to the genesis of ulcer, 2 principal causes emerge: (1) a circulatory disturbance, and (2) a disturbance in the balance of the peptinizing capacity of the gastric juice and the antipeptic defence of the gastric wall, or of the blood. The pathologicanatomic findings of muscular hypertrophy, thickening of the connective tissue of the vessel sheaths, and obliterating processes furnish a sufficient morphological basis for the assumption that circulatory disturbances are of significance in the

pathogenesis of ulcer in victims of lead-poisoning The objection might justly be raised that in comparison with the frequency of ulcers the coincidence with lead poisoning is purely accidental. But in the case cited the author thinks it is justifiable to assume a connection between the two diseases, for to him the fact was decisive that the pains had first put in an appearance after the time at which the lead colic clinically appeared. Chronic lead poisoning may, as the above shows. produce conditions that bring about an ulcer even in an individual in whom no dysharmony of the vegetative system existed. Moreover, the coincidence of ulcer and manifest lead poisoning has been observed not infrequently by various authors.

The Resistance of Healing Wounds to lafection:-In order to determine the degree oi infectibility of simple incised and sutured wounds, Jean Jacques DuMortier swabbed such wounds with a culture of pathogenic organisms after various intervals of time. He found that the resistance of a healing wound to infection is minimal during the first six hours. After the first six hours, infections decrease in number and severity When organisms are imuntil the fifth day. planted upon a sutured wound twelve hours after operation, although the great majority of incisions become infected (83 per cent), the infections are localized. From this time on, the percentage and severity of infections steadily decreases until, between the fourth and fifth postoperative days it is no longer possible to cause infection by implantation of virulent microorganisms on the surface of the wound. This period of four to five days corresponds with the "lag period" of healing wounds, described by Harvey and Carrel. This period is characterized by fibrin formation in the blood or plasma exuded between the surfaces of the fresh wound. This fibrin formation apparently has but little resistance against the invasion or multiplication of bacteria and it is only when it has been replaced by fibroblasts that protection against bacterial invasions becomes complete. It is of clinical importance that for the first five days following an operative incision extreme care be taken in the manipulation of a wound. Removal of the stitches on the sixth day after operation does not lower the resistance of the wound to infection, since these stitches have become walled off by granulation tissue, which is highly resistant to the invasion of bacteria. The author points out that the period in healing, in which a wound may be manipulated without danger of resulting infection through surface implantation of organisms, whether by wilful of unintentional abandonment of the principles of asepsis, has not hitherto been demonstrated. Surgery, Gynecology and Obstetrics, April, 1933. lvi, 4.



LEGAL



JURORS-MISCONDUCT HELD CONTEMPT OF COURT

By Lorenz J Brosnan, Esq. Counsel Medical Society of the State of New York

It is absolutely essential to the proper administration of justice that those who are called upon to serve as jurors conscientiously and honestly perform the duties of their office. A juror who violates his oath of office strikes at the very foundation of our government. He commits a serious offense for which he can, under our law, and should receive punishment. An example of a statute designed to safeguard litigants against "jury fixing" is found in Section 753 of our Judiciary Law which provides for punishment of contempts of court, and deals with improper conduct of jurors as follows.

"Sec 753 subd 6 A person duly notified to attend as a juror, at a term of the court, for improperly conversing with a party to an action or special proceeding to be tried at that term or with any other person, in relation to the merits of that action or special proceeding, or for receiving a communication from any per son, in relation to the merits of such an action or special proceeding, without immediately disclosing the same to the court"

The United States Supreme Court recently passed upon a most important case involving a question of the validity of the ruling of a trial judge punishing a juror for misconduct der to understand the ruling of the court it is necessary to discuss the facts in detail. In one of the Tederal District Courts a certain defend ant F--- was indicted for use of the mails to defraud, and when his case came up for trial a panel of jurors was summoned to attend jurisdiction was one in which women have the privilege and duty of serving as jurors and a certain Mrs C- received a notice first made inquiries as to how she might be excused from jury duty, and learned that excuses should be presented to the judge and further that she probably would not be accepted as a mror for the trial of Γ — as she had once been in the employ of the F- Company, with which the defendant lind been associated

She reported at the courtroom the day of the trial and while other members of the jury were being examined she stated to several other women on the panel that she wanted to serve on the jury, but that she was afraid that she would be disqualified because of her former employment. The facts were that she had been for a short time a stenographer and typist in the employ of

the F—— Company, and that in addition she had been for a few years assistant eashier in a bank of which F—— had been an active customer Mis C—— had married the president of the stud bank, and a friendship of some years standing had existed between Mr C—— and F——

When Mrs C-was interrogated under oath on her so-called tour dire examination to deter nune whether she was suitable and satisfactory as a juror, she was asked if she had ever been in business of any kind. Her answer was, "I have been a stenographer before my marriage, yes" In answer to a question as to the kind of business, she said, "Well, I did some banking and some real estate and insurance and I was with an automobile concern, with a Nash agency' Upon being asked whether she felt that she was unbiased, and that she could base her verdiet upon the evidence, and the law given her by the court, she replied that she was unbiased and would follow only the evidence and the law Rehing upon these answers the prosecution accepted her as a juror and she sat as such during the entire trial, which lasted eight weeks

The court submitted the issue of the innocence or guilt of the defendant to the jury and after deliberating for a full week the jury reported their inability to agree and were discharged. The jury stood eleven to one in favor of conviction of the defendant. The sole vote for acquittal was that of Mrs C--- It was brought out that during the trial Mrs C--- had told the jurors that she regarded F--- as a victim of circum stances, he having been unable to borrow money to cover his needs in the year 1929. She had told the other jurors that the source of her information was outside the evidence. During the jury's deliberations she refused to reason with the others, placing her hands over her cars or failing to reply to their statements them that a certain witness for the prosecution was a perjuror and that she had been told so by her husband

The government took steps against her to punish her for contempt, charging that her answers on the voir dire examination had been wilfully and corruptly false, and that her misconduct had hindered and obstructed the trial. A hearing on these charges was held and after such hearing the court found Mrs. C——guilty of obstructing the administration of justice by falsely stating that she was free from bias and would follow the

law and the evidence, and in deliberately concealing the fact of her employment with the F——Company. She was thereupon sentenced to fine and imprisonment.

The case was then taken on a writ of Certiorari to the United States Supreme Court where the conviction was affirmed. The opinion of the court was delivered by Justice Cardozo.

The opinion stated that the jury woman had been properly found guilty of both false swearing and concealment, but that the wrong that she was being punished for was that of improperly intruding into a position for which clearly she had believed herself ineligible and thereby to obstruct the administration of justice. The court stated:

"The petitioner is not condemned for concealment, though concealment has been proved. She is not condemned for false swearing though false swearing has been proved. She is condemned for that she made use of false swearing and concealment as the means whereby to accomplish her acceptance as a juror, and under cover of that relation to obstruct the course of justice. There is a distinction not to be ignored between deceit by a witness and deceit by a talesman. A talesman when accepted as a juror becomes a part or member of the court. . . . The judge who examines on the voir dire is engaged in the process of organizing the court. If the answers to the questions are wilfully evasive or knowingly. untrue, the talesman, when accepted, is a juror in name only. His relation to the court and to the parties is tainted in its origin; it is a mere pretense and sham. What was sought to be attained was the choice of an impartial arbiter. What happened was the intrusion of a partisan defender. If a kinsman of one of the litigants had gone into the jury room disguised as a complaisant juror, the effect would have been no different. The doom of mere sterility was on the trial from the beginning."

The argument had been urged on behalf of Mrs. C— that what had transpired in the jury room was privileged, and had been improperly used against her. The court dealt with the said argument by ruling that even assuming such a privilege to exist in ordinary cases, in this case it had been lost for the petitioner had assumed her duties as a juror through fraud, and there-

fore was not entitled to benefit by the immunities of jurors.

It had been urged that to hold Mrs. C—for contempt would tend to deprive jurors of their views and would cause them to fear punishment for following their own views on any given case. The court disposed of those arguments as follows:

"A juror of integrity and reasonable firmness will not fear to speak his mind if the confidences of debate are barred to the ears of mere impertinence or malice. He will not expect to be shielded against the disclosure of his conduct in the event that there is evidence reflecting upon his honor. The chance that now and then there may be found some timid soul who will take counsel of his fears and give way to their repressive power is too remote and shadowy to shape the course of justice. It must yield to the overmastering need, so vital in our polity, of preserving trial by jury in its purity against the inroads of corruption."

The court continued:

"She has not been held to answer for any verdict that she has rendered, nor for any thing said or done in considering her verdict. She has been held to answer for the deceit whereby she made herself a juror, and was thereby placed in a position to vote upon the case at all. What was said and done in the jury room is not the gist of her wrongdoing. What was said and done in the jury room is no more than confirmatory evidence of her state of mind before. . . . Indeed what happened in the jury room added so little to the case that the error, if there had been any, in permitting it to be proved, would have to be regarded as unsubstantial and without effect on the result. No one can read the findings of the triers of the facts and hesitate in concluding that even with this evidence omitted there would have been an adjudication of contempt. In considering with all this fullness the merits of the ruling. we have been moved by the desire to build securely for the future."

Every citizen who is interested in the proper administration of 'our law will heartily concur with the opinion of the highest court of our land. It is to be hoped that the punishment to this juror will serve as a warning that such conduct will not go unpunished.

CLAIMED NEGLIGENT APPLICATION OF ARGYROL TO THROAT

A doctor was requested by a patient to examine her throat as she complained that it was giving her considerable discomfort. The doctor found her throat slightly red with a post-

nasal discharge. He took a tongue depresson and a throat applicator, and after applying clean cotton on the applicator he dipped the same in 25% argyrol solution and applied it

to the nasopharynx. On doing so the doctor observed that a few drops of blood came from the sensitive mucous membrane. The patient however seemed to suffer no discomfort, except that she coughed a few times. She left the doctor's office and the next he heard of her was when he received a telephone call the following night stating that the patient was suffering from a hemorrhage. He called at her home and found that she was bleeding somewhat from the nasopharynx. He cleaned a clot of blood away from the area and applied adrenaline solution and gave her an injection in the arm to promote coagulation of the blood. The next day he again received a call that the blood was again bothering the patient and he directed that she should enter a hospital where she remained a short time receiving care for her condition which promptly improved under his treatment.

An action was instituted charging the doctor with malpractice in his treatment. The charge was that in treating the patient's throat the doctor had negligently cut or picrced one of the main arteries. Said claim, of course, was emphatically denied by the doctor. The case came on for trial and the plaintiff was unable to introduce any competent proof to the effect that anything the doctor did or failed to do was improper. Thereafter, at the close of the plaintiff's testimony, on motion of defendant's counsel, the complaint was dismissed, finally terminating the matter in favor of the doctor.

EPILEPTIC SEIZURE DURING TREATMENT

A specialist in ear, nose and throat cases was consulted by a young man who complained of nose trouble. The doctor examined him and found that he had chronically infected tonsils and a chronic infection of the left sinus. The doctor advised the application of eph-

edrine by drops in the nose.

The patient returned about two weeks later and at that time the doctor intended to give him a treatment preliminary to which he swabbed the patient's left nostril with adrenaline. The doctor left the patient sitting on a chair attended by his nurse, and stepped a few feet away for the purpose of obtaining his instruments in order that he might proceed with the treatment. Just at that moment the patient made a remark to the nurse that he felt weak and the nurse ob-tained a bottle of smelling salts consisting of ammonium carbonate crystals. She removed the cork and was just about to put the bottle to the patient's nose when the patient suddenly went into an epileptic fit, rolling from the chair down onto the floor. he fell he in some way struck the nurse's hand in which she held the open bottle of crystals and some of these spilled out over the patient's face, one or two of them going into his eyes. The doctor immediately took steps to restore the patient to a normal condition and he promptly seemed to become normal except that both of his eyes showed signs of redness. The doctor applied boric acid solution to the eyes and told the patient that if his eyes bothered him further he should go to an eye man for treatment.

Apparently he did go to another doctor who examined his eyes and found a condition of crosion of the cornea which after treatment with medications entirely healed and the man's eyes became perfectly normal in a few weeks,

A suit was brought against the doctor, charging him with negligence in the matter, claiming that the doctor or his assistant while treating the patient had so negligently mishandled a certain chemical as to cause it to be thrown or spilled into the plaintiff's eyes, thereby causing him to sustain severe burns in both of his eyes with a resultant inability to attend to his vocation for one month. The case came up for trial before a Judge without a Jury and after the testimony had been put in on both sides the Judge directed a judgment in favor of the defendant doctor.



NEWS NOTES



EXECUTIVE COMMITTEE

The regular monthly meeting of the Executive Committee of the Medical Society of the State of New York was held in the State Society rooms. 2 East 103rd Street, New York City, on Thursday, May 11, 1933. The following officers were present:

Frederick H. Flaherty.
Samuel J. Kopetzky.
Chas. Gordon Heyd.
Daniel S. Dougherty.
Louis A. Van Kleeck.

Arthur J. Bedell.
Thomas P. Farmer.
James M. Flynn.
Stuart B. Blakely.

The following appointments were made: Orrin Sage Wightman, Editor-in-Chief. Frank Overton, Executive Editor. Lorenz J. Brosnan, Legal Counsel. Thomas H. Clearwater, Attorney.

The reappointment of J. S. Lawrence as Executive Officer was approved and referred to the Trustees for a renewal of his contract.

Dr. Terry M. Townsend of New York was appointed Chairman, and Dr. Thomas F. Laurie of Syracuse, Secretary, of the newly created Section on Urology.

The President submitted a list of nominees to complete the Standing Committees, their chairman having already been elected by the House of Delegates. These nominees were elected. The complete personnel of the standing committees is as follows:

STANDING COMMITTEES

COMMITTEE ON SCIENTIFIC WORK

William A. Groat, Syracuse, Chairman. Alfred M. Wedd, Clifton Springs. Floyd S. Winslow, Rochester. Milton G. Potter, Buffalo. Adolph G. De Sanctis, New York. Frank M. Sulzman, Troy. Stanley W. Sayer, Gouverneur. Leon H. Cornwall, New York. George M. Fisher, Utica. Terry M. Townsend, New York. Joseph M. Steiner, New York. William F. Jacobs, Buffalo.

COMMITTEE ON PUBLIC HEALTH AND MEDICAL EDUCATION

Thomas P. Farmer, Syracuse, Chairman. George W. Kosmak, New York. Mahlon H. Atkinson, Catskill. Leo F. Schiff, Plattsburg. William A. Groat, Syracuse. Martin B. Tinker, Ithaca. Clayton W. Greene, Buffalo. Edward G. Whipple, Rochester. Nellis B. Foster, New York.

COMMITTEE ON LEGISLATION

Harry Aranow, New York, Chairman. John J. Buettner, Syracuse. Bernard B. Berkowitz, Brooklyn. B. Wallace Hamilton, New York. Edward E. Haley, Buffalo.

COMMITTEE ON ECONOMICS

Frederic E. Elliott, Brooklyn, Chairman. Charles H. Goodrich, Brooklyn.
Frederick M. Miller, Utica.
Frederick S. Wetherell, Syracuse.
Joseph O'Gorman, Buffalo.
Joseph Garen, Olean.
Cassius H. Watson, New York.
Terry M. Townsend, New York.
George C. Vogt, Binghamton.
Edward T. Wentworth, Rochester.

COMMITTEE ON PUBLIC RELATIONS

James E. Sadlier, Poughkeepsie, Chairman. William H. Ross, Brentwood. George M. Fisher, Utica. Oliver W. H. Mitchell, Syracuse. Augustus J. Hambrook, Troy. William D. Johnson, Batavia. Thomas H. Cunningham, Glens Falls.

SPECIAL COMMITTEES

The nominations of the President of the following members of the Special Committees, were confirmed:

COMMITTEE ON PUBLICATION

Frederic E. Sondern, New York, Chairman. Peter Irving, New York. Louis A. Van Kleeck, Manhasset.

COMMITTEE ON BUDGET

Chas. Gordon Heyd, New York, Chairman. Frederic E. Sondern, New York. Daniel S. Dougherty, New York.

COMMITTEE ON MEDICAL RESEARCH

John J Morton Jr Rochester Chairman
John Wyckoff New York
Joshua E Sweet New York
Allen O Whipple Kew York
G Canba Robinson New York
Simon Flexner New York
Peyton Rous New York
Augustus B Wadsworth Albany
Edwin MarcD Schuton Schenectady
Herman G Weiskotten Syracuse
Winfield W Scott Rochester
Burton T Simpson Buffalo
Frank A Hartman Buffalo
Varshall Clinton Buffalo

COMMITTEE ON INSURANCE

Frederic E. Sondern New York Chairman Chas Gordon Heyd New York Louis A Van Kleeck Manhasset

COMMITTEE ON PRIZE ESSAYS

James Ewing New York Churman Allen O Whipple New York Leon H Cornwall New York

COMMITTEE ON BY LAWS

Daniel S Dougherty New Yorl Chairman Thomas P Farmer Syracuse acting with the Legal Counsel Lorenz J Brosman

COMMITTEE ON TEMPORARY LMLRGENCY RELIEF

James N Vander Veer, Albany Chairman Hyzer W Jones Utica Albert G Swift Syracuse

COMMITTEE ON THE JOURNAL

Arthur W Booth, Ehuwa Chairman Floyd S Winslow Rochester Edward E Haley, Briffalo George W Kosmak, New York. Peter Irving New York

COMMITTEE TO STUDY THE FIELD OF PREVENTIVE MEDICINE

Wilfram II Park New York, Churinau Ldwii MaeD Stanton Schenectady Morris Masion, Glons Palls Velson G Russell Buffalo Alfred E Shupley Brooklyn

COMMITTLE TO STUDY STATE CONTROL OF CERTIFIED WILK

Alec V Thomson Brooklyn Chairman Edward J Wynkoop Syracuse Charles Hendee Smith New York Paul B Brooks Albanv Douglas P Arnold Buffalo

COMMITTEE TO PREPARE A HISTORY OF MEDICINE IN THE STATE OF NEW YORK

Nathan B. Van Liten New York Chairman Alvah S. Miller Rochester William H. Ross, Brentwood

COMMITTEE TO CONSULT WITH SARATOGA SPRINGS COMMISSION

John Wyckoff New York Chairman G Scott Towne Saratoga Springs L Whittington Gorham Albany

DANIEL'S DOUGHERTY Secretary

THE 1933 GRADUATE FORTNIGHT OF THE NEW YORK ACADEMY OF MEDICINE

Metabolic disorders will be the theme of the 1933 Graduate Fortnight of the New York Academy of Medicine Two weeks of intensive study, from October 23 to November 3 inclusive, will be devoted to this important branch of medical science. The theoretical physiologic and pathologic phases of Metabolism, as well as of certain of the associated endocrinologic problems will be treated in a series of round table discussions and clinical demonstrations. The latter will be given in fifteen of the leading hospitals of New York City

Among the speakers who will participate in the Graduate Fortnight are included Drs Eugene F DuBois, Harold E Himwich Walter W Palmer, Frank H Lahey, Donald Dexter Van Slyke, Joseph C Aub, Ashley Weech Dani W Atchley, Erwin Brand Emanuel Libman, Rollin T Woodyatt, Priscilla White Nellis B Foster, Herman O Mosenthal, William S Ladd, Henry W Geyelin, Albert A Epstein, John P Peters, Henry C Sherman,

Samuel W Clausen, Alfred F Hess, Wilder G Penfield, Oscar M Schloss, Henry L Jaffee and Charles F Bodecker

An exhibit will be shown in connection with the Fortnight, material having been collected from many institutions in Metropolitan New York. The various aspects of metabolic disorders will be covered in this exhibition in cluding the history of inctabolism, dietary constituents and their derivatives, drug and other therapeutic measures, general and special pathological metabolism, and laboratory methods and procedures.

The subjects will be illustrated by means of charts, graphs, photographs, microphotographs, transparencies, trays and gross and pathologic specimens

The profession of the country is invited to participate in the Graduate Fortnight

A complete program and registration blank may be secured by addressing Dr Frederick P Reynolds, The New York Academy of Medicine, 2 East 103rd Street, New York City

GREENE COUNTY

The regular May meeting of the Greene County Medical Society was held in the Saulpaugh Hotel in Catskill on Tuesday, May 9, 1933, with twenty members and guests present. The President, Dr. L. B. Honeyford, Catskill, presided and introduced the speakers of the evening, Dr. Frederic Holcomb, and Dr. Joseph Jacobson, both of Kingston.

Dr. Holcomb's address was devoted to the various classifications of tuberculosis and their These classes were illustrated by

many x-rays of each kind.

Dr. Jacobson's address was confined to the

operative measures employed in treating tubercu-This also was profusely illustrated by x-rays.

Dr. Atkinson, Chairman of Committee on Memorial Tablet for the new hospital reported that the draft as presented had been accepted by the Board of Managers and that the tablet had been ordered.

Dr. William V. Wax of Catskill was elected to membership. It was decided to hold the July meeting as usual at the Catskill Mountain House,

WILLIAM M. RAPP, Secretary.

SCHOHARIE COUNTY

The semi-annual meeting of the Schoharie County Medical Society was held in the Parrott House, Schoharie, New York, on Tuesday, May 9, 1933. Dr. Bentley reported that no legislation affecting us seriously, was enacted. Our Delegate, Dr. D. W. Beard, gave a short report of the meeting of the State Society. A committee on relations between the welfare agent and physicians was appointed consisting of Drs. H. R. Bentley, D. W. Beard and D. L. Best who are also to arrange a suitable and acceptable fee bill.

The following officers were nominated:

President......Dr. Roy G. S. Dougall Vice President......Dr. Duncan L. Best Treasurer......Dr. Le Roy Becker Secretary......Dr. Herbert L. Odell Censor......Dr. Willard T. Rivenburgh Delegate......Dr. David W. Beard

After a lengthy debate on the selection of another list of names to submit to the Chairman of the Board of Supervisors from which list one is to be appointed a member of the county board of beer control, the Comitia Minora was empowered to submit such list, each member of the society being requested to suggest one or more names for the committee to consider.

After adjournment for dinner, the society listened to a paper on "Sinus Conditions from the Standpoint of the General Practitioner," by Dr. Harry K. Tebbutt, Albany, N. Y. A rising vote of thanks was given Dr. Tebbutt for his excellent and practical address.

The attendance was large, nearly all members being present.

H. L. ODELL, Secretary.

TIOGA COUNTY

The Tioga County Medical Society completed a Post-Graduate series, consisting of five lectures, arranged by Dr. Clayton W. Green of Buffalo and delivered by Dr. Green and his associates, Dr. A. H. Aaron, Dr. N. G. Russell, Dr. E. H. Heath, and Dr. E. A. Sharp.

This was a very fine course and of great interest to the general practitioner. The meetings were held weekly, as dinner meetings, and we had an average attendance of twenty-eight Doctors per meeting, whereas our County Society Membership is twenty-two.

At the final lecture, we had an open meeting in which the wives of the Doctors and other guests were invited, and had a total attendance of fifty-seven persons.

The members of the Society consider this one of the most practical courses that they have

enjoyed.

G. S. CARPENTER.

BROOME COUNTY

Economics A special meeting of the Broome County Medical Society, convened on February 15 1933, for the purpose of discussing current economic problems and other business matters Much stress was placed on the proposed New York Retail Sales Tay It was discussed with unusual activity and the Society went on record as emphatically opposing any further increased taxation in New York State at this time, the tax burdens already being at a distressing maximum

and the Retail Sales Tax being an additional taxation with no displacement of the taxes already existing. The Society further recorded itself as urging the officials of New York State to practice more economy in the State government affairs, feeling that the time has arrived for conservatism and the cessation of extravagance in governmental departments.

HENRY D WATSON, Secretary

WASHINGTON COUNTY

A meeting of the Medical Society of the County of Washington was held on May 9, 1933, in Fort Edward Twenty one members were present

A resolution was proposed giving our standing regarding the appointment of names for the beer control President Macarthur read communications from Dr. I awrence and Governor Lehman's Secretary, and a special telegram from the President of the State Society concerning it

After much discussion this was tabled and no

nominations were made

Dr W A Leonard reported as churman of the Legislative Committee He was given a vote of thanks for his efficient work as chairman of this committee

Dr S J Banker made a motion that we still retain the present fee list with the understanding that the members who had reduced their fee did it for the present emergency only. It was see

nuded and carried (See this Journal, May 15, page 663)

Dr E V Farrell, of Whitehall gave a paper on "Functional Digestive Disorders" Dr B Deifendaufer, representing the State Department of Health, read a paper on 'Frichmosis,' and stated that there were six cases in Washington County recently, and that two per cent of all logs killed were infected. The symptoms appeared from 14 to 25 days after the infected meat was eaten. They were clulls, fever, diarrhea, and the special symptoms were edema of the face and soreness in the muscles.

Dr R E Borrowman of Fort Fdward gave an address on "Pseudo Hermaphrodism" and presented a case Dr E B D Elliot of Glens Falls talked on "Intracranial Hemorrhage" in the new born

S J BANKER Secretary

DUTCHESS-PUTNAM COUNTY SOCIETY

A regular meeting of the Dutchess Putnam Medical Society was held Wednesday, May 17th, 1933, at the Chimney Corner, Poughkeepsie N Y The meeting was called to order by the President Dr Samuel E Appel at 8 50 P M

The minutes of the previous meeting and the minutes of the Comitia Minora meeting were read and approved

The following candidates were received

Dr Louis A Parsell

Dr Frank C Genovese by transfer from Queens County

Dr James P Kelleher by transfer from New York County

Doctor A W Thomson gave a preliminary report of the Economics Committee

Doctor James T Harrington reported progress in the formation of an arbitration commission

It was regularly voted that the next meeting of the Society be devoted to the consideration of economic affairs

Dr Samuel Goodwin Gant, New York City, the guest speaker of the evening gave an address on "Bengin and Malignant Tumors of the Recto

Sigmoid'il Region"

The meeting adjourned at 1045 PM for refreshments, during which Dr Gant mystified the dictors with his feats of Medical Magic There were present Drs Appel Thomson, C E Lane, Borst Dingman Marks, Peckham, Voorhees Rogers, Neighbors, Parsell, Davison, Benson, Roberts Poucher, Vigeant, Andrews Stoller, Ashley, Harrington, Lynn, Cavanaugh, Mombello, Carpenter, Sinion, Breed, Myers, Penn Palliser Krieger, Leonidoff G MacKenzie, Popp Sobel, Rosenthal Bacile, Crane, Haas, G E Lane

H P CARPENTER M D, Secretary.



OUR NEIGHBORS



DEPARTMENT OF HEALTH AND PHYSICIANS IN INDIANA

The leading article in the May number of the Journal of the Indiana State Medical Association was prepared by Executive Committee of the State Association on the subject "Reorganization of the Indiana State Board of Health," which sets forth the relations of the physicians to the Board, under plan of reorganization accomplished by Governor Paul V. McNutt. The following abstracts indicate the scope of the new relations:

"There is no need to disguise the fact that there has been, in times recently passed, considerable cause for criticism of the broadening activities of this branch of government. Attention has been particularly directed toward the work of the Division of Infant and Child Hygiene, the Hygienic Laboratory, and the subsidization of the Venereal Clinics in different cities of the state. Not only have these branches cost a considerable sum of money, but they have also entered into forms of medical practice which have essentially put the state in competition with the practitioners of medicine. The manner in which the work of these departments is to be carried out is described later in this article.

"The present set-up is designed to correct these abuses, improve the quality of the proper services of the State Board of Health, and to effect a saving of probably \$75,000 a year."

After describing the heads of the departments which had been appointed after consultation with the State Association, the authors took up the work of the bureaus and said:

"The work of the Pasteur laboratory will be under the direction of Dr. Culbertson, Director of the Laboratory of Hygiene, but the actual giving of the Pasteur treatment will be done in the admitting room of the Long Hospital. By this means these patients will be in such a place as can properly take care of them in case their dog-bite wounds should need attention, and also in case they should get reaction from the treatment. These patients who come from a distance are required to be housed and fed by the state. In the vicinity of the Medical School campus there are many private homes where the owners would be glad to rent rooms to these patients at a very low cost.

"The attention of the profession is called to the fact that there is a provision whereby patients can be treated in their home communities by their own doctors, in the same way that they can be given free anti-toxin by their home physician. The new organization emphatically urges that all communities be responsible for the treatments of persons bitten

y dogs.

"The work of the Division of Infant and Child Hygiene is to be discontinued, except in its strictly educational phase. The new organization is extremely anxious that the interest of the public in these matters should be encouraged; and as need arises for educational programs, the medical profession and the University School of Medicine will stand ready to supply talent for such work. The communities under the leadership of the county medical societies are urged, however, to take the initiative in all of this work. Neither the State Board of Health nor the State University wishes to force anything of this sort upon a given community, but is glad to co-operate through the medical society in every way possible with clubs, parent-teacher associations, and other groups qualified to carry on such work. In all such activities the local medical association will be consulted before action is

"A strenuous effort will be made to discourage the use of the laboratory except for the two purposes for which it was originally designed, namely, the control of transmissible diseases, and the provision of a service for the indigent sick. In order that the interests of the medical profession shall be observed, a dual committee has been appointed. Three men will represent the Board of Health and the University, and three other men will represent the State Medical Association. It will be the purpose of this committee to arrange working rules for the laboratories.

"State support for venereal clinics is to be withdrawn. There is no doubt whatever that the venereal diseases are extremely important public health problems. It is the desire of the new organization, however, to place the responsibility for those problems exactly where it belongs; that is, in the home community. If a particular town or county wishes to establish such clinics, the organization will be only too glad to be of assistance.

"For several years the State Board of Health, the State University School of Medicine, and the State Medical Association have been more or less at cross purposes. Such a condition is most improper and to be lamented.

(Continued on page 718-adv. x)

A Physiological Laxative and Digestant WYALIN

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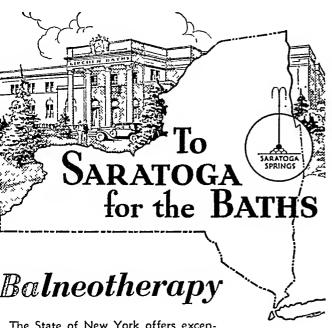
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The use of these baths has been found highly valuable in cardiac therapy and is indicated also for gout, muscular rheumatism, arthritic and neuritic conditions, and obesity.

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SAIRATOGA

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(Continued from page 716)

As short a time ago as the last state meeting the situation seemed to be one that was for from solution, though resolutions pointing of the desirability of making some change were passed. The reorganization under Governo McNutt offers a marvelous opportunity to confect the difficulties. As a matter of fact, the Governor has consulted physicians in considerable number, and is very anxious to do what

is right in this connection.

"The University is taking no part whatever except that it will lend the services of it scientific staff to the Board of Health for scien tific and educational purposes only. The University will have nothing to do with the enforcement of laws or the various police functions of the Board of Health. All laboratories and offices will remain in the old location and the relation of the University will be such tha at any time it will be a very easy matter to the University to drop out of the picture. Th only purpose of that institution is to give a at a time when aid is greatly needed. Under no circumstances will the University becom aggressive, or attempt to exercise influence political pressure. Likewise, it will not a tempt to determine the policies of the Boar of Health or the medical profession.

"The new organization believes that this the biggest step that has ever been taken Indiana away from state medicine."

GRADUATE EDUCATION IN KENTUCKY

A series of graduate lectures in obstetrics und the auspices of county societies is described the March issue of the Kentucky Medical Joi nal as follows:

"Arrangements have been made for a series postgraduate lecture courses, at different points Kentucky, by Dr. J. R. McCord, Professor Obstetrics, Emory University, Atlanta, Georgia

"The first of this series, seven in number, v be delivered in Louisville, April 3-7, in the amp theatre at the City Hospital. The lectures will given on five consecutive afternoons, between t and five o'clock. All physicians in surround counties are cordially invited to attend by the J ferson County Medical Society, which is sponsing the course.

"On the evening of March 20th, Dr. McCo will speak at the regular meeting of the Jeffer. County Medical Society, as a guest of the Lot ville Gynecological and Obstetrical Society.

"On April 17-21. Dr. McCord will give the s ond of his series of lectures in Paducah, under auspices of the McCracken County Medical ciety. It is expected that these lectures will

(Continued on page 720-adv. xii)





to overcome the marked mineral depletions caused by such acute infections as acute bronchitis, coryza, the debility of old age, and postoperative conditions.

Fellows' Syrup contains all the essential elements in a perfectly balanced solution. Unbalanced cell metabolism induced by a depleted mineral content is speedily overcome when these elements are supplied in a form which the body can readily assimilate.

Fellows' Syrup does this effectively. It therefore becomes the one most valuable preparation in these conditions.

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(Continued from page 718-adv. x) well attended by physicians from western Kentucky.

"The other five courses of the series will be given by Dr. McCord on June 26, July 10, July 24, August 7 and August 21, respectively. Definite places have not yet been selected, but will be announced later.

"We feel that Kentucky physicians are extremely fortunate, at this time of economic stress, in having brought to them an unexcelled opportunity for up-to-date postgraduate instruction, without the expense of a trip away from home

"Dr. McCord's lectures are financed by the United States Children's Bureau, and are offered to local medical societies through the Kentucky Medical Association and the State Board of Health."

THE INDIGENT IN MICHIGAN

The Journal of the Michigan State Medical Society for March contains a description of the plan for the care of the indigent in Battle Creek, which is a city of 50,000 population, with 111 doctors, 45 of whom entered into the plan described as follows:

"A meeting of Battle Creek physicians and dentists was called, November 10, 1932, which resulted in the formation of the Battle Creek Academy of Medicine and Dentistry, a non-profit non-Their first undertaking dividend corporation. was to obtain the facts as to the number of cases treated in other years, and the aggregate costs to the county for their medical care. These figures through the free cooperation of county officials, were made available, and were taken as a basis for an estimate for future service. Based upon these findings, a contract was made with the city to furnish medical care, with ordinary medicine and including surgery to the indigent sick in Battle Creek for the year 1933, for the sum of \$12,000, payable in semi-monthly installments of

"The next vital question to settle was the prob lem of determining the economic status and worthiness of the family requiring attention.

"The Academy of Medicine and Dentistry has its own investigating committee, who with an experienced social worker and former county nurse, whom they employ at their own expense, together with the city appointed Director of Relief, serve the interests of both doctors and the city by investigating the worthiness of each case.

"Each member of the Academy would at once render first aid with no question as to forthcoming pay. He at once makes his report on a special notification card, to the Academy headquarters and the visiting nurse, together with the relief director employed by the city, investigate and, if found worthy, the doctor continues to give medi-

(Continued on page 721-adv. xiii)

THE ANALYSIS SHOWS

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INDICATIONS

in stomach and liver affections and digestive disorders in general, in gout, arthritis associated with uric acidemia, uncernia, and nephrolithiasis of unc acid origin

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(Continued from page 720-adv xii) cal care until the case recovers. If unworthy, the doctor would treat the case as any other private patient. At the end of the month he sends an itemized statement to the Auditing Committee of the Academy This bill for service is rendered at the usual prices for such service in this city. The Auditing Committee discounts the bill 50 per cent, and then at once pays the doctor half of the discounted bill or 25 per cent of the original bill The rest of the account remains unpaid until the end of the year, when any remaining funds available would be pro rated up to the amount of the unpaid balance of each doctor's bill pense of hospitalization, special orthopedic appliauces, insulin, vaccines and a few other specials are not included in this plan, but are specially pro vided for by the city

While the Academy is now in actual operation,

it is yet too soon to say how perfectly it will function. It doubtless has many weaknesses, but it is expected that these will be corrected as soon as they appear The number of cases passed by the investigating committee for medical care during its first month of existence suggests that a hugh epidemic is raging However this apparent rush of business is explainable on the ground that all those registering at the city welfare headquarters are given carte blanche service by the Academy members in case of sickness. After a few months, or possibly not until the end of the year, it will be possible to pass judgment on how well it fulfills its mission Careful records of cases by the Social Worker, and systematic accounting of its funds are being kept by an expert accountant and, as the experiment unfolds, one may hope for a wealth of facts upon which to guide in other experiments of this kind "

PRESIDENT'S MESSAGE IN SOUTH CAROLINA

The April Journal of the South Carolina Medical Association contains the following message from its President, Dr J R Young

"'I shall restore unto you the years the locusts have eaten' This picturesque but heartening prophecy spoken by the prophet Joel in the long ago carries a very pertinent message for these

vears of depression. None will deny that the locusts have subbled away industriously these latter days. Stocks bonds, lands, bank deposits, and what not have been tempting morsels for this rapacious brood of hell?

"A group whose capital investment has been (Continued on page 722-adi xiv)



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(Continued from page 721-adv. xiii)

placed where thieves can not break through and steal has indeed been fortunate during these strepuous days. Doctors compose such a group. Their principal investment is their knowledge and experience. This the locusts may not devour. The members of our profession may have lost certain salted away dividends on their capital, but in the large view these losses are minor and our principal capital investment remains intact. What wiser course could the individual doctor follow during these lean years than to be continually adding to his capital stock? The doctor who fails to take advantage of this patent fact is not wise. Perhaps no method has been found of converting knowledge and experience into clinical wisdom that is superior to the regular habit of active, intelligent participation in county medical society work. The doctor who redeems the time in this way, places himself in a position to have restored unto him the years that the locusts have eaten."

GRADUATE EDUCATION IN FLORIDA

The March issue of the Journal of the Florida Medical Association contains the following editorial on a proposed graduate education course:

"Plans are nearing completion for a post-graduate medical course to be offered to the doctors of the State by the University of Florida Extension Division and sponsored by the Florida Medical Association, according to an announcement made by Dr. Gerry R. Holden, president.

"A committee, appointed by Dr. Holden, composed of Dr. T. Z. Cason, Jacksonville, chairman; Dr. G. C. Tillman, Gainesville, and Dr. T. H. Bates, Lake City, has been at work on the arrangements for the project during the past several weeks, in collaboration with Dean B. C. Rile; of the General Extension Division and Mr. W. K. Mitchell, Secretary of Institutes and Short Course Bureau, at the University.

"As outlined by the committee, the course will consume six days, June 19th to 24th. It will include six lectures each on surgery, obstetrics, pediatrics, and medicine, and two each on eye, ear, nose and throat, dermatology, laborator, work, and x-ray. All subjects will be considered from the standpoint of the general practitioner and not from that of the specialist in these various subjects.

"The lectures in the major courses will be given by full professors from various medical schools Dr. Wayne Babcock, Profesor of Surgery in Temple University of Philadelphia, has kindly consented to give the course in surgery.

"Further information concerning this cours' will be sent out soon by the Extension Division of the University of Florida."

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ACADEMIC AND INDUSTRIAL RESEARCH IN THE FIELD OF THERAPEUTICS By SIR HENRY H. DALE, M.D., LONDON, ENGLAND

An Address delivered at the opening ceremony of the Research Laboratories of Merck & Company, Inc., Rahway, New Jersey, on April 25, 1933, by the Director of the National Institute for Medical Research, London, England, and Secretary of the Royal Society of London.

TE have today the privilege of assisting at the formal inauguration of these Research Laboratories, which the enterprise of a manufacturing house has brought into being. I know that I can speak for all those who are present, in saying to the directors whose enlightened policy has provided these laboratories, and to the distinguished investigators who will use them, that we wish them all the success which they desire and deserve. And in wishing them success. I have in mind not merely such as will directly increase the efficiency and extend the scope of the industrial enterprise with which these laboratories are associated, though that we may wish them without reserve; but we may also wish them a wider and more enduring success, in adding to the sum of life-saving knowledge, for the benefit of all mankind.

Research Industrially and Scientifically.-The word "research" in relation to industry has been made to do duty over a wide range of meanings. You would probably find some manufacturers who apply the term to the mere experimental control of the details of an unprogressive technical routine, or of the quality of the materials used in it. At the other end of the scale, this great country, in particular, can show conspicuous examples of the far-seeing policy of great industrial enterprises, in providing opportunity for men of world-wide fame in science to follow freely the lead of their own original genius, without any immediate reference to the production of remuncrative inventions. Results of the greatest theoretical importance to science have thus been obtained, which any University might be proud to claim as the product of its laboratories of pure research; but in some cases, at least, they have been obtained under conditions which only the technical resources of great industry could provide. I do not think that we can have any doubt that, by such a policy, industry will not only render a proper service to the wider interests of the Community from which it draws its support, but will also act in the essential interests of its own

success and development. And it will do so, I think, not merely because some of the most important inventions, leading to really new lines of practical development, do in fact arise as incidental results of fundamental researches having no such practical aim; but also because the progress of such free scientific enquiry in any community creates the atmosphere of mental enterprise and the fount of ideas, which enable practical invention to thrive and to come to fruition.

Industry and the University.-There may be some who will see a danger here, fearing lest the opportunities offered by the research service of industry may come to make too large a draft upon the highest grade of scientific ability, so that the Universities may be unable to make good their primary claim upon it, for the training and inspiration of the following generations. danger is not one which could be treated lightly if there were any good reason to fear its development. For the scientific future of any country, in industry as well as in the academic sphere, must depend on the quality of the recruits which the Universities can furnish; and that quality will be determined, not only by the effectiveness and the attractive influence of the formal teaching which they provide, but even more by the opportunity which they afford to their best students, of a living contact with the finest type of ability and achievement in research. If such a danger really existed, we could hardly put the responsi-bility for it only on industry. The great institutions, supported by private munificence or by public funds, and offering, to men selected for their achievement or promise as investigators, an opportunity to give the whole of their thoughts and energies to research, must share any responsibility of that kind,

This country, through the imparalleled and enlightened generosity of its leaders of industry and finance, has led the world in this relatively new development of the endowment of research for its own sake. I myself have the honor now

N. Y. State J. M June 15, 1933

to be associated with an Institute thus devoted entirely to medical research, with no formal academic contacts, supported from the public funds by the British Government. Earlier, after a relatively short academic experience, I had charge, for ten of my most active years as a scientific worker, of laboratories also concerned with various aspects of medical research—physiology, pharmacology, immunology, serology—and supported by the head of a great British pharmaceutical firm, Sir Henry Wellcome, who had migrated from your country to mine at an early stage of his career.

I allow myself the apparent egotism of these personal details only to make it clear that I have had the opportunity of viewing, from more than one angle, this problem of the relation between research in the Universities, in endowed and public institutes, and in laboratories supported by Industry. And, so far as this experience has enabled me to form a judgment, I do not believe that there is any real or permanent danger of the Universities losing, to whole-time research in endowed institutions or in laboratories associated with Industry, the particular kind of scientific leadership and power of inspiration, which, in the interests of all kinds of scientific activity, it is essential that they should retain.

Careers in Industrial Research.—So far as I can judge, I believe that, in general, this relatively new growth of whole-time research as a career is already effective, and is likely to become more so, in the reverse direction. In this, as in other spheres of human activity, supply must be largely determined by demand. The Universities, in the nature of things, can offer only a limited number of major opportunities in science to their ablest and most enterprising students; and the more numerous the extra-academic opportunities for careers of distinction and of service to the community in research, the more readily will able men be willing to try their ability as investigators, before embarking on careers of professional practice or business; and the wider should be the field thus made available to the Universities, in choosing the men they wish to retain and to promote. I do not think, then, that there is any real danger in that direction. Such difficulties as may arise, to hamper the development of the best and most helpful relationship between research in the Universities and in the laboratories associated with Industry, must come from causes of a different kind.

In the field of medical science, which is that of my own direct experience, I am inclined to doubt whether the ideal relationship has yet been everywhere established, between research in the Universities and the hospitals on the one hand, and that associated with the pharmaceutical industry on the other. The finding and acceptance of a proper relationship, however, is vital to the

progress of both alike, and to their union in an ordered advance, along the common front of medical science and its applications. It is a matter of special importance to an institution such as this, which starts today on its career, with the good wishes and the confident hope of us all. I hope, therefore, that I may be allowed to put briefly before you a few ideas as to the special kind of service which an organization such as this may render to medical science, and as to some of the difficulties which it may have to face.

Altruism of Medical Research.—Let us recognize, in the first place, that investigation in that group of sciences which contribute to medicine entails certain special obligations. The practitioners of medicine are bound, by a tradition of long and honorable history, to place any new knowledge, gained in the practice of their art, freely at the disposal of their professional brethren, without any concealment or any attempt to restrict its use for private advantage. This tradition has no connection with any formal code of professional etiquette governing medical practice. Its basis, I think, is a recognition of an essential condition for the advance of medical science; and in recent years, as such advances have come in increasing measure from the research laboratories, the workers in these, whether medically qualified or not, have in general shown themselves eager to embrace this great medical tradition, and to accept this freedom of the great medical brotherhood. Without committing ourselves too hastily in advance to the details of its application over the whole field of enterprise, I think we must accept this tradition as embodying a true ideal, and one which we cannot afford to lose or to see obscured. For medical research differs from that in other fields in this respect, that its ultimate aim is the provision of knowledge which will find its application in the relief, the cure, or the prevention of human sickness and suffering.

Coordination of Medical Research with Clinical Practice.—Further, while all medical research, however remote from any immediate thought of such application, preserves this ultimate aim, no practical development of the results of medical research can be made, no therapeutic invention can be completed, without a full and frank cooperation with those engaged in clinical practice. Those who are engaged in the task, vitally important to the progress of medical science and practice, of translating the new knowledge of natural laws and principles into terms of practical therapeutics, as the workers in these laboratories will be, require the fullest confidence and cooperation of those, on the one hand, who are freely exploring new avenues of knowledge, without an immediately practical objective, and those, on the other hand, who are directly responsible for the care and the treatment of the sick. And

in order that this frank and full cooperation and confidence may be established, between all those engaged in furthering medical discovery and its application at these different stages, they will need to convince one another that they are bound together in a common cause, and by loyalty to a common tradition.

Trade Interests.—I think that we must frankly face the fact that those whose contribution to this common end is made by research in laboratories such as these, may find a special difficulty in carrying that conviction. These laboratories have been founded by Industry, and their maintenance and progressive opportunity of service to medical science will depend on the extent to which Industry receives the proper reward of its enterprise. I have no fear that the directorate responsible for these laboratories will reckon that reward by any narrow calculation, based merely on returns from directly remunerative invention. But you men of science, who have accepted the opportunity which these laboratories offer, will probably find some among your academic or clinical colleagues, who will be ready to assume that your researches, henceforward, will be directed merely to the promotion of some trade interest, to securing some advantage to the manufacturing house supporting you over its competitors, and not to the advancement of the common cause of medical science. I say that you will probably find some ready to take this attitude, and to regard you as engaged in, at best, an inferior order of medical research; but it may be that I am wrong, and I hope that I am. I was speaking from the analogy, perhaps a misleading one, of my own experience in another country, and now nearly 30 years ago. I suspect, however, that human nature and academic traditions do not exhibit any fundamental differences over those parts of the world where our common language is spoken, and that they do not change completely in the course of thirty years. If there is anything in my suspicion, it will be your task, as it was mine, to show these colleagues that they have been wrong in their assumptions; that work in these laboratories supported by industrial enterprise, though differing from theirs, perhaps, in the nature of its immediate objective, can be as genuinely inspired by the ideals of the advancement of medical science, and of service to suffering humanity; and that even in researches undertaken in the interests of some immediately practical development, the alert investigator, given such freedom as you will surely have here, will find the opportunity for making additions to the common fund of scientific knowledge, which may be as fundamentally important as those which come from the academic laboratories. They have had examples before them, indeed, for many years, from other laboratories established and maintained by great pharmaceutical houses in this country.

It must surely be generally recognized that some of the great advances in medical knowledge, which have in recent years come from American Universities, have been made possible by the cooperation which only industrially supported research could give. But prejudice dies hard, especially when it has its roots in a tradition which we all acknowledge and respect; and I suspect that you who are to work here will find that there is, for yourselves and your colleagues in other similar institutions, something yet to be won, of the full confidence and cooperation which you need from the academic investigators, and which they as certainly need from you. You will win it, when they see that your work differs from theirs not so much in its quality or its ultimate aim, as in the nature of the incentive, and in the kind of opportunity offered by the conditions under which it is done.

Palents.—There is one matter affecting the question of loyalty to a common medical tradition, which I must mention more explicitly, if only to free myself from the suspicion of shirking a difficulty. I refer to the question of patents for inventions having therapeutic value. I shall make no attempt to conceal my own wish that we could do without them. I am convinced that a general recognition of their use by research workers in the medical field would be unfavorable to open confidence and to the free interchange of experience and materials among such workers, including those whose part in a common investigation is concerned with the human patient. The whole basis of such cooperative work would be endangered by any suspicion that it was being used for the enrichment of some individual or institution, and not for the advancement of medical science for the common benefit.

That being said, I should make it clear that I am not among those who condemn the use of patents in medicine with a kind of dogmatic fervour and without reference to its object and its effect. The object of any patent law is to further the progress of science and its applications, by stimulating invention and by providing the conditions which will make its results available to all who need to use them.

I believe that a general use of patents in all parts of the field of therapeutic research and by investigators in all kinds of institutions would definitely hinder, rather than promote, such progress. That belief, however, does not entitle me to suggest that the protection by patent of any kind of therapeutic invention, under any conditions, and in any country, must of necessity have that detrimental effect.

So far as I can judge the situation, the danger of its seems to me to be greatest in connection with discoveries relating to remedies of the biological type, for which the practical application is apt to present itself as a stage in the general ad-

vance of knowledge, to which many, in different institutions and countries, have made essential contributions. I believe that there is a definite danger here from the difficulty of distinguishing between scientific discovery and practical invention, and from the temptation to use the opportunity which a patent affords, not only to endow a particular institution in which a practical development happened to begin, but also to dictate to the whole world an orthodoxy in its application, and thereby to restrict the freedom of further advance. Frankly, I am inclined to regard the medical patent as a peculiarly dangerous weapon when it is wielded by the good intentions of the academic amateur.

On the other hand, I do not see the same danger in the use of patents for inventions related to really new substances of therapeutic value produced by chemical synthesis. I cannot ignore the argument that an immediate and complete freedom to all the world for the manufacture and sale of such a substance might have the result of its not being produced at all, because nobody could justify the expenditure necessary to organize its efficient production and to make its value known to those who could use it. I think it could be urged that, under the conditions of modern pharmaceutical industry, in some countries, a patent for a definite invention of this kind may be used in accordance with the very purpose of medical tradition, to make the new knowledge available to all who need to use it. I think that it can also be urged that such a policy may enable an industry to support research leading to further and more important inventions.

Without such incentive and guarantee it is ardly likely, I think, that the great pharmaceucal industry of Germany could have embarked n a policy which, after many years, has led to the production of substances representing the first ear advance in the treatment of malaria along ew lines since the Jesuit Fathers brought Cinhona bark from Peru in the 17th Century; or not the pharmaceutical industry of this and other puntries would have enriched the resources of the reduce with all the new general and local naesthetics which now help to reduce the sum of uman pain.

If the industry of any country tells me that it in promote research and apply its results in this ynthetic field of therapeutic invention only by ie use of patents, I cannot presume to contest ie statement. But I am certain that patents in ie medical field will do no service, even to industy, unless they are so used that they serve also ie great medical tradition, so that industry wins not retains the confidence of the academic labratories and the clinics. No invention in the iedical field can be completed or brought to use ithout the cooperation of the physician and his atients. I believe that such cooperation will be

readily and properly given so long as it is clear that the aim of industrial research is the real increase of knowledge for the ultimate benefit of mankind, and not the promotion of some narrow commercial aim.

Coordination of Academic with Industrial Laboratories.—The idea of cooperation involves some differentiation of function. It would not be in the general interest of science that the academic institutions and laboratories such as these should be following exactly similar lines of investigation, with the same kind of immediate objective. Broadly, we may distinguish their respective functions, I think, by saying that the primary task of those academic laboratories, which are concerned with the ultimate advancement of therapeutics, is the increase of our fundamental knowledge of the problems involved, without any immediate or insistent thought of its practical application. The function of science in the Universities seems to me to be well expressed in the old formula, which, since its foundation in the seventeenth century, has defined the purpose of the Royal Society of London—"the improvement of natural knowledge by means of experiment." That tradition has not needed any artificial importation into the Universities of this country. One of the first and greatest of American citizens, Benjamin Franklin, was himself a distinguished Fellow of the Royal Society.

Your primary task in industrial laboratories, on the other hand, will be to find applications for the laws governing therapeutic action, as fundamental inquiry reveals them; and to translate them into the practical terms of remedies ready for the treatment of the sick.

Practical Applications of Research.—Broadly, I think, this differentiation can be made, and 1 believe it to be important that it should be kept steadily in view. On the other hand, it is natural and proper that, from time to time, these functions should largely overlap. The academic investigator must certainly not be inhibited or called off from his quest, if its natural line of development should lead him to a discovery which is directly applicable to the prevention or treatment of disease. On the contrary, it is right that he should be the more encouraged to pursue his investigation, by the thought of its promise of immediate benefit to mankind. I suppose that we shall agree that the discovery, in the past century, which had the most revolutionary and transforming effect on medical science and practice was that of micro-organisms as the cause of infective diseases; and its real starting point was the interest, awakened in the mind of a man of genius, Louis Pasteur, by the relation between the optical rotations of the different tartaric acids and the asymmetry of their crystals. He followed the clue through the differential fermentative action of moulds and of yeasts, to open a new world to investigation, in the bacterial origin of putrefaction and of many diseases. But, out of an unbounded admiration for that great man and for his wonderful gift to mankind, I am sometimes tempted to wonder whether that gift might not have been even greater, and in some of its phases more permanent, if the clamour for practical application had not led him, in later years, so far into the unfamiliar field of therapeutics, and away from his more fundamental enquiries.

When Michael Faraday, patiently seeking the improvement of natural knowledge, with an inspired curiosity, discovered the phenomenon of electromagnetic induction, he probably had little thought that it would find any practical application; if he had had any provision of the kind of civilization which, a hundred years later, would have arisen on his discovery, the thought would probably have appalled him. It will surely happen in the future, as in the past, that free and fundamental researches will often lead to the most important practical discoveries; and we need not grudge his good fortune to the academic investigator whose work has such a result. I do think, however, that there is a definite danger lest he should be diverted by it from his proper task of further free enquiry, and should devote his interest to the practical development and application of a discovery already made, which, in many The coneases, he had better leave to others. eentration of popular enthusiasm, on discoveries which are immediately applicable in therapeutics, is natural and intelligible. We need have no fear of its effect, provided that a proper balance of recognition is preserved within the Universities themselves, between the achievement of a praetical success, and the fundamental advancement of knowledge.

Financing Academic Research.-I have no right, and no desire, to criticize here a particular line of policy, which some of the Universities of the North American continent have adopted in recent years, in order to secure to themselves funds for the endowment of further research, from the proceeds of practically useful medical discoveries which have come from their respective laboratories. It is for them to judge their needs, and the proper way to meet them. I mention the matter, not from any desire to make or to imply a criticism of action already taken, but because of its direct bearing on a view which I desire to emphasize, namely, that the primary and special function of research in the Universities is to build the main fabric of knowledge by free and untrammelled inquiry, and to be concerned with the practical uses of it, only as these arise in the course of a natural development. I suggest that we should watch carefully the effect of any line of action, which might lead the scientific departments of the Universities to give encouragement and promotion to the practical inventor, at the expense of withholding it from a potential Michael Faraday or Willard Gibbs. If that should happen, there would be a real danger of the University departments neglecting their own proper part in the cooperative scheme, and encroaching on that more proper to the laboratories supported by Industry.

Altrustic Research in Industry.- I have suggested, as the primary concern of the laboratories supported by Industry, the development to a practical outcome of the fundamental discoveries which the academic and endowed institutions may be expected, in the main, to furnish. But just as the academic worker ought not to be restrained from following freely the line of his enquiry, because it happens to lead to a practical application, the investigator in an industrially supported laboratory ought to have a large freedom to follow a clue to new knowledge of a fundamental kind, if it presents itself in the course of his practical investigations. Indeed, I think it is probably of great advantage to an industrial laboratory that its staff should have always in hand a substantial body of investigation having no direct relation to any praetical development,

My own personal experience, if you will pardon a further reference to it, perhaps influences my views unduly. If the head of a great pharmacentical house, who gave me my first real opportunity as an independent investigator, had been inclined to judge me by my output of therapeutic novelties directly remunerative to his firm, I think he must have concluded that I was a very unprofitable investment. If he did so, he never let me suspect it; on the contrary, I received a steady encouragement to follow, with my colleagues, the natural lead of the problems which our initially practical investigations had presented. And I believe that such a policy is undoubtedly the right one.

If necessity is the mother of invention, the spirit of free investigation is most certainly its father. The men who work here will need it, to preserve their active interest in what is happening in the larger world of science, and to maintain their contacts with men of like interests in the academic world.

In a very large proportion of cases, when we come to look at the results, it will be difficult to say whether a particular discovery would come more appropriately from an academic or from an industrial laboratory. Permit me to illustrate the difficulty by an example which has some personal interest for me, as well as for these laboratories.

Many years ago my friend, Dr. Reid Hunt, now Profesor in the Harvard Medical School, thought that he detected the presence, in an animal organ, of some unstable derivative of choline, of greater physiological activity than that substance. An examination of a series of artificial derivatives, with Dr. Taveau, led him to the dis-

covery, in acetylcholine, of a substance having at least one thousand times the activity of the parent base.

Some five years later, in the Wellcome Laboratories, I was still following up certain lines of enquiry on the pharmacology of ergot, which had been suggested to me as a subject when I entered that service. A remarkable type of activity showed itself in certain peculiar ergot extracts, and co-operative work with my colleague, Dr. Ewins, led to the isolation of the substance responsible for it, which proved to be acetylcholine. Acetylcholine thus passed from the class of synthetic curiosities into that of natural substances, and a fuller study of its action showed a remarkable relation between its effects on different organs and those produced by parasympathetic This work, in an industrially supported laboratory, had brought us no nearer to practical therapeutics than Professor Reid Hunt's original discovery had done; but it arose from a chance observation, for which only the industrial connection could have provided the opportunity, and of which we were able to take advantage through our association with large-scale work.

After another interval, created by the war, the next step was taken in an academic laboratory, when Professor Loewi, in Graz, showed that stimulation of the vagus nerve produces its effect on the frog's heart by releasing something remarkably similar to acetylcholine in its properties; but the quantities were far too small for direct identification. After another interval of years, now in an institute supported by the public funds, another chance observation enabled Dr. Dudley and myself actually to isolate acetylcholine from an animal organ, in quantity sufficient for complete identification. So that now we had evidence that this substance, the most powerful dilator of the arteries of which we have any knowledge, actually occurs as a natural constituent of the body, and almost certainly intervenes in the natural control of its functions. But still its instability, and the consequent evanescent nature of its action, while fitting it supremely for such a natural function, made it of very doubtful value for artificial application in therapeutics.

And so the scene shifts again to the industrially-supported laboratories, and the systematic search begins for allied esters of choline, with a similar but more persistent action. And already there is news of the discovery of several; of one from the laboratories of the ancestral house of Merck in Germany; of another, apparently of real therapeutic promise, from the research laboratories of this younger house of Merck, for the inauguration of which in their new form we have been invited here today. The pharmacological properties of this new substance, however, were first made clear by Simonart, working under academic conditions, in the laboratories of my

friend, and for a time my close comrade in research, Professor A. N. Richards of Philadelphia. I congratulate these laboratories on securing the cooperation and advice of Professor Richards in relation to their activities in fundamental research. The association, as you will see, has a double interest for me; but I take almost as much in tracing the successive stages of this investigation, from the academic to the industrial laboratories and back again, and in finding myself unable to suggest that the nature of the researches at any one stage was specially suited to an academic institution, and at another more appropriate to the function of an industrial laboratory.

Temperament of Research Workers.—I have spoken of the broad differentiation of aim and of function between academic and industrial research, and of the different types of ability and of temperament suited to each. There are men, indeed, of whom we could say with confidence, that the associations of academic life are necessary for their happiness and their efficiency in research; and there are others of whom we could say with equal certainty that their best work would be done under such conditions as these laboratories provide. I believe, however, that the men so easily classified are realtively few, and that for a large majority the choice will be determined by the accident of opportunity, rather than by aptitude. For some of this majority, I suspect that the best conditions for the full development and maintenance of their powers of serving science, might be provided by a successive or an alternating experience of the conditions of academic and of industrial research. The investigator who has been digging himself to a standstill in an academic groove, might find a new mobility in the less conventional surroundings of an industrial laboratory; while his colleague whose inventive energies have grown stale, from too long contact with a variety of practical problems, might find them refreshed and renewed by migrating for a period to the calmer atmosphere of fundamental research. I believe, then, that a freer interchange of suitable personnel, if it were possible, between the academic laboratories and those supported by industry, might have an invigorating influence on both; but I speak of ideals, without knowledge of practical possibilities. I am sure that even a short experience of the kind of opportunity that these laboratories will afford, would make some of your academic colleagues envy the elasticity of organization, the adaptability of equipment, and readiness of expansion to a large scale of working which the industrial association can give.

Absence of Restrictions.—There are several advantages which you will have here over some institutions supported by memorial endowments. I am sure that this country must have had examples of a type of large-hearted testator or pious

founder, familiar to us in England. He rightly believes that he can create the most worthy memorial to himself or to those dear to him by the endowment of medical research; but too often he wrongly believes that his generous impulse brings with it a scientific vision and a proplictic wisdom, entitling him to restrict, for all time, the application of his benefaction to research on some particular problem in medicine, which has enlisted his personal sympathies or stimulated his imagination. You who work here will be free to choose your problems, according to the needs of the time and the promise of advance offered by current progress in science; you will be able to give intensive cultivation to the fertile areas, to raise the erops which are likely to give good yield, and out in the sickle where the harvest stands ripe for gathering. You will have the great advantage that your buildings can be designed and equipped, with the sole aim of making the most efficient provision for the work which you have in hand or in near prospect. You begin with an equipment perfect for your present needs, and will be able to expand it as your programme and your staff expand. I can hardly resist a feeling of envy at the opportunity which Dr. Major, Dr.

Molitor, Dr. Engels and their co-workers will have, to concentrate their thoughts on their researches, without distraction by duties of administration or teaching, in laboratories designed so admirably for the needs of research, and so readily adaptable to changing requirements.

Cooperation of Industry and Universities.— Whole-time research, however, whether in an endowed or an industrial laboratory, has its own special anxieties and psychological needs. search workers in an institution such as this can only give of their best, if they can escape from any feeling of isolation from the general scientific community, and can feel an assurance that their work is making an essential contribution to the general advance of medical science and practice. They will need, and I am confident that they will have, all the encouragement and friendly cooperation which their scientific colleagues in the academic laboratories and the clinical centres can give them. We wish them all success, and we eongratulate the President, Mr. Merck, and all who have been associated with him, on an enterprise which we now launch, with high hopes, on a career of service to science, and to the Industry which supports it.

THE SIGNIFICANCE AND DETECTION OF TUBERCULOSIS IN SCHOOL CHILDREN

By WILLIAM J. RYAN, M.D., SUMMIT PARK SANATORIUM, POMONA, N. Y. Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., on May 25, 1932

THOSE of us who are familiar with the tuberculosis situation in our sanatoria realize that
beds are occupied by too large a percentage
of patients with advanced tuberculosis. The results of the Early Diagnosis Campaign, which has
been carried on intensely during the past few
years, have been disappointing in detecting early
tuberculosis.

While the mortality curve has shown a marked decline during the past 25 years, the decline during the age-period of 15 to 24 years has not been proportionate. It is now generally recognized that tuberculosis in the teens and early twenties is usually a manifestation of childhood infection which has been undiscovered and untreated, although there are some who now believe that tuberculosis occurring in the young adult is often the result of a primary adult infection.

We believe that most tuberculosis in its early stage cannot be recognized until those under 30 years of age will have their chests x-rayed periodically; but the public has not as yet been educated to this point. An approach to this problem, however, is being made by the examination of students in elementary and high schools.

This paper deals with the results obtained from a study of 1,885 school children in Rockland

County, New York, by means of the tuberculin test, and a study of the x-ray film of the reactors for the purpose of discovering early tuberculous lesions in the lungs.

PATHOLOGY OF CHILDHOOD TUBERCULOSIS

Since the pathology of childhood tuberculosis differs in character from that of the adult type, a brief review of this subject will be given.

Our present conception of tuberculous infection in childhood is briefly as follows: The aerogenous channel as the entry of tubercle bacilli into the lungs is now generally accepted as the most frequent portal. Tubercle bacilli, when inhaled, lodge in the terminal bronchioles usually near the periphery of the lung, and a localized, inflammatory exudate is set up which, if recognized at the time of infection, would resemble a bronchopneumonia. In infants the disease occasionally progresses to massive consolidation and death. Usually, however, this condition passes undetected during the acute phase, to at least a temporary recovery.

From this primary focus tubercle, bacilli are carried by the lymphatics to the lymph nodes at the roots of the lungs, and there set up seemadary foci of infection. In the area of the lung where the tubercle bacilli were implanted, the cellular elements may be completely absorbed, leaving no evidence of the infection, although a small area of caseation is the rule and this is followed by a gradual deposit of lime salts, leaving one or more calcified nodules usually in a lower lobe. calcification can result only from the deposit of mineral elements in a caseated tuberculous focus; and when this pathological picture is present, the infection has been unusually severe. A similar pathological picture has developed in the tracheobronchial or mediastinal glands of the lung infected. The glands become enlarged and caseous, followed by calcified deposits, and are more frequently detected on the film than the primary lung focus, although the calcified lymph nodes may be present, but obscured on the film by bony or other

Therefore, tuberculosis of the tracheobronchial lymph nodes is always preceded by a primary pulmonary focus which may or may not be visible on the x-ray. This pathological condition is the result of a tuberculous infection in a previously uninfected child, and is spoken of as the "primary complex," first described by Parot in 1876, and again confirmed by Kuss in 1898, and Albrecht in 1907, and amply verified by Ghon in his classical work published in 1916.

After careful study of abundant material, pathologists are unanimous in their opinion that primary infection of the tracheobronchial lymph glands does not occur. The following is a statement from Ghon: "The investigations of Kuss. Albrecht, and my own have proved almost without exception that a focus can be found in the lungs bearing distinct relations to the adjacent altered lymph nodes, and which is often small but can be detected by appropriate post mortem methods." Of Ghon's 184 cases with tuberculosis of the tracheobronchial lymph nodes, 174 or 95% showed a primary lung focus.

THE INCIDENCE OF INFECTION

It is now generally accepted that the tuberculin test is almost a specific in determining the presence or absence of tuberculous infection. There is also evidence to indicate that there is a relation of the intensity of the tuberculin reaction to the gravity of the lesion, but not necessarily to its size. However, a reaction to tuberculin does not indicate clinical disease. The number of positive reactors varies according to the method of testing used (whether Von Pirquet or Manteaux), the dosage of tuberculin, the different ages, and different communities; it being larger in the more densely populated centers with poor home surroundings.

In a study of 50,000 school children by Chadwick in the State of Massachusetts, using the Von Pirquet test, he found that there was an increase

of infection from 20 per cent at the age of 5 years to 35 per cent at the age of 15. He estimated the state-wide average to be 18 to 20 per cent. Chadwick found that 80 per cent of children under 5 years of age are infected when they are living in families where an open case of tuberculosis exists, while in non-tuberculous families but 20 per cent of the children of the same age are infected.

In 1924 Slater made a study in rural Minnesota by means of the Von Pirquet test and found that 10 per cent reactors.

In the Philadelphia schools 37.7 per cent were positive at 5 years, and the percentage increased

to 90.2 per cent at the age of 18 years.

In our study of 1,885 students, nearly all in the 7th and 8th grades and high schools, there were 52.14 per cent who reacted. This survey was made in the high schools of three villages, each with a population of about 5,000, and two smaller villages of less than 1,000 each, and in some rural grade schools of Rockland County, New York, which is located in the metropolitan area about 30 miles from New York City.

· PURPOSE OF STUDY

1. To detect cases of manifest active tuberculosis, particularly of the adult type and promptly place them under the proper treatment, as well as to break the contact with other children if any such cases had positive sputum.

2. The discovery of any infected children with latent disease who might profitably receive treatment that would prevent the further development

of tuberculosis.

3. After the detection of tuberculosis in the child, latent or otherwise, to investigate other members of the family for the source of infection, and the examination of the remaining children in the home.

PRELIMINARY PROCEDURES

The greatest obstacle in carrying out this survey was to obtain from the parents a written consent for the examination, especially for the tuberculin test. But little objection was made to x-raying the children. A very thorough and carefully laid plan for education and arousing the enthusiasm of the parents and school authorities was carried out.

Approval of Board of Education.—Our first step in the village, where we planned the survey, was to ask the Board of Education for the opportunity to explain to them the importance and purpose of the work. The medical inspector, nurse, and principal were invited to attend this meeting. We have always found that the school board has lent its enthusiastic support.

Mass Meeting for the General Public.—An evening mass meeting for the parents and general public was then held. This was usually conducted by the Parent-Teachers' association and

given wide publicity in the schools and press, during the two weeks preceding the meeting when emphasis was placed on the importance of safeguarding the children's health, but stress on tuberculosis was purposely omitted.

The members of the board of education, the school principal, school nurse, and teachers were urged to be present at this general meeting. A special effort was made to have all the local physicians attend, since the cooperation of the family doctor is most important for the success of this work.

A motion picture dealing with tuberculosis in general was first on the program. The principal speakers at this meeting were physicians who had a standing in the field of tuberculosis, including a representative specialist from the State Department of Health or other official agency who has proven of great value in supplementing the talk of the principal speaker.

The importance of tuberculosis and its significance in early adult life was especially emphasized in our talks; this was illustrated by x-ray films or lantern slides, with case histories, showing tuberculosis in the lungs and proved most effective. The presenting of one or more high school students who had been or were being treated for tuberculosis has, in our experience, had a marked influence on the audience. They were given the opportunity to speak and their comment on the privileges now given for the detection of early tuberculosis in students and which were not available to themselves was most impressive. physicians present were called upon to express their opinion on the contemplated work and, in our experience, they have invariably approved and encouraged the program.

Distribution of Consent Blanks.—On the day following the meeting a letter explaining the purpose of the examination and a consent blank for the parents' signature is given by the school nurse to each child. About 3 days later a further explanation of the purpose of the examination is made to the students, assembled in the auditorium. Following the discussion, the students are free to ask questions. After the lapse of one week, the homes from which the consent blanks were not returned are visited by the school and tuberculosis nurses when further explanation will result in many more signatures. Our experience has proven that 50 per cent of those who originally failed to sign for the test could be obtained by this follow-up method. Frequently the child does not deliver the letter to the parents and, if they do the parents may be indifferent rather than opposed to the examination. Many of the children themselves may object to the test, but by a personal interview in the school such objection can usually be overcome. Many more children, after they observed that the test proved simple and painless, likewise gave their consent.

It is our belief that consent from 75 per cent of the school population can be obtained if the proper program is carried out. However, the enthusiasm and cooperation of the principal, school nurse, and the teachers has, in our experience, been the greatest factor in the success of the program.

THE TUBERCULIN TEST

The Mantcaux or intracutaneous test was used. The number of reactors is higher, and the administration is more rapid than by the Von Pirquet method. However, there are some communities in which it is difficult to obtain consent for the intracutaneous test, and under such circumstances it has been found advisable to use the older method.

One milligram of old tuberculin (New York State Department of Health Laboratories) was given intracutaneously (Manteaux test) and the reaction read seventy-two hours later. The positive reactors were read +, ++, +\dot++, and ++++, as classified by the Diagnostic Standards of the National Tuberculosis Association.

We tested 1,885 pupils, 1,335 of whom were 7th and 8th grade and high school students; the remaining 549 children were from grade and private schools and averaged under 12 years of age. The total number of reactors was 983 or 52,14 per cent, a rather high percentage as compared with the findings in many other communities. The variable percentage of reactors was interesting. Forty-five per cent of the children in the Suffern school were positive to the test, while the Haverstraw school showed 68 per cent reactors, although the age-group was the same, the villages about equal in size, and but seven miles apart. However, Haverstraw village is more the industrial, living conditions are the less favorable, and tuberculosis is known to be more prevalent there.

X-RAY PROCEDURE AND INTERPRETATION

All reactors were x-rayed. One anteroposterior film was taken with a 10 milliampere, 100 volt, portable x-ray machine and double screens. The distance used was 48 inches, and the time, the only variable factor, was from one-quarter to three-quarters of a second. All cases showing questionable pathology were again x-rayed at the sanatorium with a high-power machine, and given a physical-examination before a final diagnosis and classification were made. There were 211 children who were re-x-rayed, and in addition all these children received a physical examination together with a complete clinical history.

The interpretation and classification of the shadows on the chest film of a child is often a most difficult problem. A final diagnosis of such shadows should be made only by one who has had the experience of studying a very large number

of films, and frequently he must combine the family and personal history, symptoms, and physical examination with the x-ray interpretation before a final decision can be reached.

While the roentgenogram is the best method available at present for the detection of tuberculous lesions in childhood, pathologists have recognized the fact that small foci of consolidated lung tissue, even with caseation, are not always opaque to x-rays. It has also been noted that shadows on the film may suggest advanced calcification, while the autopsy findings demonstrate putty-like caseous material with only uniform deposits of mineral salts as the cause of such shadows; and such material may contain numerous tubercle bacilli.

It is, therefore, dangerous to classify petrified lesions as shown by the x-ray as always completely healed. However, "dense sharply defined opacity," says Opie, "suggests that calcification is advanced, whereas shadows of less density, occurring in small spots, which give a granular appearance to the lesion suggest the early state of calcification." The primary complex of childhood, as evidenced by calcium in the lung parenchyma and lymph nodes, which we so frequently find accompanying active adult tuberculous lesions is, in our opinion, the focus for the recent spread in the majority of cases.

CLASSIFICATION OF FINDINGS

Our classification followed that of the Diagnostic Standards of the National Tuberculosis Association of 1931 which is briefly as follows: 1. Observation Cases. 2. Manifest Disease. 3. Apparently Healed.

- 1. The Observation Cases include:
 - (a) Those in whom the x-ray shadows or symptoms, or both, suggest tuberculosis but which cannot be proven at the time of the examination.
 - (b) Those in whom tuberculosis is definitely present, but the proof of latent or active disease cannot be determined at the time of the examination.
 - (c) Children who had a positive tuberculin and were known to have been exposed to sputum-positive cases, although the x-ray is negative. The later group has materially increased the number of observation cases.
- 2. The Manifest Disease cases includes definite pulmonary or tracheobronchial tuberculosis, or a combination of both, with all the evidence of clinical or roentgenological activity.
- 3. The Apparently Healed cases includes lesions which have all the x-ray evidence of com-

plete fibrosis or complete calcification, and the child is free from clinical symptoms.

The difficulty of all workers to classify uniformly the results based on the above standards is obvious. Many may group the majority of calcified lesions as apparently healed. While others, more conservative, are likely to consider a prolonged period of observation as necessary and carry such patients as suspects.

RESULTS

The percentage of tuberculous lesions found by workers in this field is fairly uniform. Rathbun in a study of 3,678 school children in Chatauqua County, New York, reported an incidence of 3.3 per cent as having tuberculous lesions. Of 11,449 children examined by Chadwick in the State of Massachusetts, 4.8 per cent were found to have tuberculosis of the tracheobronchial lymph nodes. Opie and McPhedran of Philadelphia emphasized the increase of tuberculous lesions in children with the increase of age. They report that at the age of 5 years only one-twentieth of those infected show definable lesions; at 10 years approximately one-ninth; and at 15 years, one-quarter. workers of the Philadelphia group have also found that tuberculous foci occur more often in girls than in boys from 12 to 20 years, the rate being 3.4 per cent for girls, while that for boys in the same age-group is 2.1 per cent.

In a study of 1,000 children, ages 13 and 14 years, from the Bellevue-Yorkville District, New York City, Barnard, Amberson, and Loew report 7 per cent of them as having apparently healed tuberculosis, and 11 per cent as having clinically important lesions.

Our study consisted of 1,885 children in the 7th and 8th grades and high schools of five villages, several small grade schools, and two private schools. No attempt has been made to classify the character or percentage of lung lesions in accordance with the age-groups. The students ranged in age from 12 to 17 years.

In the group termed "dangerous lesions" are included all those classified under manifest disease, and a large percentage of the observation cases, where the tuberculous foci in the lung suggest possible incomplete fibrosis or where the calcification in the nodes indicates that there may be some remaining caseation. Any extensive lesion in the tracheobronchial lymph nodes or lung parenchyma was classified as dangerous.

Tables 1, 2, 3, and 4 show the results found in our study of three distinct school groups:

TABLE I.

Results found in Five High Schools—Spring Valley, Suffern, Haverstraw, Stony Point, and Tomkins Cove.

Total Enrollment—1,935.

	Number	Per cent
Tubereulin tested	1336	69 04
Negative to Tuberculin	575	43 03
Positive to Tuberculin (these were		
\ rayed)	761	56 96
Negative to X-ray	622	46 55
Negative to either Tuberculin or A ray		
(No Tb)	1197	89 59
Positive for Tb or Suspect	139	10 40
(a) Observation	42	3 14
(h) Manifest Disease	17	1.27
(b) Manifest Disease (c) Apparently Heiled	80	598

TABI E II

Results found in Seven Grade Schools, study confined to the 7th and 8th grades Total Enrollment—429

	Number	Per cent
Tuberculm Tested	315	73 42
Negative to Tuberculin	174	55 33
Positive to Tuberculin (these were	•••	
\ rayed)	141	44 76
Negative to X ray	87	27 61
Negative to either Tuberculin or A ra	ly	
(No Tb)	261	82 85
Positive for Tb or Suspect	54	17 14
(a) Observation	27	8 57
(b) Manifest Disease (c) Apparently Healed	4	1 26
(c) Apparently Healed	23	7 30

TABLE III

Results found in Two Private Schools—one for boys 12 to 17 years enrollment 54 the other school for girls ages 12 to 17 years enrollment 180 Total Furollment—234

	Number	Per cent
Tuberculm Tested	234	100 00
Negative to Tuberculin	153	65 38
Positive to Tuberculin (these were		30 00
1 rased)	81	34 61
Negative to X ray	57	24 35
Negative to either Tuberculin or A-ray	γ	
No Tb)	210	89 74
Positive for Tb or Suspect	24	10 25
(a) Observation	13	5 55
(b) Manufest Disease	4	1 70
(c) Apparently Healed	7	299

SUMMARY

Combined results in Tables I II and III Total Furoliment—2 598

	Number	Per cen
1 otal Fuberculm Tested	1885	72 55
Total Negative to Tuberculin	902	47 85
Total Positive to Tuberculin (thes	c.	
were X rayed)	983	52 15
Total Negative to A ray	766	40 63
Total Negative to either Tuberculin o	г	10 00
X ray (No Tb)	1668	88 48
Total Positive for Th or Suspect	217	11 51
(a) Observation -	82	4 35
(b) Manifest Disease	25	1 33
(e) Apparently Healed	110	584
		3 07

The total number of children with definite le sions, suspected lesions, or those classified as ob servation cases on account of contact, was 217 or 11 5 per cent Of this number we considered 50 or 27 per cent as having "dangerous lesinis" and

will be closely observed, 25 of whom were considered clinically active

In addition to the examination of school children, 123 teachers were n-rayed, 2 were found to have active disease and in need of treatment, 1 case was classified as minimal quiescent, and 12 showed evidence of apical fibrosis or calicification of a tuberculous character but apparently well healed

We feel that a splendid opportunity is offered by this work for the detection of the source of in fection in the homes. Fifty three families in whom the children had tuberculous infection were studied, 108 members were 1-rayed and given a physical examination, including 42, mothers 29 fathers, and 37 other children not included in the school study. Six cases of unsuspected active pul monary tuberculosis were discovered, 4 mothers, 1 father, and 1 boarder. In our study of the 53 families one or the other parent in 18 of the families was found to have arrested tuberculosis. Of the 37 children, 4 cases of active childhood tuberculosis were detected, 4 cases were classified as observation, and 4 as apparently healed

Further study brought out the following facts in relation to the children with positive findings. One or the other parent or some member of the family of 26 children were known to have died of pulmonary tuberculosis. Sixteen children were known to have been exposed to a parent who had, or now has, active pulmonary tuberculosis but is still living. Twenty two children had one parent in whom an arrested lesion was found, but no past listory of activity could be obtained.

We have come to the conclusion that a child reared in close contact with a person who has been an open case of tuberculosis is potentially tuberculous until proven otherwise

SOME CONCLUSIONS

The secret of the adolescent peak of tubercu losis mortality is probably hidden in the period immediately preceding adolescence

By means of the tuberculin test and 1 ray, grave pulmourry lesions may be discovered in children long before they have produced the destructive stage. Careful supervision and treatment of such lesions will, in many cases prevent the development of adult tuberculosis.

Someone has said "Tuberculosis is the last verse of the song, the first of which was sung to the infinit in the eradle". The truth of this state ment in its entirety remains to be proven but we do believe that childhood infection plays an important part in the epidemiology of tuberculosis. The present method of attack through the school offers encouragement and warrants continued investigation.

TUBERCULIN TESTS IN CHILDREN

Comparative Studies with Different Makes of Tuberculin

By HENRY A. REISMAN, M.D., JAMAICA, N. Y.

From the Chest Clinic, Pediatric Department, New York Post-Graduate Medical School and Hospital, and Columbia University.

TOMPARATIVE studies were made with Koch's old tuberculin prepared in and distributed by the Bureau of Laboratories of the Department of Health, New York City, and that of a well known reliable commercial house whose old tuberculin is highly recommended. Studies were made to ascertain the reliability, potency and dependency of the tuberculin prepared by the Health Department, which we have been using in our Chest Clinic of the Pediatrie Department for the past seven years. It is indeed gratif ying to learn that the tuberculin prepared by the City compares more than favorably with that of one of the best commercial houses. With old tuberculin, as it is prepared today, one does not expect to find the same degree of potency in different lots because of lack of satisfactory standards as to activity and potency.

Robert Koch¹ succeeded in isolating the tubercle bacilli in 1882, definitely establishing it as the etiological factor of the disease. Koch also observed that when the products of the tubercle bacilli were injected into tuberculous animals, there were both local and general reactions. This, he designated as the "Tuberculin Test." It is a tribute to the man whose achievement, the discovery of the tubercle bacilli, and the publication of the "Etiology of Tuberculosis" (the fiftieth anniversary of which recently received world-wide recognition—March 24, 1882-1932), that tuberculin as originally prepared by him remains today praetically unchanged.

To a 5 per cent glycerin broth media, 0.5 per cent sodium chloride and 1 per cent dried peptone were added. The tubercle bacilli were then cultivated at a temperature of 38° C. At the end of six weeks there was a pellicle-like growth. The culture was then filtered, the filtrate heated to kill all living tubercle bacilli and then concentrated to 1/10 its volume making a 50 per cent glycerin solution. It is with this concentrated preparation designated as old tuberculin (Koch's O. T.) that the diagnostic tests are now performed.

Tuberculin as prepared by the Bureau of Laboratories, Department of Health, City of New York, differs only from the original method of Koch in that the culture is first heated to destroy all living tubercle bacilli and then filtered and concentrated; rather than filtering first and then heating the filtrate to destroy any living tubercle bacilli, because of the danger associated with filtering live bacilli.

In 1907 Pirquet² described his cutaneous test. In 1908. Mantoux³ described his intracutaneous method commonly known as the "Mantoux Test,"

which today is the tuberculin test of choice. It is the more delicate, sensitive, and reliable test, and produces a greater number of reactions than the Pirquet (cutaneous) method.⁴ Other tuberculin tests are:

1. Subcutaneous test (Koch).

2. Subcutaneous test Local (Stichreaktion) (Escherich) (Hamburger).

3. Percutaneous (inunction) (Moro).

4. Ophthalmo test (Conjunctival) (Calmette).

Of all the tuberculin tests, the Pirquet² (cutaneous), and the Mantoux³ (intracutaneous), are by far the most reliable and safest; and of the

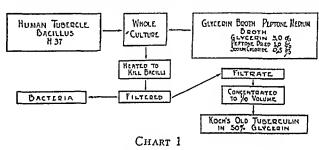


Diagram of the constituents and method of manufacture of old Tuberculin.

two, the Mantoux is the more sensitive and accurate.

There are three distinct phases to the tuberculin reaction:

- (1) Local.
- (2) General.
- (3) Focal
- (1) Local reaction is present at the site of inoculation in sensitive individuals; it consists of swelling, redness, and edema which reaches its height at the end of forty-eight or seventy-two hours, after which time it gradually subsides, undergoing a brownish pigmentation with fine desquamation which may persist for several weeks. Premature pseudo reactions disappear within the first twenty-four hours.
- (2) General reaction may follow the subcutaneous test, which is not commonly used today. Constitutional symptoms usually accompany a positive reaction as a rise in temperature, malaise. nausea, headache, anorexia, and insomnia. A general reaction is to be avoided when doing the tuberculin test in man. Using the intracutaneous method with good technic and the proper dilutions, there need be no fear of any untoward symptoms. The subcutaneous method is the one used in testing cattle. A comparatively large amount

of old tuberculin is injected into the suspected animal subcutaneously. If, within forty-eight hours, there is a sharp rise in temperature, the test is considered positive and the animal tuberculous.

(3) Focal Reaction. In addition to general or constitutional symptoms, in the subcutaneous test, there may be a reaction at the site of the tuberculous focus or lesion. There is increased activity which is manifested by an increase in physical signs. Even though the general reaction be marked, there need not necessarily be a focal reaction.

Over 200 children in the Chest Clinie were simultaneously tested by the intracutaneous method with equal dilutions of tuberculin. For uniformity, the Health Department tuberculin was used on the right forearm and the proprietary tuberculin on the left. The dilutions used were 1-1000 and 1-100 depending upon whether the Mantoux test was previously done, and whether it was positive or negative at either of the dilutions. Both tuberculins were freshly prepared on each day they were used.

In all cases where the Mantoux tests were positive, with but one exception, the City tuberculin gave the more intense reaction. In one instance the reaction with the City tuberculin (1-100) was faintly positive and the proprietary was negative. The majority, however, were 4 plus of the City to 3 plus of the proprietary. The following four cases (Table 1) are representative of the results in comparing the intensity of the reactions of the two tuberculins.

TABLE 1

Four cases illustrating the intensity of the tuberculin reaction.

Name Age Diagnosis M.Z. 5 Ch. Bronchitis	Reacti Tube	on to City reulin	Proprietar: Tubercula
E.S. 10 Old Hilum Tuber.	1 +	(1-100)	Neg
IS 11 Phlycterular Kerato-	+++	(1-1000)	+
Conjunctivitis; Hilum Tuberculosis W.B. 9 Old Hilum Tuber-	++++	(1-1000)	++
	++++	(1-1000)	+++

In view of the fact that we place a great deal of reliance relative to our diagnosis on the result of the tuberculin test, particularly in children, it is important to know that we are using a potent and reliable tuberculin. Until such time that tuberculin can be properly standardized as to potency, we can expect different lots from different and even the same laboratories to produce reactions of varying intensity, barring, of course, the human factor of faulty technie. When we eonsider the method of preparation of tuberculin, its conglomerate composition with only a quantitative standard, but with no satisfactory qualitative standard to test its activity or potency so as to give all tuberculins equal activity, one must realize the need for such a procedure.

Human Tubercle Bacillus Protein known as

M. A. 100 gives good promise for such a standard. Masueci and McAlpine⁸ isolated the protein M. A. 100 from the filtrate of culture of the human tubercle bacillus H. 37 grown on Longs synthetic enture media. This medium contains no protein, but contains asparagin as a source of organic nitrogen. Hence all proteins present with various other substances not medium constituents in the filtrate must have been synthesized by the tubercle bacillus. Masueci and McAlpine tested this specific protein M. A. 100 in tuberculous lumans and guinea pigs. It gave a typical skin reaction as with Koch's O. T. In humans the dosage necessary to give a reaction was as low as

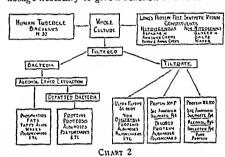


Diagram of the constituents and method of manufacture of Human Tubercle Bacillus Protein M. A. 100

.00005 mgm. In comparison with old tuberculin and Siebert's ultrafiltration method, it was found to be relatively less toxic. W. C. White and J. Burns Amberson are undertaking a elinical study of M. A. 100 under the auspices of the National Tuberculosis and Health Association, through its affiliated associations. Funk and Huntoon investigated the skin sensitivity of man to this partieular human tubercle bacillus protein M. A. 100 when the protein is introduced intradermally as in the intradermal tuberculin test. To control the observations, intradermal tests were made simultaneously with a standard tuberculin O. T. eomparable and safe dosage was established for tuberculin O. T. .00001 c.e. and .0005 mgm. of protein. They found (1) that the human tubercle bacillus protein when injected intradermally elicits in the majority of adults, a skin reaction reaching its height in twenty-four to forty-eight hours, and indistinguishable from that produced by old tuberculin, but apt to be less intense in color and edema; (2) that the skin reaction with M. A. 100 occurs in a slightly greater incidence than that produced by old tuberculin:

TABLE 2
Tests in two groups of cases
Protein M.A. 100, Tuberculin O.T.,
% Positive % Positive % Positive % Positive % 91.2%

81% 71.5%

(3) That in tuberculous individuals and animals the protein is as specific as tuberculin (O. T.) and (4) that disagreeable and dangerous reactions are less apt to occur. In the report of Dr. W. H. Morris¹⁰ to the Research Committee of the National Tuberculosis and Health Association on Protein 304F used as intracutaneous diagnostic skin test, he stated that the 304F protein reactions do not persist as long and are of less. intensity than Tuberculin (O. T.). It is obvious that if the Protein M. A. 100 proves to be as specific as old tuberculin from a diagnostic standpoint, it will be far more preferable to the latter, not only because it is less toxic, but because it is a pure substance which readily lends itself towards standardization as compared to the complex composition of tuberculin (O. T.).

The specificity of the tuberculin test today is undoubted. The younger the child, the more significant its reaction. So much importance is placed upon a positive tuberculin test that, given a young child about three or less suffering from a fever of unknown origin, giving a positive tuberculin test, it is accepted as strong evidence in favor of some form of active tuberculosis. persistent negative tuberculin test rules out a tuberculous infection. However, under certain conditions, the tuberculin test may be negative in spite of a tuberculous focus, as in the following five conditions:

Incubation period:

From the time the child or individual becomes infected to the time he develops a sensitivity and reacts to tuberculin, is called "the incubation period." In the guinea pig, it is approximately eleven days; in man it may be any time up to approximately three months.

- Acute advanced Tuberculous infection with marked constitutional symptoms such as:
 - (a) Acute miliary tuberculosis.

(b) Tuberculous meningitis.

(c) Advanced pulmonary tuberculosis.

A negative tuberculin test in the presence of an acute advanced tuberculous infection indicates a very grave prognosis.

- During certain acute infectious diseases, 5 such
 - (a) Measles.
 - (b) Scarlet fever.(c) Diphtheria.

(d) Others as pneumonia, influenza, erysipelas, and typhoid, to a lesser degree.

According to Abt⁵ 100 per cent of all cases of measles will give a negative tuberculin test. This, however, has not been my experience. In a small group of case's during measles, which Dr. Caldwell and mysel's have observed, 25 per cent gave a positive tuberc'ulin test, and one child had defi-

nite active tuberculosis. Although there are many instances where the infection has caused the tuberculin test to be negative, if one suspects a tuberculous focus, it is advisable to repeat the Mantoux two or three months later, at which time there should be no interference with the test. In order to avoid a general reaction, it is advisable to first repeat the Mantoux with the weaker dilution, and then, if negative, to use the more concentrated dilution. The fact that any were positive during measles is obvious proof that not all children with measles give a negative tuberculin test. Tuberculin Therapy:

During the course of tuberculin therapy, the tuberculin test may become negative. The test is made negative merely from the standpoint of desensitization to a particular dilution. I found that when a Mantoux was repeated with a more concentrated dilution, the reaction was positive. It is advisable, in repeating a Mantoux, to wait at least an interval of one week instead of two or three days, and to increase the dose from .1 mg. to 1. mg. instead of the intermediate .5 mg. as is some times advocated. Otherwise, we may be defeating our own purpose in attempting to obtain a positive tuberculin test. The repeating of the test at a short interval of two or three days would be doing it during a period of temporary desensitization which requires more than a few days to disappear and to go from .1 c.c. of 1-1000 to .1 c.c. of 1-500 and .I c.c. of 1-100 might result in desensitizing the patient to tuberculin as in tuberculin therapy. One need not fear a severe reaction with a 1. mg. if a previous .1 mg. was negative.

Healed or Extinct Tuberculosis:

It is claimed that in an individual with a completely healed or extinct tuberculous infection, the tuberculin test will be negative and that in order to give a positive tuberculin test one must have at least one living tubercle bacillus present. On the other hand, the rapidly increasing incidence of positive tuberculin tests in children to its almost universal presence in adults should cause one to ponder whether the belief is correct or mere conjecture and if correct, then all individuals with positive tuberculin tests are suffering from some form of inactive or active tuberculosis. It must, therefore, indicate a negligible percentage of healed cases, particularly if we are to take into consideration a small percentage who have never become infected. Can it really mean that so few of us are able to combat this infection success-The explanation given occasionally when the tuberculin tests are persistently negative, and there are what appears to be calcific nodules in the hilum, is that the lesion is healed. However, it might be that every "calcific nodule" is not what it appears to be. This was brought out in an extensive research program sponsored by the

Oueensboro Tuberculosis and Health Association in co-operation with the Queens County Medical Society, to be carried out for a period of several years. The author is a member of the research committee and active in the work supervising the physical examinations of the children. X-rays were taken of the chests of 10,706 school children (7, 10 and 14 yr. groups) with a specially devised camera x-ray and paper film. Interpretation of the plates were made by an experienced worker and final interpretation by Dr. J. Burns Amberson, designating those showing sufficient amount of pathology from a tuberculosis standpoint to warrant a physical examination, at which time a tuberculin test was performed (intradermal I-1000). Of the 10,706 children x-rayed, 199 showed sufficient evidence of tuberculosis on xray to warrant a physical examination, and of the 199 children examined, 188 received the Mantoux test, of which only 105 (55.8 per cent) were positive.

It is, indeed, a comparatively small percentage of positive tuberculin tests in a group of children with highly suspicious tuberculous findings. indicates that x-ray alone cannot be depended upon to make a diagnosis of tuberculosis in children because of numerous conditions that may produce hilum adenopathy and central pneumonic infiltration that may more or less simulate Roentgenologically childhood tuberculosis. 7. 18 and 19

These conditions are:

- Post Scarlet Fever. (2) Post Whooping Cough.
- (3) Post Measles.
- (4) Chronic Bronchitis.(5) Bronchiectasis.(6) Lung Abscess.
- (7) Lues.
- (8) Hodgkins. (9) Foreign Body.
- (10) Asthma.
- (11) Anemia, (Leukemia)
- (12) Sinusitis.
- (13) Central Broncho Pneumonia. (14) Influenza. (15) Chronic Pneumonic Processes.
- 6. Other tuberculous conditions reported to produce a negative tuberculin test are:
 - Tuberculosis of serous membrane.¹¹
 - (2) Certain skin conditions believed tuberculous.12

There is much discussion at the present time, as to how concentrated a solution of tuberculin it is advisable to use. Hart,33 in his very complete monograph on tuberculin, used dilutions varying from .1 c.c. of a 1-10,000 (.01 mg.) to .1 c.c. of undiluted tuberculin (1:1 solution or 100 mg.). He calculated the percentage error to be expected with the various dilutions. "A negative intra-

cutaneous reaction with the standard dilution 1-1000 of tuberculin must weigh heavily against a diagnosis of clinical tuberculosis. The average error being 4 per cent in the series investigated. If, however, the slightest doubt remains as to the diagnosis, further tests with a 1-100 dilution should be performed, and if still negative, repeated with a 1-10 dilution. He states that a negative intracutaneous reaction to a 1-10 dilution of tuberculin excludes clinical tuberculosis with an error; that, judged from the present series, is very close to the minimum (2 per cent) obtained by using undiluted tuberculin. On this account and for technical reasons, a 1-10 dilution is the practical upper limit."

In 1911 Engle¹⁴ advised the use of a 1-10 dilution (10 mg.) and even undiluted tuberculin. With these larger doses he was able to obtain reactions in patients with cachexia and miliary tuberculosis who were negative to the more commonly used doses.

Happ and Casparis15 corroborated the findings of Engle with particular reference to children with tuberculous meningitis and miliary tuberculosis and stated that in their opinion the sensitivity to tuberculin is only depressed, but not lost. There are several reasons against the practical use of the more concentrated solutions of old tuberculin; namely, 1-10 and 1:1 (undiluted). The percentage error with a 1-1000 dilution is only 4 per cent compared with a minimum error of 2 per cent with undiluted tuberculin. Obviously, when a 1-100 dilution is used, the error is reduced still nearer the minimum 2 per cent, 2.75 per cent¹³ making a difference of a little less than 1 per cent. The vast majority of cases which compose that difference are cases that are obviously tuberculous, as advanced tuberculosis with cachexia, miliary tuberculosis, or tuberculous meningitis, requiring no positive tuberculin test to make the diagnosis. The use of a 1-10 dilution or stronger has often left me with more doubt than certainty as to the diagnosis because of persistent pseudotuberculin reactions that were difficult to distinguish from the typical tuberculin reaction which in itself has variations. Control solutions of glycerinated veal broth were used in the majority of cases in suitable dilutions in Hart's series. Skin reactions were obtained with the control solutions, 1-10 or stronger having all the macroscopic characteristics of the tuberculin reaction. However, the positive reactions in the controls, he stated, only occurred in tuberculous individuals.

Willis¹⁶ tested two groups: I group of 13 tuberculous patients and I of 15 healthy volunteers, with .1 c.c. of equal parts of glycerin and saline. This corresponds to undiluted tuberculin. Not a single individual tested failed to give a definitely indurated reaction in twenty-four to forty-eight hours, which was distinct for five or six days. The reaction was characterized by a

firm nodular induration; definitely pallid rather than red, and which might easily be mistaken for a true tuberculin reaction. In some there was vesiculation. Hence, in view of the fact that the percentage error with a 1-100 dilution is only 2.75 per cent compared with a minimum of 2 per cent with undiluted tuberculin, the difference be-

ing chiefly among the advanced and obviously tuberculous patients, and that reactions can be obtained in the 1-10 or stronger dilutions that are probably due to concentrated glycerin, I feel that the practical limit for ambulatory cases, and those not obviously with advanced tuberculosis should be a 1-100 dilution.

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UNRESOLVED PNEUMONIA

By HAROLD J. HARRIS, M.D., WESTPORT, N. Y.

Read before the Medical Society of the County of Essex, November 9, 1932.

N the past five years virtually the only type of pneumonia that has occurred in this region has been the so-called grippe pneumonia. The sudden mode of onset with chill, high fever and pleuritic pain has been of rare occurrence. see a patient with grippe which actually merges into a frank lobar pneumonia has been common.

The other striking change has been the relative prevalence of unresolved pneumonia. The term 'unresolved" is used in preference to "delayed resolution" because it seems to be more accurately descriptive of the condition. The literature has contained very little on this subject in the past twenty years.

Because of the tendency towards this condition it has seemed wise to make routine radiographs as early as feasible during the convalescence from pneumonia. Physical findings nearly always are definite enough to make a diagnosis quite certain before radiography but occasionally small areas near the center of the lung may not give physical findings but will show up in stereoscopic radiographs.

The patient presents a rather typical clinical picture. There is usually a persistent cough, palpitation, lassitude, easy fatiguability, afternoon temperature, and a general slowing up of convalescence. Some are very ill and bed-ridden; pourse th

others work and complain only of palpitation,

dyspnea, and cough.

Treatment in this small series has been diathermy through the chest, often laterally as well antero-posteriorly, each treatment lasting from forty-five minutes to one and one-half hours, and given as nearly daily as possible. Obviously the electrodes have to be carefully placed directly over the aspect of the chest near which the patch exists. These patients improve so constantly under treatment that they do not have to be told that subsequent radiographs are showing a steady clearing. The mechanism of cure is by increasing circulation through the lung.

Case 1. Mrs. T. S. Age 35. Pneumonia complicating measles in December, 1924. Cough continued with occasional attacks of asthma, periodic temperature elevation and malaise. She consulted me on July 15, 1926, one and one-half years later. Physical examination showed a few crepitant rales over the middle third of the left chest posteriorly with increased whispered voice sounds and slight dullness. X-ray showed a hazy area in this part of the left lung. Six diathermy treatments given three days apart was followed by disappearance of all signs, symptoms and x-ray findings.

Case 2. Mrs. G. S. E. Age 49. Type 3 lobar pneumonia of the right base, onset May 29, 1931, following grippe. An apparent crisis occurred 48 hours later and was followed by a secondary rise of temperature which ran an irregular course up to 101 for another week, and then ranged to 99.6 for the next six weeks. Radiographs taken at the end of three weeks showed a patch over the lower half of the right lung diagnosable stereoscopically as unresolved pneumonia. A blood Wassermann taken the same day was 3-plus with both antigens. There was a history of syphilis 15 years before. Fifteen diathermy treatments, averaging one hour each, were given before the was no noticeable change on physical or x-ray examination during the first three weeks of treatment. Accordingly, diathermy was stopped but the sulfarsphenamine was con-

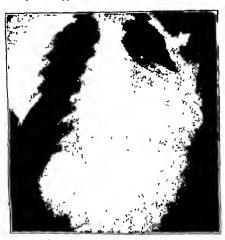


Fig 1—(Case 3) —Empyema and unresolved pneumonia, May 17, 1930

tinued. At the end of seven weeks roentgenogrants showed a practically normal lung, with the exception of accentuated root markings. The slow response in this case, as compared to the usual response to diathermy, was probably due to the long-standing st philis, as probably was the unresolved pneumonia itself. Cure was mainly ascribable to anti-syphilitic treatment, I believe.

Case 3. Mrs. C. C. Age 42. Ouset of right-sided type 3 lobar pneumonia, May 5, 1930, following grippe, followed closely by empyema, which diagnosis was confirmed by radiographs 12 days after the onset. Closed drainage was instituted. Drainage ceased in five weeks, but a daily temperature up to 101 continued. A clinical diagnosis of imresolved pneumonia co-existing with and following empyema was confirmed by further x-ray study. Diathermy had been given throughout the aeute pneumonia and stopped at the onset of empyema. It was resumed when drainage ceased, three times weeldy for four weeks, at the end of which time physical and x-ray signs had disappeared. Improvement in all signs and symptoms had been constant.

Case 4, Mr. C. P. Age 25. Onset of severe right-sided lobar pneumonia on February 18, 1931 following grippe. He was treated throughout with oxygen tent and diathermy, with lysis ending in normal temperature in six days Cough, dyspnea, tachyeardia and easy fatiguability persisted but there was no recurrence of fever. Radiographs taken four weeks after the onset showed an unresolved area in the outer third of the lower lobe of the right ling, the only part of involved lung tissue not thoroughly treated by diathermy throughout the acute pneumonia. The patient improved rapidly

after the first few diathermy treatments and all signs and symptoms disappeared within six weeks. Treatments were given with electrodes placed laterally, the smaller on the affected side to concentrate heat in the periphery of the right base.

Case 5 Mr. W. D. Age 75 Sudden onset of leftsided lobar pneumonia, March 5, 1931. No diathermy
was used hecause of the lack of electricity in the home
and the mildness of the pneumonia. A partial crisis
occurred in four days with a recurrence of pain, bloody
sputum and fever 48 hours later, subsiding by lysis in
six more days. Cough, dyspnea, dullness over the left
base, and distant breath sounds persisted. Radiographs
six weeks after the onset showed failure of resolution
of the outer lialf of the lower lobe of the left lung. Constant improvement in all signs and symptoms occurred
following the initiation of diathermy which was continued for the next four weeks.

Case 6. V. T. Female Age 9 Ouset of left-sided type 1 lobar pneumonia, January 17, 1929, following grippe, ending by erriss in six days and followed by empyeina five days later. Radlographs were taken two weeks after the onset and closed drainage instituted. Drainage stopped in 18 days but an irregular tempera-



Fig. 2--(Case 3).--Unresolved pneumonia (after drainage of empyema), June 25, 1930

ture up to 100, with cough, and evident toxacmia continued. Two weeks after drainage had stopped further radiographs showed a fan-shaped area of unresolved pneumoma in the upper third of the left lung. Diathermy was administered for four hours daily for five days and then for one and one-half hours each second day for another 10 days during which time all signs and symptoms disappeared.

Case 7. Mrs. E. N. Age 91. Onset of lobar pneumonia of right base August 11, 1931. Recovery was almost unbelievably rapid, temperature subsiding in 48 hours with no specific therapy. Moist rales persisted in the right base posteriorly. She was not seen again after the 15th of August until April 29, 1932, eight months later, at which time the history was obtained of frequent attacks of fever, cough, malaise and progressive weakness ever since the pneumonia. She had been a

relatively vigorous person, considering her advanced age, prior to the pneumonia. Physical examination showed crepitant rales, distant breath sounds and slight dullness over the site of the pneumonia. A diagnosis of unre-solved pneumonia was made but was not confirmed by x-ray because of the distance she would have had to travel to my office. She was last scen on September 5, 1932, and was in better general health. The physical signs had disappeared spontaneously after having persisted at least eight months. A decply placed patch may

Case 8. Mrs. J. N. Age 74. This patient was first seen on July 7, 1932, in consultation with her family doctor. There was a history of bronchial pneumonia in 1925, lobar pneumonia in 1927 and bronchial pneumonia again in 1931. Her present illness began in May, 1932, when she had symptoms of a grippe infection and ran a temperature upwards of 104 for 10 days. She was able to get up and about for a few days but there was a re-currence of fever and malaise. The cough had not subsided at any time. It was severe and productive of a frothy mucus. Her temperature continued up to 102 until the day she was seen in consultation. She had coughed up a mouthful of blood on two occasions and a diagnosis of pulmonary tuberculosis had been made by her attending physician. She was becoming progressively weaker.

Physical examination of this emaciated, bed-ridden



Fig. 3—(Case 8).—Unresolved pneumonia; right base, July 9, 1932.

woman showed a temperature of 99.6 and duliness with distant breath sounds over the right base posteriorly. A tentative diagnosis of unresolved pneumonia was made, tuberculosis seeming unlikely because of the basal location of the lung lesion. Five negative sputums had already been obtained and fifteen more taken subsequently were negative for tubercle bacilli as well as for evidence of mycotic infection. Pneumococcus Group IV was isolated. Radiographs showed an extensive unresolved pneumonia of the right base. Fifteen diathermy treatments were given between July 18 and August 23. The last radiograph taken September 5, 1932 showed a nearly cleared right lung. Her temperature had subsided to normal within two weeks of the time diathermy was begun and her cough had steadily lessened. She gained constantly in strength and weight. Improvement continued following the discontinuance of treatment, as usually does occur in such cases. When last seen on September 21, 1932, the patient seemed entirely well.

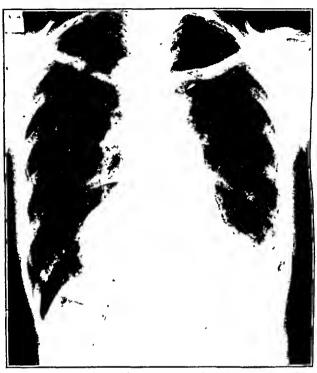


Fig 4—(Case 8).—After three weeks of treatment (improvement greater than is apparent due to over-exposure of this and subsequent radiograph).

Her cough had practically disappeared and she was able

to do her own house work.

This patient may actually have had an area of unresolved pneumonia since her first pneumonia seven years before. This area conceivably became reactivated by new bronchial infections three times subsequently and then, following her infection in May, 1932, failed to quiet down until treatment was instituted. I have purposely gone into detail in this case as I believe it illustrates many phases of the apparently ill-understood condition called unresolved pneumonia or delayed resolution of

pneumonia. Comment—Out of 32 cases of acute lobar pneumonia, selected at random from my files, eight had definite unresolved areas of lung tissue. Six out of eight cases of unresolved pneumonia were in patients in whom grippe had immediately preceded the pneumonia. In two cases empyema and unresolved pneumonia co-existed and the delayed resolution continued after the empyema was cured. In three cases diathermy had been used throughout the acute pneumonia. In all cases, except two, diathermy was used as the method of treatment of the unresolved pneumonia.

Conclusions

1. My limited experience would seem to indicate a higher incidence of unresolved pneumonia than is apparent from the literature.

2. Post-grippal pncumonia seems especially prone to the complication of unresolved pneumonia.

3. Physical signs and symptoms may not read-

ily suggest the diagnosis.

 Routine radiographs of all patients within a month following the onset of pneumonia would obviate the failure to recognize this condition.

5. Diathermy is a highly satisfactory method

of treatment of unresolved pneumonia. It may be administered in the home, even a portable machine of fair capacity sufficing, while x-ray therapy is usually not as readily available. Improvement begins very promptly after diathermy is begun.

 Recurrence of pneumonia within a few months or even years may well be due to reinfection of a neglected area of unresolved pneumonia.

A SIMPLE PROCEDURE FOR THE CURE OF RHINOPHYMA

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In view of the disfigurement and humiliation caused by rhinophyma, the treatment of this condition with good cosmetic results is of great importance to the one afflicted. Unfortunately many of the sufferers are led to believe that there is no cure for this ugly affliction. This is unfortunate as the technic for producing satisfactory results is rather simple.

Relation of Rhinophyma to Acne Rosacea.— As rhinophyma occasionally occurs as a sequela of acne rosacea, a description of their relationship

pathologically is hereby given.

Acne rosacea is more or less a sub-acute or chronic congestive disease involving the nose and neighboring parts of the cheeks and forehead,the flush areas of the face. The disease in its early stage begins as a passive hyperemia, which is followed later by dilatation and proliferation of the superficial capillaries. This telangietic element is due to an absorption of the elastic tissue in the blood vessel walls. At this stage the skin may be oily. The pustules in acne rosacea are more superficial than those seen in acne vulgaris. In rarer cases, the hypertrophy of the cutaneous and subcutaneous tissue becomes marked, and more or less lobulated masses appear, deforming the nor-mal structure of the nosc. This last stage is known as rhinophyma. The pores become patulons; and either sebum or pus, or both can be squeezed out of the tissues. The blood vessels continue to show considerable dilatation in this

Histologically then, rosacea in the early stage presents a dilatation of the capillaries with newly formed blood vessels, which may or may not be surrounded by an inflammatory inflitrate of small lymphocytes. This increased blood supply leads to edema and over-nourishment of the connective tissue. As the disease advances, deeper vessels are involved, and these may be surrounded in places by thick mantles of infiltrate made up of lymphocytes, epitheliod cells, and occasional giant cells. The condition being chronic and one which

is prone to recurrences leads therefore to considerable hypertrophy of the connective tissue and sebaceous glands, which together comprise the first signs of the later stage known as rhinophyma. Rhinophyma, histologically, consists of a marked hyperplasia of sebaceous glands and connective tissue plus many of the cellular elements found in acne rosacea.

The simple red enlargement of the end of the nose is an exaggerated form of acne rosacea which may or may not be a beginning rhinophyma. Rhinophyma which is removed by some surgical method in addition to other therapy does not recur, whereas acne rosacea which is treated by local applications and other palliative measures, such as attention to gastric and nervous disturbances, is prone to recur, depending on the latter conditions.

The four cases of rhinophyma herein reported are examples of the good cosmetic results obtained by a relatively simple procedure. The superfluous tissue is pared off under local anesthesia until the nose is shapely. Later when the skin has grown over the denuded areas, it is treated by applications of roentgen rays, or trichloracetic acid or phenol.

In each case, the patient regained a shapely nose without conspicuous scars.

Report of Cases

Case I. A. L., male, aged 80, consulted me December 30, 1929, complaining of a disfiguring enlargment of the nose. The condition was rhinophyma of twenty years' duration, and progressively becoming worse. On palpation, the nodular growths were found to be pliable but rather firm in consistency. They involved the tip and both alae of the nose and consisted of several irregularly lobulated masses, varying in size from that of a pea to that of a marble. One large nodule arising from the left ala was the size of a lemon and liung below the other portions of the mass. These combined nodules formed an irregularity of the mass. These combined nodules formed an irregularity of the mass.

lar collection the size of an orange, with many pea to marble size satellites projecting from the main mass.

Under local anesthesia with 2 per cent novocaine solution, the redundant bulbous tissue was pared off until the nose had a shapely proportion.

Six weeks later four roentgen ray applications in doses of one half unit every three weeks were made to the alae of the nose. One month after the course of X-ray therapy, phenol solution was applied to the raised granulating area. Five months after the paring off procedure trichloracetic acid was applied. This had the effect of minimizing the scars. The cosmetic result is shown in Figure 1.



Fig 1
Before and after treatment, Case 1

Case 2. J. E. M., a realtor aged 56, consulted me September 23, 1930, complaining of disfiguring enlargement and redness of the end of his nose. The condition was obviously rhinophyma. It started ten to fifteen years ago, when the end of the nose became reddened and pus would at times exude from the patulous follicles. Since then the extremity of the nose gradually became larger and redder.

The nose was pared down to normal shape under 2 per cent novocaine infiltration. A petrolatum dressing was applied.

Later, roentgen ray applications, one half unit, were made to the sides of the nose, generally at intervals of ten days to two weeks. On several occasions the Grenz ray, one eighth unit, was used. This treatment had the effect of minimizing the scar.

The cosmetic result is shown in Figure 2.



Fig 2
Before and after treatment, Case 3

Case 3. A.E., housewife, aged 61, was seen May 5, 1931, complaining of the disfiguring enlargement of her nose. The condition was a typical rhinophyma as shown in Figure 2. She stated that the nose growth began four or five years ago and gradually grew to its present size. It caused no pain or discomfort but occasioned extreme humiliation. Except for this condition, the physical examination was negative.

The nodules were excised with the scissors and the extremity of the nose was pared down to normal proportions with the scalpel. Bleeding was easily controlled by compression and tying the vessels with catgut The skin from around the base of the growth was utilized to cover the raw areas after excision of the mass. Finally, a petrolatum album dressing was applied with pressure.

Simple dressings, curetting of the edges of the wound and applications of phenol solution to the elevated granulations, were the only after-treatment required in this case The cosmetic result is shown in Figure 2 taken ten weeks after treatment.

Case 4. H. R., a tool maker aged 56, presented himself on May 22, 1932, with a nodular swelling of the tip and ala of the nose about the size of a walnut. He had had acne at 14 years of age, which disappeared from his face but persisted on his back and shoulders. The end of the nose had been red for ten years and enlarged for the past four years

The enlargement of the nose involved the tip and both alae, principally the right It was irregular in outline and showed many patent ducts. To palpation it felt soft and cystic. On pressure, a yellowish material exuded from the follicles About the bridge of the nose and the nasolabial

folds there were many telangiectatic blood vessels

The treatment in this case was similar to that of the other cases and included excision of the nodules and reshaping of the nose under novocame anesthesia. The after-treatment utilized Roentgen ray applications. The cosmetic result was excellent.

The method described is simpler and gives better results than the old technique of decortication which requires skin grafting from distant points

It is much quicker and surer than the method of gradually destroying the rhinophyma by the high frequency current

SUMMARY

A simple procedure giving excellent cosmetic results in rhinophy in a described. To obliterate the scars, roentgen rays and tirchloracetic acid or phenol may be used in after treatment. The four cases reported illustrate the results to be expected.

A GROUP STUDY IN HAY FEVER* By HARRY S BERKOFF, M D, NEW YORK, N Y

DURING the hay fever season of 1932 an opportunity was offered to treat a group of subjects during their actual hours of work in the various departments of a large mercantile organization. Their observation under these somewhat unusual circumstances was productive of data and results that seemed to warrant this summary review.

Ninety three subjects reported at different times to the clime which continued in operation from March to November, meeting twice weekly for periods of two and one half hours. At the first visit a history was taken, tests performed, and treatment, when indicated, commenced.

Of the total number 59 were able to report for a complete course of treatment, while in the remaining 34 the treatment was incomplete due to various reasons. It is the former group that forms the basis for the first part of this study.

Completely Treated Group (59)
Females 38 (644%)
Males 21 (356%)

Occupation

Sales 24 Non sales 35

It is interesting to note that in the sales group the predominiting departments represented were dresses, linens, coats, furs and other fabrics all though, as will be shown later, this was without effect upon the ultimate results of treatment. The non-sales were mostly clerical workers

*From the Med cal Oepartment-R H Macy & Company Ine New York City

Auc

This ranged from 16 to 55 and was distributed as follows

nione		
	l'ears	Number
	16 20	11
	21-25	17
	26 30	12
	31 35	11
	36-40	3
	41-45	3
	55	2

Seoson

Seven had symptoms in the spring season Forty-six had symptoms in the fill season Six had be seasonal symptoms

Duration of Hoy Fever

The shortest history was of 1 year's, the longest of 31 years' duration

The table shows the duration for the group

THE MINE 21	ions me am	ation for	me group
Years	Number	Years	Number
1	3	15	1
2	2	16	1
3	8	17	3
4	2	20	3
4 5 6	7	21	1
6	5	22	1
7	4	23	1
8	4	24	1
9	1	26	1
10	6	27	1
12	1	31	1
13	1		

Preceding Course:

23 reported no change in the severity of their hay fever.

19 reported an amelioration of their symptoms.

14 reported an increasing severity of their ymptoms.

It is noteworthy that in the group that was improving (19) only 2 had had their hay fever for less than 5 years, the majority having had theirs for ten years or more.

Degree of Sensitivity:

In recent years the grading of patients according to the degree of their sensitivity by skin tests has become a valuable index. Our group was distributed as follows in the order of decreasing sensitivity:

Α	2
B+	16
В	28
С	10
D	1

No relation was apparent between the degree of sensitiveness and the duration of the hay fever. While the majority of the most sensitive individuals were in the less than 10 year group, there were included also those who had their hay fever for 20, 23 and 27 years, respectively.

Relation of Asthma:

14 had asthma accompanying their hay fever at different times.

45 were free from it.

2 complained of asthma after the cessation of hay fever.

Free Intervals:

12 reported brief intervals of freedom from hay fever of 1 to 2 years' duration. Among the ascribed reasons for this were: residence abroad, pregnancy, and previous treatment.

Other Allergy:

The allied allergic conditions were found distributed as follows in our group:

Urticaria:

Present in 14

Eczema:

Present in 7

Angioneurotic edema:

Present in 2

Five individuals had more than one of these conditions.

Aggravating Factors in Relation to Hay Fever: (From past history)

Dust:

Increased symptoms in 45. Was without effect in 13.

Cold:

Increased symptoms in 7. Diminished symptoms in 18. Was without effect in 34.

Heat:

Increased symptoms in 35. Diminished symptoms in 2. Was without effect in 20.

Dampness:

Increased symptoms in 11. Diminished symptoms in 18. Was without effect in 25.

Drought:

Increased symptoms in 18. Diminished symptoms in 8. Was without effect in 27.

Exertion (marked):

Increased symptoms in 24. Diminished symptoms in 1. Was without effect in 33.

Emotional Upset:

Increased symptoms in 9. Diminished symptoms in 1. Was without effect in 47.

11 complained of more symptoms at night. 27 complained of more symptoms during the day.

21 were affected equally by day and night.

History of Colds:

Under this heading are included the usual upper respiratory infections and doubtless many of the milder sinus and bronchial involvements, causing, in the majority of instances, little, if any, disability.

2 were entirely free from colds.

40 were subject to an occasional cold.

13 suffered from frequent colds.

10 were previously subjected to operations on the nose, such as submucus resections, antrotomy and polyp removal.

Previous Treatment:

29 were previously tested.

20 were previously treated and 5 others incompletely for a period of 1 to 5 years; the majority for 2 years.

The results of such previous treatment showed:

17 benefited

2 unaffected

2 aggravated (1 incomplete treatment)

Family History:

A distinct familial tendency to hay fever or the other conditions allied to it (asthma, eczema, urticaria. angioneurotic edema, migraine, etc.) is well recognized. In our group the incidence was

rather high, being present in 29 (50%). Of these, 7 patients had 2 members of their families subject to the above conditions, 5 had 3 relatives and 1 had 4 similarly affected.

General Health

53 reported being in good general health 6 were in only fair health

Past Medical History

A general survey of the past health history showed the following conditions present most frequently in our group

Hypertrophied tonsils Sinusitis Otitis Dysmenorrhica Malnutrition Furunculosis

One of our patients is a diabetic, another his a healed pulmonary lesion

Tests

Tests were performed by the intracutaneous technique routinely with the common pollens, and when indicated with the trees and other grasses by the scratch method. In several cases eye tests were resorted to. The distribution of positive tests was as follows.

Plantain 5 Timothy 15 Ragweeds 50 Orris root 20 Dust 34

The last two were added because of their alleged aggravating tendency

Tested to other common grasses
13—10 were positive
1 ested to combined trees

10—1 was positive

Lye tests were invariably negative

Treatment

This was limited to extracts of plantain, timothy and the ragweeds, the concentrated solutions being obtained from one of the local biological laboratories and dilutions made whenever required

48 individuals were treated weekly 11 individuals were treated semi weekly

Absences vacations and over-lapping in the case of bi-sersonal patients were factors in disturbing the schedule. In this group treatment was continued well into the season, as is the usual practice.

Reactions

Occasionally systemic reactions after treatment may occur. These are of the nature of a hay fever or asthmatic reaction and, if watched for, can be readily controlled. There were six

reactions and only one of any degree of severity The very low incidence of reactions in our group was probably attained

By a somewhat more prolonged period of treatment, which allowed a more gradual step

ping-up of dosages,

By a conservative maximum of dosage, and By a short period of rest (about 20 minutes)

in the clinic after treatments

The last is of importance when we consider the varied environments and occupations our patients returned to So that while treatment of a large group such as this in the course of a day's activity and return to it, rather than to a period of restful recovery at home may have been somewhat of an experiment, it was decidedly without any of its risks

Aurihary Treatment

Thirty-five individuals resorted in varying degrees to medicinal preparations for such symptoms as occurred at the height of the season These included adrentin sprays, ephedrine and atropine

Results

At the end of the season questionnaires were submitted for a subjective estimate of results

No hay fever symptoms 2
75% or more improved 34 (59 6%)
50% improved 17
25% improved 4
2 interported because of resignation

In other words, 631% of completely treated patients had 75% or more of improvement

Our own estimate of results, with few exceptions, closely approached the individual responses obtained

From the standpoint of occupation in relation to unsatisfactory results the following is of interest

In the 25% improved group, of the 4 subjects 2 were secretaries, 2 sales persons only one of whom was exposed to a possibly irritant inhalant

In the 50% improved group (total of 17) the division was almost equal between those who may have been exposed to irritating inhalants such as cotton, fur, woolen, etc., and those who were not

In the group giving history of frequent colds, 3 of whom had been subjected to intransal operative therapy, there was no definite influence on the result of the hay fever treatment 70% of all those who had similar operative interference reported 75% or more improvement in their hay fever. However, in those who developed colds during the late treatment period or in the season itself, the impression was that the results were less favorable.

In regard to extra pollen sensitivity only orris root and dust are available for notice in this group. The results of treatment with pollen alone in those also sensitive to orris root were as follows:

No hay fever 175% improved 1250% improved 525% improved 2

The results of treatment with pollen alone in those also sensitive to dust were as follows:

No hay fever 1 75% improved 22 50% improved 8 25% improved 2

While the numbers are too small to draw any conclusions, it would seem, however, that sensitivity to such common substances as orris root and dust was without notable effect on the ultimate result of treatment.

Two patients who gave negative skin and eye reactions and were treated on basis of history and allergic family tendency had 75% relief of symptoms.

Complications in the Course of Treatment:

Colds (nasopharyngitis, tonsillitis, laryngitis.)
Coughs—some of asthmatic character.

Skin eruptions. Gastric upsets.

One case developed an acute antrum infection which had to be drained.

The outstanding complaint was, of course, the sneeze, but it is interesting from a study of symptomatology that nasal obstruction was frequently the only complaint and that among those who probably were developing the hay fever for the first time this year, that was the only presenting symptom.

Loss of Time from Work:

Four women lost a total of ten days from work, three of which in one case were directly attributable to a sinus re-infection.

Laboratory Studies:

Differential blood counts were done on 63 patients. Only two showed an absence of eosinophiles. The highest count of these was 12%. Thirty-five patients had 3% or more of eosinophiles—the average was 3.9%. The polymorphonuclear count ranged from 45 to 80% with an average of 59.3%. The lymphocytes ranged from 14 to 48% with an average of 33.1%.

X-rays:

No routine plates were made, but in five individuals of this group who were x-rayed in the course of other studies, an increase of bronchial markings was found.

Post-Seasonal Retesting:

In 22 instances skin tests were repeated at the

end of the treatment. Only four showed a definite diminution in the size of the reaction, the rest remaining the same. There was no correlation observed between the lessening of skin reactivity and the extent of symptomatic improvement on treatment.

The Incompletely Treated Group:

Thirty-four individuals were included in this varied group. Some could not or would not continue treatment, some resigned, a few waited for the onset of hay fever before reporting, and 12 came for diagnosis with symptoms for the first time this year. Here also the women outnumbered the men, 19 to 15. The numbers were evenly divided between selling and non-selling departments. The ages ranged from 20 to 48. The duration of hay fever in this group was from 1 to 26 years. The classification of sensitivity was as follows, in decreasing degree:

A 1 B+ 7 B 13 C 5 D 1

Seven gave a history of accompanying asthma and four of asthma at other times of the year. Seven were subject to urticaria, two to eczema and one to angioneurotic edema.

Four gave no history of colds, twenty of an occasional one, and ten of frequent colds.

Here even a higher familial history was found, namely 64.9%.

Only two in this group were previously treated, and with good results.

Because of the inadequacy of treatment in this group, the results are not suitable for analysis.

In a sufficient number of instances to warrant notice considerable improvement in symptoms was afforded those who reported during the active season and received small dosages at weekly or semi-weekly intervals. No actual effort was made to desensitize or hyposensitize these patients, among whom were included first-year subjects as well as those of many years' standing. No explanation is offered of the process underlying the relief noted, but the fact is worthy of further observation.

Summary:

A group study is reported of preventive hay fever treatment in the case of 93 individuals in the course of their daily activities, 59 of whom completed their treatment and 34 of whom did not.

A total of 1414 injections was administered.

Ouestionnaires about results were returned

Questionnaires about results were returned from all but two of the completely treated group.

Results:

No hay fever 2 75% or more improved 34 (59.6%) 50% improved 17 25% improved 4

In other words 63.1% of completely treated patients had 75% or more of improvement. The remaining 36.9% must, strictly speaking, be regarded as the poor result of treatment. It did not appear that such factors as the occupational environment or exposure to inhalant irritants, or conservatism of dosage played a marked role in this. The explanation must probably be sought in the individual variant of the allergic constitution.

From the standpoint of group treatment, how-

ever, if we bear in mind the existence of a certain pressure because of the need for time economy, that our patients came directly from their varied occupations and returned to them only after a hrief period of rest, that interruptions due to vacations and business were frequent, and that a certain conservatism of dosage had to be maintained because of the very nature of mass treatment, the results, even in only a moderately severe season, would seem to endorse the present therapeutic procedure.

Until such a day as a hetter understanding of the allergic tendency and mechanism is to be had and better methods of prevention and treatment are evolved, hyposensitization, for those, at least, who must live and work in the pollen atmosphere,

still remains the method of choice.

ACNE VULGARIS*

A Review of 200 Cases with Reference to Classification and Treatment By ALBERT R. McFARLAND, M.D., ROCHESTER, N. Y.

E present in this paper a study of 200 cases of acne vulgaris observed over a period of about five years. No case was included in which a shorter time than one year had elapsed following treatment. Follow up consisted mostly of personal observation but sometimes by letter or phone.

An attempt is made to classify the types and to

evaluate the various forms of treatment.

The accompanying tables present a statistical résumé although we realize the fallability of statistics and believe a large personal element must necessarily enter into the compiling of any statistics on acne. Certain impressions gained by seeing many cases are however in general confirmed by the statistical study.

Chart I indicates the types and duration.

CHART I

Type and Duration

Duration 6 months to 20 years.

92% began at or near puberty. 8% pustular acne indurata.

24% comedone type.

68% mixed type.

Chart II indicates the treatment received prior to our seeing them.

CHART II

Previous Care

32% on low C. H. diet with no improvement. 84% frequent soap and water or steaming.

24% said better in Summer.

38% had used some local medication.

8% had had some actinic therapy.

* Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May, 1932

I.D., ROCHESTER, N. Y.

Chart III indicates the type of treatment used.

CHART III

Treatment

6% phenol only used.

68% x-ray, lotia alba, diet, surgery and local

18% quartz light, lotia alba and surgery. 8% miscellaneous.

Chart IV shows results obtained.

CHART IV

Results

82% good result after 1 to 11/2 years.

18% varying degrees of improvement. Almost 100% results with phenol in indurata type.

Little if any improvement with diet alone. Objectionable x-ray effects 4%.

The outstanding fact in acne vulgaris, which is obvious to anyone, is that acne is a disease of the post adolescent age and undoubtedly closely related to changes in glandular function which occur at this period. Until the disease can be approached from this angle successfully, the treatment of acne must remain the treatment of symptoms. Acne is not so much a disease of pathology as it is of physiology. At the adolescent age the sebaceous glands become hyperactive, the secretion is excessive, the ducts become dilated and clogged and secondary infection finds a fertile soil in which to grow. We use local measures to try to decrease the activity of these glands to keep them free from infection and to establish drainage but until we can control the chemical stimulant which starts the process, we must rely upon symptomatic treatment. The role of local infecting organisms is doubtful as studied by Ketron & Brown.

For convenience of study our cases are classified as, comedone type, pustular, indurated type and mixed type. This classification is of course based upon the preponderating type of lesion and overlapping frequently occurs.

The armamentarium of treatment used consisted of x-rays, quartz light, acne surgery, diet and hygienic measures, vaccines and bacteriophages, parenteric use of phenol, glandular therapy and local applications to the skin. As will be pointed out later, the choice of treatment or combinations of treatment depended upon the

type encountered.

Having seen from this statistical study what may be reasonably expected in the management of acne cases provided an intelligent line of procedure is adopted which is suitable to the individual case, we should like to devote the remainder of the paper to a detailed consideration of the various phases of treatment in selected types of cases and some lessons which seem to have been learned.

X-ray Therapy

From what deductions may be made from this series and from personal observation, there seems to be little doubt but that x-ray treatment is the most valuable and effective single agent available. However, like most other therapeutic measures which are of value it has its drawbacks and limitations and is certainly a two-edged sword. This is particularly true in the hands of the inexperienced and perhaps too often in the hands also of presumably competent dermatologists. It would seem timely therefore to call attention to some of the dangers to guard against in using x-rays.

In the first place we believe that cases should be selected carefully for x-ray treatment and should not be subjected to a mechanical routine just because the diagnosis of acne is made. should be borne in mind that many cases of acne are very mild and undoubtedly clear up spontaneously or with very limited therapy. For those who are of a platonic temperament and who are not particularly annoyed by the condition one can afford to follow an expectant program of treatment. Often the assurance that improvement is likely to take place as they get a little older will satisfy these individuals. It would seem undesirable to subject that class of patients to intensive x-ray therapy where a little applied psychology would tide them over the acne age. In only 68% of our cases was x-ray found to be indicated.

If it is decided that x-ray therapy is indicated it has been our impression that patients get a better final result if the treatment is not hurried. As a rule $\frac{1}{4}$ to $\frac{3}{8}$ skin unit doses every two weeks, depending upon the type of skin, gives better re-

sults than ¼ skin units weekly. X-ray effects develop slowly and time should be given we believe for observing a gradual, though, slow improvement. The very fact that the patients are kept under observation longer affords the physician an opportunity to direct treatment as indications arise.

The fact that epilation of the scalp in tinea does not begin for about two weeks after exposure would indicate that this length of time is required to get the full therapeutic effect.

In general we are in accord with the views of Lord & Kemp² that a maximum total x-ray dosage of $2\frac{1}{2}$ to 3 skin units should be about the limit.

Again a great deal can be done by carefully directing the rays to the parts most affected rather than a routine of one front and two side exposures.

One must be on guard against idiosyncrasy. The general type of skin, texture and pigmentation is of some importance in determining the amount of x-ray likely to be tolerated. The end results would seem to indicate that skins which show an early tendency to pigmentation and freckling do not tolerate x-ray well. Males are apparently more resistant to the rays in general than females, and young individuals do not tolerate a dose which may be given adults. Occasionally a case was encountered in which the patient noted a slight erythema after a treatment which should not cause an erythema. These patients should be watched closely. Personally I have never observed the erythema myself after a 1/4 skin unit dose. It is evidently quite transient if it occurs.

A rather susceptible area in my experience has been about the angles of the mouth and chin in women. This is the region where "crows feet" normally develop and we have observed several cases where there seems to be a lack of subcutaneous tissue and wrinkling in this area where areas such as the forehead and cheeks are not affected. This should be borne in mind and as little as possible given to this area.

It was our custom routinely to cover the eyes with lead glasses and to use leaded rubber over the chest and thyroid region. Close screening with lead did not seem to be necessary and in fact undesirable, as slight lines of pigmentation might show where the lead had been placed and a bad cosmetic result secured.

When radiating the back or chest the areas of exposure should not be too close together. In small individuals with narrow backs there may be too much overlapping. I have seen two cases in which x-ray atrophy occurred in the region where overlapping had taken place.

The technique used in most cases was to give a course of about 6 treatments at 2 week intervals using from 1/4 to 3/8 skin units at each treatment.

Regardless of immediate results treatment was then discontinued. The effects of a rays extend over a long period of time and it was found advisable to tell the patients of this fact. A fair percentage of the cases observed showed only meager improvement immediately after a course of treatment but 6 months later results were more apparent A second course was not given if it could be avoided and at least not before 6 or 8 months had elapsed. In no instance did we observe any deleterious effect after one course of treatment but after two courses there was occa sionally some evidence of atrophy cases we feel that the disease itself is so disfiguring that a slight amount of atrophy is justifiable in combatting the disease just as an abdominal scar is a necessary evil in the removal of an appendix. Finally it should be emphasized that if results are not obtained after a reasonable amount of treatment recourse should be had to other methods of treatment. Three or four eases were encountered, among earlier patients clinelly, where our enthusiasm carried us on to kill or cure and where the result was not good. If carried too far we feel that the skin becomes atrophic and actually loses its resistance to progenic infection and licks reciperative power

Personally I have not encountered a case where telengiectasia developed with as little as a total dosige of 3 skin units provided the dosige was properly spaced although other derinatologists

have reported such cases

Quartz Light Therapy

Treatment with the air-cooled mercury vapor quartz light was used in a large number of these cases either alone or combined with x-ray Two methods may be employed. One is to use it locally only on the areas my lived. The other is to use it all over the body for its tonic or systemie The former method was used in most An attempt was made to give a mild erythema with some exfoliating action The me ehanical exfoliation seems to be of benefit use is indicated in cases with a tendency to superficial progenic infections where an autibacterio cidal effect is desired. It is also of value in those types which have a combined greasy seborrhea and acne Where it was used in conjunction with x ray it has been our practice to give a course of treatment with the quartz light some months after the x-ray, or if two 1-ray courses were given between these courses Oceasionally a ease was encountered where the individual had very little if any acne but was phobie in regard to it or developed an inferiority complex Management of these eases is made easier by the use of quartz light even though it may be little more than a form of psycho-therapy One realized that he is at least doing no damage by treatment

Whether the generalized use of quartz light

has enough benefit to warrant its use, I am not eertain A rather large series of cases have been treated by this method at the University of Rochester Medical School with the cooperation of Dr A fair amount of improve-Stafford Warren ment was noted in most cases but frequent treatments over long periods of time seemed to be required to produce any results Perhaps the tonic effect increases resistance to staphylococci but I believe very little is accomplished in the severe eomedone type Where cases are moderately severe this technique seems to us rather uncertain and the economic factor involved in long contimued and frequent treatments renders it almost proliibitive in private practice

We therefore found quartz light of value in mild cases, especially in young individuals, in superficial purcular types, and as an adjunct to 1-ray therapy. Although relatively safe, its effi-

ciency is much less than r-ray

Acne Surgery

Acne surgery we found to be very valuable in many cases. A sharp cataract knife and a come done expressor having a fairly large opening are the instruments needed. Asepsis should be followed in their use as failure to do so may lead to added infection. In the comedone type acne surgery is especially indicated. An attempt should be made to cause a slight scar which upon contracting decreases the size of the duct. The contents should also be expressed as thoroughly as possible Acue surgery is most effective in the early course of a ray treatment. Later on it be comes more difficult to express the contents due to action of the rays upon the glandular tissue We have frequently found it almost impossible to express the contents of comedones after a course of r-ray as the sebaccous material becomes inspicated and firmly impacted. In the deep indurated pustular type it is usually essential to evacuate the contents

A fair number of eases are encountered where only an occasional deep sented pustule appears, the skin being otherwise normal. Such a type is often found in women where the lesions appear only at the menstrial time. Acre surgery alone may be sufficient for such a case and keep it un-

der control

Parenteric Phenol

Since the report of Matusis and Pavlov³ regarding the parenterie use of phenol we have been interested in following the results after its use A 3% aqueous solution is used intramuseularly in doses of 1 to 2 cc two or three times a week. The first ease in which we used it was that of a voing man 23 years of age who had a very severe pustular indurated type on the face and neck. There were numerous pockets 2 to 3 cm in themeter. He had had the limit of 1-ray, several

courses of quartz light, acne surgery and local applications. As a therapeutic test he was given 1 to 2 c.c. of a 3% solution of phenol every third day. All other treatment was suspended. At the end of 3 weeks at least 75% benefit was obtained. Gradually the interval of treatment was lengthened. At the end of 3 months he was absolutely free from lesions and has remained so. then we have had 7 similar cases. It is our practice now to use it in severe pustular types in conjunction with other forms of treatment. The results seem to be most striking in acne indurata but we feel that it is also of benefit in milder pustular The urine should be checked frequently as we have occasionally noted a trace of albumin after eight or ten injections. This, however, quickly disappears upon stopping the drug.

Diet

A tradition has become established that acne is made worse by diets rich in carbohydrates, fried foods and condiments. From our series it would be difficult to say how much benefit is derived from such a diet. From a careful history it was found that 32% of our cases had voluntarily been on such a diet before consulting us and in a much larger percentage no excess of these foods was being used. In spite of this practically none had noted any improvement. Theoretically a high blood sugar should encourage the growth of staphylococci but certainly in our experience acne cannot be materially affected by diet alone. Of late we have been cautious in stressing this point as many young women get the impression that if such a diet is of benefit they will eat no starches at all in a frantic effort to obtain improvement. We have felt that the general resistance of quite a few cases has been impaired by overdoing this restriction of diet.

General hygienic measures such as regular meals, plenty of time to eat, keeping the bowels regular, sufficient sleep and plenty of fresh air. sunshine and exercise are probably of value but it seems questionable if a marked restriction of diet is justifiable. At least the mental makeup of the patient should be evaluated before giving any drastic instructions in regard to the limitation of diet.

Local Care of the Skin

Two objects should be kept in mind in caring for the skin in acne. One is to keep the surface as free as possible from staphylococci and the other is to use applications which will either mechanically clear out the pores or to act as an astringent. Cold crèmes are contra-indicated as they really add to the accumulation in the pores. Frequent washing of the face with soap and warm water followed by a cold splash are of advantage. The usual lotia alba has proved to be quite satisfactory as a local application because of its astringent and mild exfoliative action. Inci-

dentally a number of control cases were run with and without using lotia alba together with x-ray. No appreciable difference could be noted in the two series as to the effect of x-ray.

What would seem to be most needed is a good solvent which would dissolve the fatty plugs without injuring the skin. Acetone and alcohol seem to only partially fulfill this requirement.

Coincident care of the scalp as well as to the skin of the face is important. Many cases were encountered with marked seborrhea of the scalp. The acne clears up more rapidly if this condition is corrected at the same time.

Vaccines and Bacteriophages

Both autogenous and stock vaccines were used in a number of cases but no striking results were noted. They would appear to us to be of questionable value.

A few cases were temporarily improved by local applications of staphylococcic bacteriophage. The cost is however of some economic importance and patients often will not take the time to use it properly.

Glandular Therapy

As we stated at the outset we feel that acne is primarily a disease of abnormal physiology probably bound up with the glandular system. Unfortunately this field seems as yet too poorly understood to be of great value.

In selected cases we have used mixed glandular therapy and have frequently been encouraged by the results. Certainly, however, much more must be learned before this type of therapy can be intelligently applied.

Conclusions

- 1. By a proper selection of therapy, satisfactory results may be obtained in approximately 82% of cases of acne vulgaris.
- 2. Emphasis should be laid upon conservative methods of treatment as about 30% may be tided over the acne age without the use of x-ray.
- 3. X-ray is the most valuable single adjunct in the treatment of acne but should be used only in selected cases and the total dose should in all cases be kept well under the point of producing objectionable sequale.
- 4. The parenteric use of phenol promises to be of value in the pustular indurative type.
- 5. More emphasis should be placed upon general hygienic measures than on restrictive diets as damage may be otherwise done due to malnutrition.
- 6. The management of acne in general is based upon symptomatic treatment. The probable advances in the future would seem to be in the field of glandular therapy.

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A CASE OF TULAREMIA IN WHICH NO LOCAL LESION DEVELOPED AT THE SITE OF INJURY

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N February 6, 1931, a middle-aged man, a specimen of whose blood had agglutinated B. tularense,1 came to the branch laboratory of the New York State Department of Health to have specimens collected for examination. At the time, it was noted that the patient had an ulcer on the plantar surface of his left thumb. Material collected from the ulcer was suspended in sterile physiological salt solution and injected subeutaneously into two guinea pigs. The animals died on February 12 and were subsequently autopsied. Exudate was found in the plcural and peritoneal cavities with vascular engorgement and petechial hemorrhages throughout. B. tularense was isolated from the liver, lung, spleen, kidneys, and from blood taken from the heart, as well as from the pleural and peritoneal exudates and the urine. While performing the autopsy, the pathologist accidentally pricked his finger with a thumb tack which held the guinea pig on the board. The gloves were immediately removed and the hands washed with soap and water and rinsed in alcohol.

On the seventh day following the accident, February 19, a feeling of general malaise with fever, chills, and headache was experienced. The symptoms became more pronounced, particularly the headache, which was postoccipital in location and intensely gripping in character. The duration of the fever, which was remittent, was about three weeks, and the temperature ranged from 99°F. to 104°F. The daily peak, which usually occurred in the early afternoon, was preceded by chills and followed by profuse sweating and prostration. The pulse rate fluctuated between 100 and 130 during the height of the febrile reaction.

A complete physical examination revealed no abnormal findings. No lesion developed at the site of the accidental prick nor was there any palpable enlargement of the regional lymph glands. These features of the case seemed of particular interest since a lesion so generally develops at the site of infection and the enlargement

of the regional lymph nodes is so characteristic of tularemia when a wound has occurred. Francis² has reported a number of cases of tularemia, among laboratory personnel, without manifestations of a primary lesion or of glandular enlargement. Possibly the prompt use of an antiseptic which would remove nost of the pyogenic cocci may inhibit the development of a lesion at the portal of infection. Convalescence was fairly rapid with complete recovery at the end of the seventh week.*

Laboratory Examinations

Several specimens of whole blood were eolected from the patient at various times for serological examination. A specimen collected on February 21 did not agglutinate B. tularense; a specimen eollected on February 27 gave a partial agglutination reaction (2+) in a 1:40 dilution of the scrum. Definite agglutination (3+) of B. tularense was obtained with blood specimens collected March 10 and April 19, in dilutions of 1:640 and 1:1280 respectively. A specimen examined in August, 1932, gave a definite agglutination reaction of 3+ in a 1:80 dilution. Agglutination tests with B. abortus and B. proteus X 19 were performed on all the specimens; no agglutination was obtained in any instance.

Summary

A case of an accidental infection of a laboratory worker with *B. tularense* is reported. The clinical picture was that of an infectious disease, but not outstandingly typical of any. This case illustrates the importance of a complete history as an aid in determining the type of laboratory examinations to be undertaken. The reliability and practicability of the agglutination tests as a method for differentiating infectious diseases are well exemplified.

*This case is one of the twelve included in a report by Gilbert and Coleman: "The Incidence of Tularemia in New York State," Amer. Jour. Pub. Health, Dec., 1932, 22, 1249.

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TRICHINIASIS, WITH RECOVERY

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In this age of close and rigid public health supervision the impression prevails that trichiniasis is a rather rare and unimportant disease. The medical service of the Staten Island Hospital recently had a case of trichiniasis which bears interest both from a medical as well as from a public health standpoint.

The statistics concerning this disease are interesting. Staten Island has a population of about 160,000. As far as can be determined this is the first case ever to be reported to the Staten Island Board of Health. Examination of statistics for the rest of New York City disclosed that forty-eight (48) cases of trichiniasis had been reported in 1932. The State Department of Health furnishes the following figures:

Year	New York City	Upstate	Total
1930	21	3 9	60
1931	33	57	90
1932	48	23	71

In 1932 there were 237 cases and 15 deaths reported in the United States. These figures are for the first eleven months and are by no means complete since many states do not consider trichiniasis a reportable disease. In fact New York City has been reporting this disease for only the past three years.

Case Report: Mrs. L. M., age 20, an Italian housewife, was sent into the hospital by her family physician on December 14, 1932, for diagnosis and treatment. Her chief complaint on entry was headache of two weeks' duration. She stated that she had been in good health until two weeks prior to admission when she gradually developed an intermittent generalized headache. About one week prior to entry she developed swelling of her eyelids, face, and lower extremities in the order mentioned. During the past week she had complained of a very severe itching of the skin, ringing of the ears, and black spots before her eyes.

Her past history was unimportant. She stated that she had always been well. She had been married for nine months. She had lived on Staten Island practically all her life. Questions concerning her diet in the past month became of paramount importance.

On detailed questioning, the patient admitted that on November 21st she and her husband had eaten pork sausages without any apparent ill effects. On Thanksgiving day, November 27, she had eaten some pork sausages purchased in one of the neighborhood Italian stores; and on the following Sunday night the patient began to complain of a headache for the first time.

Physical examination at the time of admission revealed a well-developed, well-nourished, white female, about twenty-five years of age, who appeared acutely ill. There was marked edema of both upper and lower eyelids, the face was considerably swollen, and the back of her hands and ankles were also somewhat edematous. There was a moderate injection of the pharynx with slight reddening of both tonsils. There were several palpable, discrete anterior cervical glands. The spleen and liver were not palpable and no rose spots were seen. The kidneys could not be There was considerable costo-vertebral tenderness on both sides. The reflexes were normal. A pelvic examination disclosed no important findings.

Her temperature on admission varied from 102 in the morning, to 103-103.5 in the afternoon; her pulse was 95; and respirations 24. The blood

pressure was 100/60.

Urine sp. gr. 1022; trace of albumin, no sugar, no bile, no acetone, no diacetic acid. The microscopic examination showed an occasional white cell and no casts. Her non-protein-nitrogen was 30 mg. per 100 c.c. blood. Hemoglobin 92 per cent, red blood cells 4,890,000, white blood cells 13,200, of which 25 per cent were lymphocytes and 78 per cent polys.

Her temperature continued to fluctuate, her itching increased somewhat, and her edema subsided slightly; but she still continued to complain of a generalized headache. An opthalmoscopic examination was negative. Blood culture report was negative. Widal agglutination test for typhoid was negative. Daily examination of her urine failed to disclose any kidney pathology. Several days later she began to have clonic contractions of her leg muscles, and severe pain in the calves of her legs.

It was about four days after entry that we learned from her and her husband that, about three weeks previous to admission, they had both eaten pork. By this time the white blood cells showed a presence of 10 per cent eosinophiles. Two days later another white count showed 20 per cent eosinophiles; and a biopsy taken from the right gastrocnemius revealed encysted larvae within the muscle fibres with considerable lymphocytic infiltration between the individual fibres. Some of the larvae could be seen moving under the oil immersion lens. The diagnosis of trichiniasis was then evident.

The patient stayed in the hospital about three and one-half weeks, symptoms being treated as they arose. At the time of her discharge the patient had apparently fully recovered.

AN EVALUATION OF THE ARSPHENAMINES FOR GENERAL USE WITH SPECIAL REFERENCE TO SULPHARSPHENAMINE

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Read at the Annual Meeting of the Medical Society of the State of New York at Buffalo N Y, on May 25 1932

7 ITHIN the past few years there have been a number of excellent articles on the toxic effects of the various arsphenamines and their relative value in the treatment of syphilis In 1929, Moore¹ and his collaborators brought the existing information up to date in reprint No 13 of the United States Public Health Service Last year, Cole" and his associates summarized the existing knowledge up to that time and added their experiences in detail. Cannon and Karelitza reported last year on the comparative value of the arsphenamnes in the treatment of early syph ilis giving their results mostly from the standpoint of serologic and clinical response. In addition to these articles, Stokes' in his new section on syph ilis, in Tiees' Practice of Medicine has discussed the relative value of arsphenamine, neoarsphenamine, sulpharsphenamine silverarsphenamine and bismarsen. In view of all these excellent articles mentioned above, it would seem hardly indicated to present again an evaluation of the arsphenamines for general use were it not for the fact that the 1931 report of the Division of Social Hygiene of the New York State Department of Health showed five times more sulpharsphenamine dispensed to the physicians of New York State than regular arsphenamine The popularization of this drug among the general physicians of New York State we believe to be a serious mistake, in view of the data furnished in the articles above cited, and in view of the microchemical studies on rabbits which we made last year follow

ing the administration of arsphenamine, neoars phenamine and sulpharsphenamine in rabbits. In this paper, we will summarize the information contained in the above mentioned articles and, in addition, summarize our own reactions from the arsphenamines and, finally, discuss the chemistry and metabolism of the arsphenamines.

Reactions to the Arsphenamines

In Chart I, we have summarized, as far as possible, the experience of the investigators mentioned above in the frequency of the common reactions following the administration of arsplienamine, neoarsphenamine, and sulpharsphenamine. There are three outstanding facts illustrated in this chart

1 Early reactions such as the intritoid and gastro-intestinal reactions were about equally divided between neoarsphenamine and old arsphenamine. None of the authors mentioned the frequency of these reactions following sulphars phenamine.

2 Jaundice apparently was reported more frequently after neoarsphenamine than old arsphenamine, and here again sulpharsphenamine was not mentioned Cannon and Karelitz did not use sulpharsphenamine

3 The authors are of the unanimous opinion that the serious late complications of dermatitis, purpura, and hemorrhagic encephalitis have their highest incidence following the use of sulpharsphenamine. It is a striking fact that Cole and

CHART I
INCIDENCE OF REACTIONS AFTER VARIOUS ARSPHENAMINES

Type of Reaction	Moore et al	Cole et al	Cannon and Karelitz*	Stokes
Nitritoid	More common after neo	Same for neo and old araph	About the same after neo and old arsph	
Severe Gastro Intestinal Disturbance		Same	Same	
Jaundice		More frequent after neo	Slightly more com- mon after neo	
Dermatitis	Highest incidence after sulph	Same for neo and old arsph	More common after neo	More common after sulph Less often after neo
Purpura	Same	More common after sulph	No cases	More common after sulph
Hemorrhagic Encephalitis	Same	Same	No cases	Same

^{*}Authors did not report on the use of Sulpharsphenamine

his collaborators reported six cases of hemorrhagic encephalitis of which four followed the use of sulpharsphenamine, which drug was so little used in comparison to arsphenamine and neoarsphenamine.

Bearing in mind the above findings, we have recently reviewed all of the severe, late reactions occurring on our service at the Buffalo City Hospital during the past five years. Arsphenamine has been the drug of choice as a routine measure. Up to four years ago the usual dose was .1 gram for every thirty pounds of body weight. For the past four years our maximum dose of arsphenamine has never exceeded .4 grams in males and .3 grams in females in contrast to the former maximum of .6 and .5 grams in males and in females, respectively. Our acute reactions, including the gastro-intestinal reaction, have markedly diminished since reducing our maximum dose. The drug has always been diluted .1 gram to 25 cc. of water and each injection has required a minimum of one minute for each .1 gram of drug. We have never used neoarsphenamine in the treatment of clinic patients. Silverarsphenamine has been used in most patients presenting nitritoid and gastro-intestinal reactions. Sulpharsphenamine, subcutaneously or intramuscularly, has been used as a routine only in those patients presenting technical difficulties in the administration of arsphenamine intravenously and in all cases of congenital syphilis under the age of fourteen years. In all probability one of the reasons why we have not had more serious late reactions from sulpharsphenamine has been the fact that our maximum dose has been .4 grams in adults and .3 grams in children. Cole and his associates used .6 grams as a maximum and this dose is generally advised. Two grams of tryparsamide has been our maximum dosage in dispensary patients. In the case of arsphenamine and sulpharsphenamine we have given weekly treatments for an average number Silverarsphenamine has been adminof eight. istered every five to seven days for a total of eight to ten injections, per course. Tryparsamide is administered weekly in courses of from 20-40 injections.

In summarizing our results from the administration of these drugs, we include only those reactions occuring during the five year period from 1927-1931 inclusive. During this period there were administered 22,336 injections of arsphenamine, 3,584 injections of sulpharsphenamine, and 9,734 injections of tryparsamide. In the case of arsphenamine, all of the injections were given to adults, that is, in individuals past the age of 14 years, whereas with sulpharsphenamine, only left injections were given to adults and the rehad ter to children under the age of fourteen of the paration for purposes of comparison is following that because it is well recognized that plain of aldom react to any arsphenamine. This,

3 due to the relative efficiency of the

liver of a child as compared to the liver of an adult. Two years ago, Osborne and Putnam⁶ reported on the use of sulpharsphenamine in the treatment of congenital syphilis at the Children's Hospital in which report we had no reactions of a serious nature to sulpharsphenamine over a five year period. Since that time we have had two cases of mild dermatitis at the Children's Hospital and one at the Buffalo City Hospital. Chart II shows the number of late serious reactions to arsphenamine, sulpharsphenamine and tryparsamide in both adults and children. As will be noted there were two deaths from dermatitis following

CHART II
Author's Late Serious Reactions to Arsphenamine,
Sulpharsphenamine and Tryparsamide
(1927–1931)

Reaction	Arsphen- amine	Sulphar- sphenamine	Trypar- samide	Total
Jaundice:	28	5	7 (1 fatal case acute yellow atrophy.)	40
Dermatitis	26 (2 deaths)	4	None	30
Purpura	None	2	None	2
Hemorrhagic Encephalitis	None	None	None	None

arsphenamine. One of these deaths occurred in a pregnant woman who, in view of this fact, was grossly overtreated. It has always been our custom to reduce the dose of arsphenamine to onehalf or two-thirds the usual maximum after the fourth month of pregnancy. We wish to call special attention to the seven cases of jaundice following the use of tryparsamide, including one fatal case of acute yellow atrophy. The general opinion has been that tryparsamide causes little or no damage to the liver with the ordinary maximum dose of .2 or .3 grams. It has been recommended that as many as 60 or 100 or more tryparsamide injections be given without any intervals of rest. In view of our experience, this would seem to be a mistake and we would strongly recommend that tryparsamide be given in courses of not more than 20 injections each. This question will be discussed further in our consideration of the micro-chemical findings of the tissues of the rabbit following the administration of the drug

Chart III indicates the division of reactions among adults and children. All of the reactions following arsphenamine occurred in adults. Ten of the eleven reactions following sulpharsphenamine occurred in adults and one in a child, whereas approximately seventy-five per cent of all the sulpharsphenamine administered was to children. In Chart IV, the incidence of late reactions to arsphenamine, sulpharsphenamine, and tryparsa-

CHART III REACTIONS FROM ARSPHENAMINE AND SULPHARSPHENAMINE IN ADULTS AND CHILDREN (Under 14 Years of Age) (1927-1931)

Reaction		Sulpharsphenamin Adults Childre	
	Arsphenamine		
Jaundice	433.50	5	0
Dermatitis	All Reactions in Adults	3	1
Purpura		2	0

^{*}Approximately 75% of all Sulpharsphenamine was given to children, yet 10 of the 11 reactions occurred in adults.

tions following their use. There is considerable information available on this phase of the sub-Several years ago, Fordyce and his coworkers showed by chemical means that the arsphenamine, following intravenous injection. rapidly disappeared from the blood stream during the first 20-30 minutes and then the arsenic gradnally reappeared in the blood stream in larger quantities and was eliminated largely by the kidneys and to a lesser extent through the bowels. Chemical studies of the various organs and tissues showed the arsenie to be present in greatest quantities in the liver, spleen, adrenals and bone mar-Most observers have thought that the arsphenamines, with a valance of 3, were reduced or oxidized in the liver to simpler arsenical compounds having a valance of 5 Thus the penta-

CHART IV
INCIDENCE OF LATE REACTIONS TO ARSPHENAMINE SULPHARSPHENAMINE AND TRYPARSAMIDE IN ADULTS (1927–31)

	Aı	RSPHENAMIN	E	SULP	HARSPHENAN	line	Tryparsamioe			
Number of Injections		22,336		 	896		9,734			
	Jaundice	Dermatitis	Purpura	Jaundice	Dermatitis	Purpura	Jaundice	Dermatitis	Purpura	
Incidence of Reactions	1 in 800	1 in 859		1 in 179	1 in 298	1 in 448	1 in 1391			

mide in adults is indicated. It is a striking fact that, following arsphenamine, the incidence of jaundice was 1 in 800 injections whereas, following sulpharsphenamine it was 1 in 179 injections. Dermatitis occurred with an incidence of 1 in 859 injections following arsphenamine whereas it oc-curred in 1 in 298 injections following sul-pharsphenamine. We had no cases of purpura following arsphenamine whereas, we had two following sulpharsphenamine. The incidence of jaundiee following tryparsamide was 1 in 1391 injections and there were no eases of dermatitis or purpura. The conclusions from these figures are obvious. In adults following sulpharsphenamine, the liability to jaundice is over four times as great as great as following arsphenamine and the liability to dermatitis is almost three times as great. The incidence of purpura following sulpharsphenamine from our figures and also in the literature, is vastly greater following sulpharsphenamine than after arsphenamine. We believe that the comparison would have been more odious had we used the usual maximum dose of .6 grams rather than the conservative maximum of .4 grams in the ease of sulpharsphedamine.

A Discussion of the Metabolism of the Arsphenamines and Tryparsamide

A clear understanding of the metabolism and chemistry of the various arsenicals would aid materially in the understanding of the various reacvalent, tryparsanude, has less effect upon the liver than the trivalent arsphenamine. We believe that the studies reported on last year by Osborne, Putnam and Hitchcock! on the effect of arsenic on rabbits explains a great many of the effects of the various arsenicals as used in the treatment of syphilis. Chart V is taken from this study. The following facts seem pertinent:

1. Following the administration of therapeutic or lethal doscs of arsphenamine, the liver takes up the drug, metabolizes it and passes it on to the organs of exerction, namely; kidneys, stomaeli, small intestine and colon. In the case of a therapeutie dose of arsphenamine, the liver handles it rapidly and it disappears rapidly from the organs of exerction. Twenty-four hours after a lethal dose of arsphenamine the liver contains maximum quantities of arsenie and very little has been passed on to the organs of exerction indicating that the liver was more or less overwhelmed by the drug. In the ease of ncoarsphenamine, the liver was able to metabolize and pass it on to the organs of excretion much more rapidly than following a Icthal dose of arsphenamine. With sulpharsphenamine, the liver was simply overwhelmed by the drug and was unable to pass on any arsenic to the organs of excretion, except in very small quantities. In the case of tryparsamide, there was no evidence of storage of arsenic iollowing the therapeutic use of this drug. However, following the injection of a lethal dose of

CHART V

A ROUGH TABULATION OF THE RESULTS OF MICROCHEMICAL STUDIES OF TISSUES OF THE RABBIT FOLLOWING THERAPEUTIC AND LETHAL DOSES OF ARSPHENAMINE, NEOARSPHENAMINE AND SULPHARSPHENAMINE, AND TRYPARSAMIDE

	ARSPHEN	VAMINE-	— — Neo-Arsphenamine— — Sulph-Arsphenamine—				TRYPARSAMIDE				
	Therapeutic, 48 Hrs. After Last Dose	Lethal 24 Hours	Lethal 1 Hour	Lethal 24 Hours	Lethal 1 Hour	Lethal 24 Hours	48 Hrs. After Last Doso	Lethal 1 Hour	Lethal 24 Hours	Lethal 48 Hours	
Origin											
Brain	. —				Occ.		++	+		++	
Cord		Occ.	Occ.	_	+		+	+	_	++	
Lung	. —	Occ.	Occ.				<u></u>		_	_	
Heart	. —			_			_				
Liver	. +	++++	++++	++++	+	++++		+	++	++++	
Spleen	. –		+	Occ.	+		++	++	<u>-</u>		
Adrenals	. –		+		Occ.						
Kidney	. –	+	+ `	++++	Occ.	+	+	+++	+	++	
Sm. Intes		•	+	++++	_		•	+	+		
Colon			++++	++++	'	++		++++	+++		
Stomach			++	++		<u></u>		++++	+		
Pancreas			+	• •		_		+			

^{*}Key; +small amount of arsenic; ++moderate amount of arsenic; +++large amount of arsenic; ++++maximum amount of arsenic

tryparsamide, the liver gradually took up more and more arsenic in proportion to the liver damage. In other words, it is evident that tryparsamide, administered to an individual with a previously damaged liver might end in disaster. More attention should therefore be given to the condition of the liver in individuals receiving tryparsamide therapy.

Therapeutic Efficiency of the Arsphenamines

We believe strongly that arsphenamine is approximately twice as efficient therapeutically as neoarsphenamine, when administered in equal doses. It is therefore necessary to give twice the dose of neoarsphenamine as required for arsphenamine to secure the same therapeutic result. Therefore the total amount of arsenic is actually greater when neoarsphenamine is administered. From a clinical standpoint, we have never seen, in our clinic, a recurring secondary syphilis following the proper use of arsphenamine combined with a heavy metal, whereas, in a period of five years, we saw over 20 recurrences following the use of neoarsphenamine by practicing physicians outside the institution. This is perhaps not a fair comparison because arsphenamine is not generally used by general physicians, but it is a striking fact nevertheless. Ease of administration is not a sufficiently justifiable excuse for using neoarsphenamine when arsphenamine is a more effective drug. In our experience, silver arsphenamine is an excellent drug and we prefer it in all cases in which arsphenamine cannot be used. There is no question but that sulpharsphenamine is an effective drug in the treatment of congeni-

tal syphilis because of its ease of administration. Since children metabolize the drug so readily on account of more efficient livers, it would seem that its continued used is indicated with a maximum dose of .1 gram to every thirty pounds of body weight. In adults, we feel that sulpharsphenamine is also effective therapeutically but that its use should be limited strictly to those individuals in which there is a technical difficulty in the administration of arsphenamine intravenously.

Conclusions

- 1. We prefer arsphenamine in the routine treatment of syphilis. From the standpoint of reactions and the therapeutic results it is superior to all others.
- 2. Silverarsphenamine is our second choice for all patients showing acute early reactions to arsphenamine such as the nitritoid and gastrointestinal reactions.
- 3. Sulpharsphenamine is a dangerous drug for general use. In adults it is four times as liable to produce jaundice and three times as liable to produce dermatitis as arsphenamine.
- 4. Sulpharsphenamine is more toxic to the liver than arsphenamine or neoarsphenamine and is therefore metabolized more slowly. The damming back of this vasculo-toxic drug in the blood stream is evidently the cause of the large number of vascular accidents.
- 5. Seven cases of jaundice including one case of acute yellow atrophy following tryparsamide are reported. Courses of not over twenty injections of tryparsamide in each series are recommended.

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NOTES ON AVIAN TUBERCULOSIS OF THE SKIN*

By R H RULISON, MD, NEW YORK, N Y

THEN Robert Koch, before the Berlin Physiological Society (March 24, 1882), annonneed the discovery of the tubercle bacillus lie was able to report the presence of the germ in thirty cases of tuberculosis in human beings. Material had been obtained from eleven cases of inflary tuberculosis, twelve cases of cheesy broncho-pneumonia, one case of tubercle of the brain, as large as a hazel nut, and two cases of intestinal infection. In addition he had found the organism in two of the three specimens of scrofulous glands examined and in two of four cases of synovial degeneration of joints

Among the lower animals he had found the bacillus in thirteen cases in cattle, in a cheesy gland from a pig, a tubercular hen and in three monkeys which died of spontaneous tuberculosis I urthermore he had identified the germ after inoculation of 172 guinea pigs, 32 rabbits and five

He had grown the bacillus in pure culture from a large number of these cases and felt that they all represented the same organism

It so happened that he had not grown cultures from the tubercular hen and that he had not inoculated any birds with the tubercle bacillus

A wave of enthusiastic search for inicro organisms followed this discovery and all over the world bacteriology became a popular study Vetermarians took a prominent part in these researches and it was not long before doubt as to the identity of the human and the bovine types of tubercle bacillus was raised

A heated disagreement developed over this point and, later, as to the pathogenicity of the bovine strain for human beings. The quarrel was complicated by the fact that some of the French laboratories were using cultures grown by Nocard and Roux from a tubercular pheasant. This culture, of course, must have been the avian type Because of the resulting difference in laboratory findings the dispute became so violent that it is spoken of as "the great misunderstanding"

In 1890 Maffucci published a paper in which he said that, without taking up the quarrel as to the possible difference between the human and bovine forms of tubercle bacilli, he was prepared to show that the tuberculosis of birds was due to

a type distinct from either His work was so convincing that Koch, in the same year, accepted it and announced that an avian form existed and that the important question was, "Is it pathogenic for man ?"**

The laboratory differentiation of the liuman, bovine and avian strains is difficult. It is true that there are text-book differential points, but many atypical cultures occur which are extremely difficult to classify Lydia Rabinowitsch, a great expert, after studying one culture for a year, stated that while at first it semed to belong to the avian type she later became convinced that it represented an atypical bovine form

Another confusing feature lies in the discovery by Petroff that most pure cultures, when subsected to analysis by cultures from a single organisin, are found to consist of bacilli some of which grow with a rough and others with a smooth The smooth cultures seem to be more virulent than the rough and thus the virulence of any culture may depend on the proportions of the two kinds

To definitely classify a culture of tubercle bacilli both the cultural characteristics and the response of various laboratory animals to inoculation must be determined. Clinically there is a different response of various animals and birds to the different types of tubercle bacilli however, unsafe to venture a positive diagnosis of the type of tubercle bacillus causing a lesion on clinical or pathological examination alone organism must be recovered and identified by

laboratory methods

In practice, recovery of the tubercle bacillus is most easily accomplished by inoculating diseased material into animals, usually guinea-pigs the pig dies within a certain time an autopsy is done and cultures are taken in the hope of obtain ing a pure growth

It may be that this procedure has caused the failure to positively diagnose many cases of avian tuberculosis because the guinea pig is highly resistant to inoculation with the avian strain such cases the pig would remain in good health and the moculation would be recorded as having failed to cause tuberculosis Rabbits and birds

^{*} Real at the Annual Meeting of the Medical Society of the State of New York at Buffalo N Y, on May 24 1932

^{*}A fourth strain of tubercle bacillus was i lentified much more recently. This is the reptition or coll blooded strain. While it is sail to have been found in a lew cases in man it is n entioned here only to complete the group.

can be inoculated successfully with avian tuberculosis by the intravenous route.

Avian tuberculosis does occur in human beings but it is rare. Less than forty cases have been reported in the entire literature and a number of these are thought to be insufficiently proven. Branch is willing to accept only 14 cases.

It appears that human beings are highly resistant to this type. L'Esperance, after some experimental work in sensitizing guinea-pigs with killed human tubercle bacilli and later inoculating them successfully with avian, suggests that possibly men who develop avian tuberculosis have been previously sensitized by human or bovine infection.

Avian tuberculosis in human beings is, then, a rare occurrence and its diagnosis with certainty involves long and skillful laboratory work both cultural and by animal experimentation.

A diagnosis based on pathological findings alone is open to serious criticism. The histopathology of avian tuberculosis is usually different from that of human or bovine and the tissues most frequently involved vary from those attacked by the other strains, but enough atypical cases occur to make diagnosis by this means alone extremely hazardous.

In a suspected case it is desirable that Koch's postulates be strictly fulfilled and that the report of the case contain complete data as to the methods used to identify the causative organism. Very few of the reported cases fulfil these requirements.

Where complete proof is impossible it would be preferable to report the cases as probable rather than as proved avian tuberculosis.

A clear cut diagnosis is desirable because several cases have been arrested or improved by the therapeutic use of avian tuberculin. This successful therapy has been noted in three of the renal infections, one case having remained asymtomatic for over a decade.

Where avian tuberculosis is suspected the first step in diagnosis is the intradermal tuberculin test using both avian and human extracts. The reaction to the avian should be more positive than that to human.

In human beings various conditions have been diagnosed as due to avian infection. Skin and mucous membrane lesions were reported as occurring in 11 cases. The avian tubercle bacillus was recovered from seven of these cases after inoculation of tissue into chickens and in an eighth by means of a blood culture. The other three cases gave a highly positive intradermal reaction to avian tuberculin and were therefore suspected of being due to this organism.

In cases without skin lesions the avian type was recovered from the urine in five cases (indicating renal tuberculosis), from the spleen in four cases and from the lymph glands in four cases. Atypical tuberculosis of the liver and spleen, a

few cases of blood dyscrasias, abnormalities of the bone marrow and a fatal type of septicæmia have all been reported as caused by avian infection.

In four cases the organism has been recovered from sputum but three of these cases are not accepted and none have been reported during the past 25 years. Lung involvement seems to be a rare feature of avian infection.

To summarize it may be said that avian tuberculosis in human beings attacks the skin and mucous membranes, the kidneys, the spleen, the lymph glands, the bone marrow and sometimes causes a form of general sepsis.

Reported cases of aivan tuberculosis of the skin. Lipschutz, in 1914, reported the first of these cases.

The patient was a man 20 years of age who had had ulcerating lesions of the nose, upper lip and hard and soft palate for four years. The skin showed multiple, brownish-red, nodular infiltrations, slightly elevated, round and plateau-like with occasional ulceration. These lesions, aside from those on the face, were most marked on the hands, feet and elbows. The patient died of a tubercular septicæmia and at autopsy lesions were found in the bones, liver and upper small intestines. Miliary tuberculosis of the lungs was present. No diagnosis was reached during life but the avian tubercle bacillus was recovered post-mortem from material taken from the upper lip.

(2) Volk (1928) reported a case in a boy of 17 who had been employed on a chicken farm and had gone barefoot in the chicken yards. For several years he had had ulcerations of the left foot and leg. The lesions began as dermo-hypodermic nodules which softened and became ulcers of various sizes. The avian tubercle bacillus was recovered.

(3) Urbach (1928) reported a case occurring in a man aged 31. The illness was of 1½ years duration and began with fever and painful swelling over the sternum. Later ulcerations of the tongue, lips and the peno-scrotal angle developed. Still later painful swellings of the knees were noticed. The avian tubercle bacillus was

recovered from lip tissue.

(4) In 1929 Nicolau and Blumental diagnosed a case of avian tuberculosis of the skin occurring in a 19-year-old farmer. For five years he had non-ulcerating, raised, tuberculous lupus of the nose, forehead, lobule of the left ear, left side of the neck and back of the left hand. All lesions resembled ordinary lupus except the one on the ear, which in volume and gelatinous consistence suggested the variety called "lupus myxomateux." The avian tubercle bacillus was recovered from tissue excised from the ear and from the neck. The authors call attention to the fact that all previously reported cases were characterized by ulcerative lesions whereas theirs was one of non-ulcerating lupus.

Urbach (1929) in a beautifully illustrated paper again reports his case of aphthous and ulcerative lesions of the mouth and genitalia. He adds that there was a septic temperature, loss of weight, adenopathy in the cervical and axillary regions and, later, the development of herpetform lesions on the inner thighs near the scrotum with ulcerations and impetiginous eruption.

In the same paper Urbach reviews Volk's case and also reports (5) one belonging to Knossew which occurred in a hotel employee flus patient had abscesses of the leg and hlush-red papules with scarring which had been present over a long period. The avian tubercle bacillus was recov-

ered from pus from the abscesses

Urbach further speaks of two cases (6 and 7) of sarcoid of the face with infiltration and a bluish-red color. Histologically these cases were diagnosed as belonging to the Darier-Roussy type Both gave more intense reactions to intradermal avian tuberculin than to human. Neither case

yielded the avian bacillus Urbach reported another case (8) before the Vienna Dermatological Society May 8 1930 The patient was a man aged 49 Since 1917 lie had had night sweats, increased temperature and expectoration. Otitis media tuberculosa was pres-In 1926 a painless swelling of the inueous membrane of the cheek had developed testicular and prostatic tuberculosis appeared Finally tubercular infiltrations of the left vocal chord and of the posterior wall of the larying were noted. The patient had been in contact with cluckens during early adult life He gave a strongly postive reaction to avian tuberculin and Lowenstein recovered the avian organism from blood cultures

At this same meeting Löwenstein, during discussion of the last case, added another (9). He stated that a patient had recently come to autopsy from whom he had two years previously recovered the avian beeiligs. The recovery land been made both from the blood and from a tumor of the mucous membrane of the mouth

From this brief review of the literature of avian tuberculosis of the skin it appears that Urbach's suggestion that four types of lesions occur may need to be extended. Urbach thinks that there is, first, an aphthous form, usually accompanied by septicemia and bone and joint involvement. Second, a sarcoid like lesion third a guininatous form, and fourth a local illerating form. He considers the first three to be hemato genous in origin and the last due to direct inoculation.

The case reported by Nicolau and Blumental which Urbach seems to have overlooked does not fit into any of these groups for their case belonged chinically in the lupus classification

No case of definitely proved even tuberculosis of the skin has as yet been reported in America Two probable cases which I have studied may

ment brief mention. The first (10) is one of Hodgkin's disease with true Hodgkin's disease of the skin, occurring in a married woman aged 38. The condition had been present 6 months. The histologie diagnosis was made from an axillary gland and from skin taken from the cheek. Both specimens were diagnosed Hodgkin's disease by Dr. L'Esperance. Flic patient gave a strongly positive reaction to avian tuberculin and a much less marked reaction to human tuberculin. She improved after one course of Rontgen ray treatment followed by increasing doses of avian tuberculin continued for over a year.

All treatment was discontinued in May, 1930, and the patient was considered in excellent con-

dition

In the winter of 1930 31 she became ill after exposure to cold and died in February of this year with extensive lung involvement. No autopsy could be obtained

The skin lesions in this case were very interest-They entirely disappeared during treatment ıng and did not recur during the last illness There was a diffuse, dusky, erythema occurring in irregular patches involving parts of both ears, the temporal regions and the cliceks in front of the A separate, lima bean sized lesion was present near the left angle of the mouth which the patient said had at first been somewhat raised and hard but which at the time of examination, was macular and showed no increased infiltra-Efforts to recover the avian tubercle bacillus from chickens inoculated with gland material The very positive reaction to avian tuberculin and the improvement following its long continued therapciitic use are the only evidence that this patient had avian tuberculosis

It should be mentioned here that Dr L'Esperance has recovered the avian bacillus from three cases of typical Hodgkin's disease and from one of the Pel Ebstein type of this disease. Her findings in the latter case have been checked and accepted by Branch and his collaborators at Harvard as a proved case of avian tuberculosis.

(11) The second case is one clinically diag nosed lipus erythematosus of the face scalp and nucous membranes of the mouth. The patient was a female whose skin lesions first appeared seven years ago at the age of 21. She had had tubercular cervical adenitis five years previously. The nose and adjacent cheeks were involved as well as a patch on the right side of the scalp the right malai eminence, the lips and the liard palate, on which ulcerations were present. The eruption was at first quite superficial but later became rather deeper than is usual in this condition and marked crusting and scaling appeared.

The patient thought that this change did not occur until she had had some treatment with gold and sodium thosulphite. Focal infection had been sought and removed and the patient had been treated with gold for ibout two years with

out improvement. She came to Cornell Clinic in November, 1929, to ask if any other method of treatment could be suggested.

She reacted very strongly to avian tuberculin and gave only a plus minus reaction to human

tuberculin.

Efforts to recover the avian bacillus failed re-An excised cervical gland showed tubercle bacilli in sections but no success followed inoculation experiments. Repeated examinations of urine were negative. Finally the scalp lesion was excised and an emulsion injected into a chicken. The chicken died in 15 days and cultures eventually proved to be avian tubercle A rabbit inoculated intravenously with this culutre died in 15 days with evidence of tuberculosis.

The patient was treated for nearly two years with avian tuberculin. Considerable improvement occurred. However, this never reached a point where the condition could be considered cured and finally no further progress could be noticed.

Although Dr. L'Esperance has positively identified the organism recovered from this case as the avian type there are certain gaps in the laboratory evidence, and I do not wish to claim that Koch's postulates have been entirely fulfilled in this case. The original culture from the chicken was contaminated by a mould and a long time elapsed before a pure culture could be obtained. Because of this unavoidable delay certain animal inoculations have not been done and adequate control reports are not available.

However, the patient did react strongly to avian tuberculin, did improve under avian tuberculin therapy and the avian organism was recovered from a chicken inoculated with scalp tissue. The case is reported as one of probable avian tuberculosis of the skin.

Avian tuberculin therapy continued over a long time was accompanied by clinical improvement in both these cases. In neither case was a cure obtained.

SUMMARY

Avian tuberculosis is a rare occurrence in human beings. The tissues most commonly affected are the skin, the lymph glands, the kidneys, the spleen and the bone marrow. In addition a septicæmic form has been reported.

Eleven cases with skin lesion have been reported. In several of these the diagnosis is in-

complete.

Skin manifestations have been reported having (1) an aphthous, ulcerating, septicæmic form, usually with bone and joint involvement; (2) a gummatous form; (3) a lupus form; (4) a local ulcerating form, and (5) sarcoid-like lesions. One case of Hodgkin's disease of the skin may possibly have been due to avian bacilli.

In chronic skin lesions, where diagnosis has been impossible it might be advantageous to use intracutaneous tuberculin tests. A strongly positive reaction to avian tuberculin as compared with human and bovine would suggest further investigation. Inoculation of chickens with emulsified tissue should be done, since guinea-pigs are resistant to avian inoculation.

Discussion: By Dr. Louis Tulipan, New York, N. Y .: The study of Avian Tuberculosis in human beings is a difficult one and its possible association with Hodgkin's Disease requires fur-

ther study on a larger series of cases.

The fact that acid-fast bacilli have not been isolated from the glands of Hodgkin's Disease directly, but only indirectly, by the injection of ground-up Hodgkin's glands into birds, is not positive proof that Hodgkin's Disease is an atypical form of tuberculosis due to the avian tubercle

The difficulty encountered in this type of work is, that there is no infallible way of diagnosing tuberculosis in birds, inasmuch as the tuberculin test may be negative. Another possibility of error, is that of spontaneous infection from other birds or the ground, where the experimental birds are kept.

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MEDICAL ECONOMICS

There must necessarily be an economic element in the relations of practicing physicians to their patients. This element is undergoing a process of development and evolution. No longer does public sentiment impose on the medical profession the entire burden of giving medical care to the poor; and physicians are learning that the free services which they render in clinics belittles rather than enhances their professional reputation.

Medical societies are making extensive studies of the medical needs of their communities and the means of supplying them. Social organizations are developing plans by which communities shall provide medical service to the poor on a basis similar to that used in giving them food and shelter. The dollar is universally accepted as a standard of value in the distribution of all kinds of service, including that of medicine.

SWALLOWING SAFETY PINS

Resourcefulness is an essential qualification of a practitioner of medicine, especially a surgeon. The resourceful surgeon deserves credit for a procedure that is original with him, although some one had used the same solution before.

Priority of discovery is ascribed to him who first publishes his observation; and those doing equally original work do not obtain recognition because they fail to report their observations. Modesty is commendable and restriction of medical literature of a commonplace type is desirable; but every medical editor is delighted when an observation which is both original and practical is offered to his journal. Such an observation is found in the May issue of *Minnesota Medicine*, the Journal of the State Medical Association, which carries a brief article on "The Open Safety Pin in the Digestive Tract," by Dr. George Earle of St. Paul.

Dr. Earle was called on October 12, 1932 to see a ten months' old baby who had swallowed an open safety pin two days previously. The x-ray showed the progress of the pin, butt first, down the esophagus, but it evidently turned in the stomach and lodged point first in the pylorus. A laparotomy was done on the sixth day, but instead of opening the stomach, the surgeon gently manipulated the pin back into the stomach and closed it, and then left it free in the stomach. The pin was expelled from the body on the eleventh day after it had been swallowed.

The article goes on to say:—

"Dr. Greth Gardiner, consulating endoscopist, had suggested in the event of a subsequent

laparotomy that the pin be closed through the bowel wall and left to pass, thus greatly decreasing the possibility of an operative death. Children of this age are known not to tolerate opening of the bowel, and while there is probably less risk in opening the stomach than the duodenum, the risk should be avoided if possible.

"At the time of the operation, as far as Dr. Gardiner knew, the suggestion of closing the pin and allowing it to be passed was independent thinking. Dr. Gardiner had made an extensive search of the literature three years previous, and at that time such a procedure had not been suggested. His search of the literature had followed a peritonitis death from the removal of a safety pin in the bowel, and at that time the thought had come to him that it would have been better just to have closed the pin and let it pass in the natural way. This case, in which he was called in consultation while the pin was in the esophagus, offered the first opportunity to make the suggestion."

The article quotes the Journal of the American Medical Association of March 11, 1933, page 736, describing the closure of an open safety pin which had been swallowed, and its removal by means of a stomach tube into which it was manipulated. This occurred twelve days before the operation described in Minnesota Medicine.

The Minnesota article quotes a newspaper report that on April 4, 1933, a Chicago doctor had closed an open safety pin in a baby's stomach, and that the pin had been recovered when the baby vomited.

LOOKING BACKWARD

This Journal Twenty-five Years Ago

Economics: This Journal of June 1908 quotes an editorial in the Texas State Journal of Medicine as follows:

"The average man will give a lawyer \$300 to \$500, together with a lifetime's praise, to keep him out of the penitentiary for from two to ten years, and at the same time he will raise a phosphorescent glow and kick that can be heard around the world if a doctor charges him \$50 to \$100 to keep him out of hell for a lifetime. We are the only people under God's ethereal tent today who keep open shop 24 hours each day and 365 days in each year. We are also the only laborers to keep on working for people who do not pay. I can carry my part of charity with as good a grace as most men. I can go through rain, snow or mud and

do my best, provided the case is one of worthy need, but to reward continually downright rascality, willful drunkenness and wanton laziness is getting out of my line."

"The average doctor tries to do much work. Every doctor wants everybody to patronize him. He likes to be going day and night, rain or shine, Sunday or weekday, hot or cold. This is a business mistake. It wears a doctor to a frazzle. It gives him no time for bill-collecting and business matters; no time for patients who naturally feel neglected and are slow pay as a consequence. A doctor can do better work, more good and build up a more enviable reputation if he coolly takes his time and is careful and painstaking in his examinations."



MEDICAL PROGRESS



Treatment of Neuralgia and Tumors by "Cobra Venom."-A report is made by Monaelesser and Ch. Taguet in the Bulletin de l'Académic de Médecine of March 14, 1933, of the results observed in 115 cases of tumors treated during the course of 21/2 years by injections of snake venom: chiefly that of the cobra, but in a few cases that of the rattlesnake. The purpose of the treatment was the relief of the neuralgic pains that accompany the growth of tumors. The neoplasms, mostly malignant, were in the most various locations, and included 25 of the mammary gland, 20 of the uterus, 15 of the intestine and rectum, 15 of the stomach, 10 of the prostate, 5 of the tongue, etc. A 1:80,000 solution of venom, prepared by Calmette's method, was injected in gradually increasing dosage based upon the mouse-unit, that is, the minimum dose toxic for a mouse weighing 20 gm. At the present time the authors administer at each injection 1/2 e.c. of a glycerited solution containing 21/2-5-10-15-20 or more mouse units, giving the injections at intervals of 3-5-10 or 15 days. An ordinary syringe is used with a short needle, and the injection is made into the cellular tissues, such as the supraspinate fossa of the deltoid region, the gluteal region, or the thigh. In weak dosage it is painless; larger doses cause a biting sensation for a few seconds, in rare cases for a few hours, but never any erythema, suppuration or any general febrile reaction. The treatment is entirely compatible with tonic or radiotherapeutic treatment, but its action is inhilbited by vaccines and iodated medication. The cases treated were unselected, and included grave cases, recently or long since operated on, with or without recurrence, inoperable cases, those unsuccessfully irradiated, and both external and internal cancers. The majority have died from their advanced cachesia, but in nearly every case the pain had been relieved. In some cases the tumor growth itself showed a stabilization for several months, and in a few, regression or even complete cicatrization has been observed. Some of the patients who received their first injections in October, 1930, are still under treatment. An analysis of the clinical observations reveals that the effects upon the pain first become evident after the fourth or fifth injection, when the acuteness of the paroxysms begins to abate. Cases in which the effects were very striking were a cancer of the tongue, a secondary mammary cancer following operations on adnexal and gastric tumors, a metastatic cancer of the first lumbar vertebra, a cancer of the cardia, and one of the uterus and adnexa. On the other hand, cases with advanced lesions of the bladder, rectum, body of the uterus and certain tumors of the pylorus, liver and pancreas proved entirely refractory.

Magnesium Sulphate in the Treatment of Angiospasm. - N. Pines, writing The Lancet, March 18, 1933, cexxiv, relates his experience with magnesium sulphate in intermittent elaudication, spasm of the brachial artery, migraine, acute pulmonary edema, angina pectoris and coronary thrombosis, and cerebral angiospasm. Angiospasm, he says, may affect any part of the arterial tree. The duration of a vascular spasm may be a few minutes or a few hours, but the injury done may be immense if a portion of a vital organ is affected and is unable to recuperate quickly. Therefore medication must also be rapid and, of course, harmless. Recalling the efforts made to cure tetanus by subeutaneous or intratheeal injections of magnesium sulphate, Pines decided to try it in vascular spasm. After considerable experimentation it was found that the intravenous mode of administration was preferable, but if for some reason this route is impracticable, the solution of magnesium sulphate (without glucose) is well tolerated intramuscularly. For intravenous injection the dose is 5 to 10 e.c. of a 20 per cent solution of magnesium sulphate and an equal volume of 10 to 40 per cent glucose. About a minute and a half after the commencement of the injection the patient feels an intense heat in the body. The pulse becomes moderately quickened. The blood pressure is unaltered. On ophthalmoscopic examination the retinal vessels show no change. The magnesium sulphate probably relaxes vascular spasm by direct action on the vasomotor center of the brain (either cerebral only or spinal as well). No discomfort was experienced by any of the patients, though some of them were well over sixty years of age, and no harm has resulted from the injections even in cases of cerebral "vascular aceidents"; sometimes a striking improvement seemed to follow. Usually the treatment was administered twice a week.

Aspergillus as a Cause of Blindness.—Marg. Rohner and Oth. Huber say that few cases of disease of the vitreous due to invasion of hyphomycetes have been published. That hyphomycetes should cryptogenetically reach the vitreous body and cause blindness is one of the rarest of occurrences. Cases in which this fungus has attacked the cornea are, on the contrary, not very unusual. The epi-

thelium is destroyed, an ulcer forms, which is surrounded by a yellow ring of leucocytes, constituting the demarcation wall, which as a rule hinders further proliferation of the fungus. In rare cases, however, the fungi may make their way from the cornea into the anterior chamber and thence pass into the vitreous body. When this occurs a panophthalmia follows. Most of the cases reported of hyphomycetic invasion of the cornea have been due to aspergillus, and especially to The most interesting feature of A. fumigatus. the authors' case is that the hyphomycetes were found in the vitreous without there being any indication, either clinical or histological, as to the route by which they arrived there. The patient, a man of 41, reported that 3 days previous to observation he had noticed black spots in front of the right eye, and a striking decrease of visual acuity, with transient pain. As the eye was somewhhat reddened, he had applied compresses of bread and fresh butter. It is perhaps significant that none of the bread had been over 3 days old. The anamnesis also showed that the patient had often had a kind of eruption on his eyelids and on the extensor side of his elbows. Two months before, a cow had kicked him in the nose, but the eye had not suffered. Upon slit lamp examination the cornea and sclera were found perfectly in-The anterior chamber was full of a grayish white flocculent exudate, making it impossible to get a view of the vitreous and fundus. During several weeks of treatment condition grew gradually worse, until finally all vision was lost, and the eye was enucleated. Histological examination vealed no sign of any cicatrix in the cornea or The corneal epithelium, the parenchyma, Descemet's membrane, and the endothelium were all intact. The retina was almost entirely detached, and was seen lying in broad folds in the anterior portion of the vitreous, which had shrunk till it occupied but a small space. In the midst of the abscess lay a small collection of branched hyphomycetes, spreading more or less from a single point. No culture was possible, since the eye had been placed in formol, but it is highly probable that the fungus was the ubiquitous Aspergillus fumigatus, whose pathogenicity for the human eye is well known. It was impossible to guess how it reached the eye, and especially the vitreous. The presence of an endogenous infection cannot be altogether excluded. Schweiserische medizinische Wochenschrift, February 25, 1933.

Changes in the Character of Diseases.—Sir Humphrey Rolleston, writing in the *British Medical Journal*, March 25, 1933, i, describes changes which have taken place in the charac-

ter of certain diseases. He points out that Sydenham, the British Hippocrates, maintained that diseases had seasonal variations, a long period of evolution with a rise, decline, and fall extending over centuries, and an "epidemic constitution," namely, that they were subject to telluric or cosmic influences. On the other hand, that the character of acute ·diseases undergoes changes has been vigorously contested. It has been claimed that the supposed change was due to failure to recognize that a disease other than that supposed to have altered its character had appeared on the scene. Again it has been argued that improved diagnosis must be taken into account before accepting a supposed change of type in disease. At the present time no one can doubt the evidence of change of character in some acute diseases such as scarlet fever and smallpox. In order to realize the high probability that diseases must change their character it is only necessary to remember that they are not rigid entities. A morbid state is the outcome of two variables: the resistance or susceptibility of the body on the one hand and the numerous factors coming under the head of environment on the other hand. The influence of constitution is seen in hereditary and racial liability to certain diseases, for example, the frequency of diabetes in the Jews. The external environment includes microorganisms, poisons, physical agencies, trauma, unhealthy surroundings, tainted food, poverty, and over-fatigue of the body and mind. Moreover, bacteria must be more prone to mutations and changes in virulence than is man to develop changes in resistance.

In the European war there appeared new forms of disease—an increase in deficiency diseases, and a fall in the incidence of those due to dietetic excesses. The greater speed of modern life may be correlated with the increased incidence in Europe and America of epidemic diseases of the central nervous system. High blood pressure, cardio-renal disease, and diabetes may also be products of the strenuous existence. Improved hygiene has banished many acute infections, such cholera, typhus, and relapsing fever. Chlorosis has practically disappeared since the beginning of this century, and with it gastrostaxis and perforating gastric ulcer in chlorotic young women. Its place seems to have been taken by the simple achlorhydric anemia in middle-aged women. Acute rheumatism has, during the past eighty years, undergone considerable modification; its complication by pneumonia had disappeared fifty years ago. More recently there is a lessened severity of the arthritis affection. Tophaceous gout has been growing rarer. Syphilis is less obviously

mulignant than formerly, while syplithme aortitis has become increasingly common. Rolleston has the inspression that thoracic ancurysm has become less common than it was earlier in this century. Appendicitis has been much commoner since the return of influenza in 1889 after being absent for forty years. Cirrhosis of the liver is less frequent than formerly. Pneumonia has undergone a change since influenza again became prevalent, the frank lobar pneumonia is less frequent, while bronchopneumonia is more in evidence. Primary carcinoma of the lung has become much less rare since 1918. Hydatid disease has become quite infrequent within recent years.

Mixed Anesthesia for Long and Severe Operations in Deficient (Anemic and Obese, Subjects -In the opinion of Victor Panchet and A Hirchberg inixed anesthesia has made remarkable forward strides, due to the introduction of certain recent procedures, such as the preoperative sedative injection, the use of eserine, of carbon dioxide gas, and, most of all, of intermittent narcosis, the technique of which should be more widely known, for the welfare of the patients. At the outset, the preliminary injection of morphine, with or without scopolamine, followed by infiltration of the line of incision with a weak solution of percuine produces a state of calm which facili tates all forms of anesthesia. The oculocardiac reflex should be tested, if compression of the cyeball considerably accelerates the pulse, equilibrium should be re established by injecting ½ mg eserine salicylate when anes thesia commences This is especially useful in laparotomies Inhalation of carbon dioxide, either pure or mixed with an anesthetic, facili tates the arrival of ancethesia, the patient falling asleep more readily after the respiratory stimulation caused by a few whifts Periods of apnea are suppressed, the color remains healthy, and the respiration is full and deep Given again toward the close of anesthesia carbon dioxide promotes a more rapid elimination of the anesthetic The hyperventilation thus obtained also tends to reduce the number of pulmonary complications order to produce satisfactory narcosis the patient must be put to sleep slowly eliminates almost entirely the troublesome period of excitation observed when anesthesia is produced too rapidly Before operation is begun the patient must be brought into a sleep so deep that the eyeball becomes immobile the pupils contracted and the palpebral reflex abolished The Ombredanne mask is maintained at 6 or 7 while the surgeon is making the intraabdominal exploration. In practice this stage is short 5.10 minutes or at most a quarter of an hour. If the patient begins to exhibit intestinal contractions, the mask is promptly reapplied. As soon as exploration is ended and respirations are regular and deep, the mask is lifted and the patient allowed to breathe freely 5 10 minutes The mask is then replaced for I or 11/2 minutes at most, which gives the patient time for 20 30 slightly accelerated respirations, after which he may again breathe freely for 5 10 minutes In this way long, difficult and involved opera tions can be done without danger and with a minimum amount of anesthetic nignity of narcosis thus carried out has been especially striking in the case of obese sub jects with poor powers of resistance. A more than ordinarily easy anesthesia was conducted in two patients of this type whose cases are outlined, one markedly anemic, undergoing a sigmoid resection, and the other with an exaggeratedly brouzed skin covered with great numbers of nevi on whom an extensive right colectomy was performed -Bulletin de l'Academie de Medecine, March 21, 1933

A Study of the Sinuses in a Group of Patients Complaining of Vague Chest Symptoms -In order to obtain some idea of the relation ship between cliest symptoms and sinusitis when the latter has been ignored by the patient and physician Sam H Sanders examined the sinuses of a large number of patients in whom the diagnosis of chronic bronchitis had been made by one or more physicians The group did not include those who attached their primary symptoms to the sinuses or had a diagnosis of sinusitis before they were referred to the specialist. All were negative for tuberculosis. In this group of pa tients the statement is borne out that an upper respiratory infection is present in practically all cases of chronic non tuberculous pulmonary disease In some of these patients the physical findings in the nose were indefinite. One might be justified in passing the nose up as normal were it not known that the patient had a chronic pul monary lesion and a history suggestive of sinusitis Roentgenological examination of the sinuses in such cases will show a polypoid degeneration of the antral mucosa of varying degrees with some involvement of one or more of the other In some patients who complain or cough, headache, mucoid discharge from the nose, and continuous colds, the roentgenograms of the sinuses appear almost normal unless the picture is light with good contrast, and then a thickening of the mucous membrane can be seen. Some of these patients are treated for tuberculosis. The chest condition grows progressively worse unless the source of infection in the sinuses is removed Sanders urges the importance of early diagnosis and treatment of sinus disease before lower res piratory changes occur He hopes to see the day when the family physician will apologize for permitting a patient to reach the stage of bronchiectasis without a search for a definite upper respiratory infection, unless the evidence of the cause is elsewhere.—Southern Medical Journal, May, 1933, xxvi, 5.

A Case of Iodine Graves' Disease Following Bronchography.—A warning is uttered by T. Gordonoff in the Schweizerische medizinische Wochenschrift of March 11, 1933, with regard to the use of lipiodol or iodipin in bronchography in patients who for one or another reason exhibit an intolerance for iodine. There is very little understanding as yet of the fate of iodine in the body after bronchography, some authors holding that after a certain percentage has been coughed out, the residue lies in the alveoli for weeks or months, where it gradually becomes resorbed, while others take the view that the resorptive capacity of the lungs is but slight: that the lipiodol or iodipin can be resorbed only from the alimentary canal, and that on this account care should be taken that the expectorations are not swallowed. Gordonoff reports the case of a woman of 54 in whom an iodine Graves' disease developed after a bronchography designed to demonstrate bronchiectasia in the right lower lobe. The injection was followed by loss of sleep, tremor of the hands, excessive sweating, rapid pulse, loss of weight, and a lymphocytosis of 34 per cent in presence of 6,700 leucocytes per cubic millimeter. A control roentgenogram taken 1 month after the injection clearly revealed the presence of lipiodol in the right lower lobe. The basal metabolism could not be determined, but the diagnosis of Graves' disease could readily be made on the basis of the symptomatology and the roentgen To prove that lipiodol is resorbed in the lung, Gordonoff injected 2 c.c. of the substance into the trachea of a rabbit. hours he found 0.295 mg. iodine in the blood and 4.56 mg. in the urine; after 4 days there was 0.475 mg. in the blood and 5.71 mg. in the urine, while the removed lung contained 693 mg. iodine. The iodine wanders into the organism through the alveoli, where it finds no other way of exit, since the alveoli have no ciliated epithelium, and since, according to Rohrer, coughing has no effect upon them. Resorption is rapid in a healthy lung, but much slower in a diseased one, especially when the bronchi, as the result of dilatation, have a modified or thickened mucosa. In cases of hyperthyroidism, kidney disturbances, iodine idiosyncrasy, even small amounts of iodine resorbed are enough to produce injury. The author points out the necessity before every bronchography of examining not only the kidneys but also the gaseous exchanges with reference to a possible overfunctioning of the thyroid. Intracutaneous injections of minute amounts of iodine will bring to light any oversensitivity to the substance. Physicians are urged also after every

bronchography to order expectorants having secretomotor properties. Ether administered subcutaneously quickly dissolves the lipiodol in the lungs. It might be worth while to try it in combination with powerful diuretics in a case with sound kidneys, bearing in mind, however, that the resorbability of the iodine will be increased thereby. It would be still better in cases known to be intolerant of iodine to make use of a brominized opaque fluid.

Diabetes Mellitus and Postencephalitic Parkinsonism.—The possibility of the existence of a true neurogenous diabetes is discussed by Giuseppe Ceroni in the Riforma medica of February 4, 1933, on the basis of a case in a young man, in whom diabetes mellitus was associated with a syndrome of postencephalitic parkinsonism, which had begun to develop 3 years after an attack of epidemic encephalitis in 1922. The diabetes in all probability first made its appearance 7 years later, increased progressively for 2 years, then slowly regressed up to the present time. The state of hypertonia exhibited a course parallel to the gravity of the diabetes. That the condition was true diabetes was demonstrated by the constant glycosuria and hyperglycemia, and the response of the blood sugar to administration of glucose. Ceroni thinks the progress of the encephalitic lesions was the result rather of the intercurrent flaring up of the encephalitic inflammatory process than of secondary degeneration, and that the subsequent appearance of a diabetic condition was due to participation of the hypothalamic center that regulates sugar metabolism. Also the glycosuria, hyperglycemia and excess of sugar in the cerebrospinal fluid observed in the acute phase of epidemic encephalitis can be explained by assuming temporary disturbances of the paraventricular nucleus to which is assigned the control of sugar metabolism, just as the polyuria of the same disease is explained by dysfunction of the center regulating the water and salt metabolism. The patient had shown himself to be insulin-resistant in 1930-31, both the diabetic and the parkinsonian symptoms being increased during the treatment; but a more recent test has revealed a rather surprising sensitivity to insulin, not only the sugar excess but also the tremors and asthenia being markedly diminished under the treatment. This behavior certainly indicates a slight but manifest participation of the islands of the pancreas, which appears to have been secondary. It is probable that the primary lesion was at the level of the diencephalic center, and that in that period, when the pancreas was unimpaired, the insulin, instead of having the effect of decreasing blood sugar, stimulated the antagonistic neurohormonic sector. The idea of the primary nervous origin of this form of diabetes is strengthened by the long course not usually observed.



LEGAL



THE VASKO CASE

By LORENZ] BROSNAN, ESQ

Counsel Med cat Sociely of the State of New York

Several weeks ago a case came before one of the Appellate Courts of this State which received wide publicity and comment in the public press This matter, known as the Vasko case, presents a situation that cannot fail to be of interest to every doctor because of the human, as well as the medical situation involved. It is appropriate that the matter be discussed in these columns at some length

It had been ascertained at a certain hospital that a two-year-old infant child, the daughter of first generation immigrant parents, was suffering from ghoma of the return of the left eye, and the removal of the eye had been recommended in an effort to save the life of the child The parents, however, arbitrarily refused to permit the operation, flatly taking the stand that there would be no surgery performed even though the child A petition was presented by the County Society for the Prevention of Cruelty to Children, to the local Children's Court for an order requiring an operation to be performed upon the infant

The statute under which the proceeding was brought defines a neglected child to be protected under the Aet as one "whose parent, guardian or custodian neglects or refuses, when able to do so to provide necessary medical, surgical, institu-tional or hospital cire for such child" The Act further provides

'Whenever a child within the jurisdiction of the court and under the provisions of this Act appears to the court to be in need of medical or surgical care or therapeutie treatment, hospital care necessary appliances and de vices or of special educational training * * * a suitable order may be made for the treatment or education or both of such child in its home a hospital or other suit able institution and the expenses thereof, when approved by the court and duly audited shall be a charge upon the county or the proper subdivision thereof but the court may adjudge that the person or persons charged with the hability under the laws to support such child shall pay a part or all of such expenses as provided in section forty of this Act"

In response to the petition, the parents appeared before the Children's Court. The Court interro gated them and learned that the only treatment they would permit for the child was the application to the eye of some medicine obtained by mail from a so called "eye drops and herb specialist" who was not a physician The court directed the appointment of a physician of high standing to make an examination of the child and also ap

pointed one of the members of the Bar to represent the child and her parents in the matter

The examination was made and a week later the doctor appeared in Court and gave his opinion with respect to the need for operative interference in the case Part of his testimony was as follows

Q Will you please tell us the nature of the examina tion and what results or conclusions you arrived at?

A The external appearance of the eye is normal ex cept for one thing that is you see the reflects, red re flects from a light in front of the eye showing through the pupil. The pupil is widely dilated also and the eye is permanently blind. In looking into the eye there is evidence in the back part of the eye of a growth which has pushed it forward. It is detached and there is a new growth in the posterior part of the eye ball. There are numerous folds and you can see the blood vessels running through it. That growth in all probability is of a milignant nature which if left to nature will sooner or later cause the death of the child

Q How will the death of the child be caused by that

Doctor?

A The growth will increase in size until its fills the orbit until it fills the eye ball bursting through the coats of the eye ball fills the entire organ and pro-trudes out between the hids and also it will if left to nature in all probability go backward into the brain and follow up along the optic nerve into the brain, and by the same process in that locality

Q It is in the nature tumorous?

It is a tumor Q Can you state whether or not in your opinion with reasonable certainty what is necessary to be done in order to prevent the further growth and the probable fatal outcome of it?

A It is necessary to remove the eye and as much of

the optic nerve as it is possible to remove

Q Can you state whether or not in your opinion with reasonable certainty the child would die as the result of this malignant growth unless the eye is removed?

There is no question about it there is no doubt the

child will die of it

Q Just one more question. If the eye is removed at this time can you state whether or not in your opinion with resonable certainty the progress of the malignant growth will be arrested and the death of the child pre-

A There is something like an even chance One can not say with certainty the growth can be arrested my personal belief that the child has an excellent chance of living on if the eye is removed. Statistics show a cure in something like fifty per cent of these cases

The doctor also gave the opinion that the eye drops that the parents were using would have no effect whatever toward curing the child's condi-To summarize the matter, he testified that there was no chance at all of saving the child's life without operation

The services of a clergyman in the parish of the parents were enlisted by the court, but he too was unsuccessful in convincing the parents that the child should be operated upon.

An order was then made adjudging the infant to be a neglected child, reciting that the child was in need of medical or surgical care and would die unless the eye was removed. The order further directed the child to be committed to the custody of the Commissioner of Public Welfare, and by him placed in a designated hospital to be operated on by the doctor who had previously examined the child.

In order that the rights of the parents and the child might be given all possible consideration, an appeal was taken by the attorney who had been designated to represent the parents and who had also been appointed guardian ad litem of the child. The appeal was brought on very promptly for consideration before the Appellate Division of the Supreme Court for the Second Judicial Department, and briefs were submitted. No reported case was cited to the court in which the validity of a similar order had been challenged, and the propriety of the order was tested out by a determination of the scope and constitutionality of the statute as applied to the case.

One of the chief cases brought to the attention of the Appellate Court as tending to support the order, was a case that had been decided by the Court of Appeals in 1903. That case involved a conviction of the parent of a child, for a mis-demeanor under what is now part of Section 482 of the Penal Law. Said Section provides that a person is guilty of a misdemeanor who "Wilfully omits, without lawful excuse, to perform a duty by law imposed upon him to furnish food, clothing, shelter or medical attendance to a minor or to make such payment toward its maintenance as may have been required by the order of a court or magistrate when such minor has been committed to an institution." A parent had in that case failed to provide medical care for a sixteen and a half months old child who had contracted catarrhal pneumonia, although he realized for forty-eight hours before her death the serious condition of the child. In that case conviction was affirmed and the Court said:

"The peace and safety of the state involves the protection of the lives and health of its children, as well as the obedience to its laws. Full and free enjoyment of religious profession and worship is guaranteed, but acts which are not worship are not. A person cannot, under the guise of religious belief, practice polygamy and still be protected from our statutes constituting the crime of bigamy. He cannot, under the belief or profession of belief that he should be relieved from the care of children, be excused from punishment for slaying those who have been born to him. Children when born into the world are utterly helpless, having neither the power to care for, protect or maintain themselves. They are exposed to all the ills to which flesh is heir, and require careful nursing, and at times, when danger is present, the help of an experienced physician. But the law of nature, as well as the common law, devolves upon the parents the duty of caring for their young in sickness and in health, and of doing whatever may be necessary

for their care, maintenance and prescrvation, including medical attendance if necessary, and an omission to do this is a public wrong which the state, under its police powers, may prevent. The legislature is the sovereign power of the state. It may enact laws for the maintenance of order by prescribing a punishment for those who transgress. While it has no power to deprive persons of life, liberty or property without due process of law, it may, in case of the commission of acts which are public wrongs or which are destructive of private rights, specify that for which the punishment shall be death, imprisonment or the forfeiture of property."

It was argued that under the authority of the said case there would be unquestioned authority to take proceedings to punish the Vasko parents if the child were to die without medical care, and it would follow that with the power conferred by the Legislature by the Children's Court Act, the Court was justified in stepping in and attempting to prevent the tragedy.

The Appellate Division without delay handed down a decision affirming the order of the Children's Court. The opinion of the Court stated in part:

"This appeal presents, primarily, the right of the State, in a proper case, to assume the discharge of duties of parents or guardians in matters involving the life, health and physical welfare of their children or wards when it appears that the parents or guardians, through ignorance, fanaticism, or for arbitrary reasons, have become derelict in their duty and failed to perform it. As a necessary corollary, the further question presented is whether the parents were neglectful in this case, and, if so, whether proper discretion was exercised by the learned Judge of the Children's Court of Westchester County, if it be determined that such right exists in the State.

"The law is not only zealous in the protection of the

"The law is not only zealous in the protection of the civil rights of infants but has a special regard for the moral care, training and guidance of children,' as was written in People ex rel. Deordio v. Palmer (230 App. Div. 397); but its beneficence extends also to conservation of the health of children, their physical well-being, as well as to the preservation of their lives. If parents or guardians neglect their duty in respect to any one of those obligations, the State in its wisdom, through its laws, intervenes. While the question now before us has never been presented to an appellate court in this State in so far as I am able to determine, power in the court

to act rests upon ample authority.
"Prior to the adoption of the Children's Court Act of the State of New York in 1922, resting upon constitutional edict, there existed no affirmative statutory power to exercise direct control over the physical welfare of a child. Action was indirect, by punishment of those vested with responsibility for neglect of the health of children in failing to furnish medical attendance when needed, in violation of the Penal Law (citing cases). Such a law remains upon our statute books (Penal Law, Scction 482) and provides that one who, under a duty to furnish medical or surgical attendance to a minor, wilfully omits to perform that duty is guilty of a misde-meanor. That provision of the Penal Law is not inconsistent with the Act controlling here, which goes further, and, instead of punishing those guilty of neglecting children, which procedure conceivably might be entirely abortive, permits the State to assume the obligation and responsibility, and in the interest of the child and for its present and future welfare renders unto it the necessary medical or surgical treatment."

In holding that the Act in question was valid, the Court said:

LEGAL

'In my opinion the act is constitutional. The infant was properly before the court. The court is authorized in a proper case to make an order directing that a surgical operation be performed upon a child, and the only question remaining is whether or not the discretion of the court was properly exercised in this case. Main festly, it was the intent of the legislature to invest the court with wide powers of discretion to be exercised on the advice of competent medical or surgical authority, ininfluenced by the whims or arbitrary determination of parents or guardians in advancing the well-being of the child.'

In conclusion the opinion of the Appellate Divi-

'Medicine and surgery are not exact sciences and the result of an operation may not be forefold with accuracy Decision must be made and the parents persist in their refusal to consent. Children come into the world help less subject to all the ills to which flesh is her. They are entitled to the benefit of all laws made for their protection—whether affecting their property, their personal rights or their persons—by the legislature, the sovereign power of the State. The learned court has acted in this erie not only in strict compliance with the law but with scrupillous care and moderation and upon ample and competent proof. His discretion should not be disturbed.'

Subsequent to the said ittling, the operation was performed upon the child, and your Counsel has recently been advised that the child is progressing very well

As one of the metropolitan newspapers stated editorially

'Since this ease lies in a borderland wherein the respective rights of parents and of the State are but viguely defined, the decision becomes important as law and precedent. It is different from those simpler eases in which statutory penalties may be imposed upon parents for neglecting their cluidren. Although it is plan enough that the consequences of willful neglect will justify punishment, it is by no means clear how far the courts may go in prescribing a course of conduct in advance of putative neglect which has not yet produced these consequences.

these consequences
"The Appellate Division holds that the Constitution and statutes of New York confer full authority upon the State to require an operation for the Vasko child. If that is indeed the law it is logical to suppose that by an extension of this reasoning the State may go even fur ther. It is not however, of the law so much as of the prognant human issues involved that the public is now thinking. Those who applied the decision will not with hold a meed of sympthy for these unlargey parents upon whom cruel circumstances has laid a hand so here."

Another newspaper editorial made the following comment

It is the first case of the kind ever decided in this state. It shows the courts at their highest earnestly seeking to meet a social responsibility for this baby's life and happiness. It also shows how far we have come from earlier ideas of parental power and state responsibility. Yet at the same time it seems to remind one, in a sudden flash how difficult are the problems of men how close is that dark reality of insecurity, death and unhappiness over which the finest of civilization's efforts in law and medicine and education have thrown only a fragile bridge.

The justice and propriety of the action taken in this case can scarcely be questioned. It must lowever, not be taken as authority for the proposition that operations which are indicated can be indiscriminately ordered for children against the wishes of their parents. The jurisdiction conferred by law upon the Children's Court is purely statutory, and must be strictly construed and only resorted to in carefully considered cases.

BURN FROM ELECTRICAL KNIFE

A physician, specializing in surgery, was called upon to perform an operation upon a married woman about forty years of age, for chronic infected Bartholm's gland. Another doctor acted as anesthetist at the operation and administered to the plaintiff an anesthetic of avertin supplemented by introus oxide and oxygen. The usual inhalation mask was used consisting of a metal hood protected by a rubber inflated cushion. The surgeon performed the operation on the patient, using an electrical surgical knife which consisted of a needle on the end of an electric cord.

The operation itself was performed uneventully, and after the operation was over the gas machine mask was removed from the patient's face by the anesthetist. Both doctors noticed a blister on the end of the patient's nose about the size of a pea. Neither doctor could explain the manner in which the blister had been caused. Unguentine was applied to the blister on the patient's nose. The patient recovered from the effects of her operation successfully. The burn on her nose, however, took a few weeks to heal, and

a permanent scar about one quarter mich in diameter, somewhat pitted remained

Action was commenced against both the sur geon and the anesthetist, charging them with negligence in the performance of the operation and seeking to recover for damages alleged to have resulted from the burn on the patient's nose Before the action came on for trial the anesthetist died, and the action therefore abated as to him The case was continued, however, against the surgeon and the action was brought on and tried Testimony was intro before a judge and jury duced on behalf of the plaintiff by an electrical engineer to the effect that the burn must have been caused by the surgeon grounding his electrical knife against the operating table, whence the current was conducted, through a series of solid bodies to the nose of the plaintiff. An electrical expert testifying on behalf of the doctor gave testimony to refute the said rather strained explanation of how the injury occurred case was sent to the jury, who returned a verdict in favor of the defendant surgeon



NEWS NOTES



THE BUDGET

The following budget of expense of the don Heyd, Frederic E. Sondern, and Daniel Medical Society of the State of New York for the year beginning July 1, 1933. and ending June 30, 1934, was prepared by the

S. Dougherty. It was approved by the Executive Committee of the Council, and adopted by the Trustees on June 1, 1933 in accordance with

Budget Committee consisting of Cl	nas. Gor-	Chapter VI, Section 2 of the By-Laws.		
Rent	ppropriation 5 2.600.00	Special Appropriations	550.00	
Telephone	200.00	Conference of County Secretaries.	550.00	
Postage	700.00	Conference Executive Committees District Branches	400.00	
Stationery and Printing	1,000.00			
·	18,600.00	Christmas Bonus	600.00	
Contingent Fund	1,500.00	Journal*		
Annual Meeting—Printing, Postage	· .		31,500.00	
and Stenographer for House of	•	Postage—Mailing Journal	3,600.00	
Delegates and Exhibitor's Enter-	2 500 00	Postage—General	400.00	
Printing and District Branch Pro-	2,500.00	3	5,000.00	
grams, and Postage for Mailing		Commissions	· ·	
paid through Secretary's Office	800.00	Honorarium—Editor-in-Chief	500.00	
Auditor	500.00	Executive Editor—Salary	4,500.00	
Traveling Expenses-General, In-		Executive Editor—Traveling and		
cluding President	3,000.00	Incidental Expenses for Reportorial Work, including clerical		
Traveling Expenses, A. M. A. Dele-	4,000.00	work at Patchogue	500.00	
gates Counsel—Salary	12,000.00	Disbursements for Literary Work	1,376.40	
Counsel—Expenses	500.00	Rent	1,400.00	
Secretary—Honorarium	3,000.00		4,420.00	
Secretary—Expenses	500.00	Salaries	•	
Executive Officer's Salary	8,000.00	Telephone	200.00	
Executive Officer's Expenses	1,000.00	Wrappers for Journals	500.00	
Standing Committees		General Office Supplies	400.00	
Legislation	6,000.00	Directory		
Medical Economics	1,800.00		12,000.00	
Public Health and Medical Edu-	•	•		
cation	6,500.00	Wrapping and Delivery	•	
Public Relations	2,000.00	Postage	1,000.00	
Scientific Work	500.00	Commissions	500.00	
Special Committees		Stationery, Printing and Expenses	350.00	
Medical Research	500.00			
To Study State Control of Certified Milk	500.00	* The appropriation for the Journal is subject to c December 31, 1933. This limitation is necessary on ac following resolution passed by the House of Delegates 1933. (Journal May 1, 1933, page 592.)	changes after count of the on April 3,	
District Branches For Annual Meeting as allowed	1 (00 00	"Resolved, that the House of Delegates be requeste ize the appointment of a Special Committee to study question of the Journal, with a viewpoint of submit mendations as to organization, form of Journal, fi	d to author- y the entire tting recom- inances, and	

1,600.00

under the By-Laws ...

mendations as to organization, form of Journal, finances, and possible profit-making administration."

CONFERENCE ON ASPHYXIAL DEATH

The all-day conference on the subject of Asphy val Deaths of which notice was given in this Journal of May 15, page 662, was held on May 24, with entire success. The subjects of asphy via and resuscitation were discussed from every angle, and the uninimous conclusion of those in attendance was that every hospital and ambulance should be equipped with the facilities for doing resuscitation, and that the modern method of the intratracheal insufflation of ovegen should be taught to every hospital interne

The addresses given at the conference may be classified in four series —

I Those dealing with the physiology of respiration and the changed conditions in asphysia, with special reference to the role of carbon dioxide as a respiratory stimulant, and to the alkali reserve and so-called acidosis

2 The newer methods of treating asphysia, including the use of oxygen mixed with seven per cent of carbon dioxide. The particular pieces of the apparatus discussed and described

were respirators of the Drinker type, the inhalation mask and the direct vision laryn goseope for intratracheal insufflation

3 The conditions in which the newer methods were of special value, including carbon monoxide poisoning drowning, electric shock and asphysia of the newborn

4 The relation of non medical agencies to the newer methods, including policemen and firemen, ambulance surgeons and all others engaged in first aid work

The principles of asphysia and resuscitation are easily understood, and their practical application is standardized and may be made readily. The newly formed Society for the Prevention of Asphysial Deaths, whose headquarters are in the Building of the New York Academy of Medicine, 2 East 103rd Street, New York City, is preparing to supply lecturers and demonstrators to medical societies and hospital staffs in order to familiarize physicians generally with the newer methods of resuscitation.

DEDICATION OF MERCK RESEARCH LABORATORY

The new Research Laboratory of Merck & Co, Inc., manufacturers of pharmaceuticals, Rahway, N J, was dedicated on the afternoon of Tuesday, April 25th, 1933, in the presence of over three hundred guests composed of distinguished seicntists, laboratory workers, physicians and representatives of other manufacturing companies Mr George W Merck, President of the Company, presided, and explained the object of the new laboratory

The principal speaker was Sir Henry H Dale M D, FRS, whose subject was "The Relation of Research in Universities to Research Supported by Industry" Dr Dale set forth the essential services rendered by manufacturing com-

panies, not only in maintaining high standards in the manufacture of therapeutic products, but also in making discoveries in the field of pure science, comparable in importance with those made in universities. The paper was of such interest to physicians that it is printed on page 723 of this Journal

The list of speakers included—Dr Hugh S Cumning, Surgeon General, United States Public Health Service, Lammot du Pont, President Manufacturing Chemists' Association, and Josiah K Lilly, American Drug Manufacturers' Association

The visitors were entertained in the new building after the exercises

KINGS COUNTY

Diphtheria Immunization The June issue of the Bulletin of the Medical Society of the County of Kings contains the following appeal from Dr Shirley W Wynne, Commissioner of Health of the City of New York

"It was decided to make another concerted effort to arouse parents in Brooklyn to the necessity for diphtheria immunization because Brooklyn mothers have lagged so far behind that only about fifty per cent of the children under the age of ten years are now immunized

Brooklyn still leads every other Borough in diphtheria cases and diphtheria deaths. Up to May 20 there had been thirty nine deaths from diphtheria in the entire city for 1933, and twenty-one of these deaths were in Brooklyn

"Diphtheria immunization in Brooklyn in 1932 totalled 61,805, of which 10,931 were given by private physicians. So far this year the same ratio seems to exist, but we believe that our new attack will lead to more immunizations by the private practitioner.

"It is intended to make every boy and girl in Brooklyn a public health officer during the life of the campaign, and if possible beyond that period. Coupons are being published in the various daily and weekly papers published in Brooklyn and these coupons are presented by the juvenile health officers to mothers or fathers of children from the age of nine months to six years. The parents are asked to agree to have their children immunized by the family doctor, or any private practitioner in the neighborhood, and the name and address of the physician so selected is written on the coupon. If the parents are unable to pay the fee of the private doctor, they agree to take the children to the Department of Health Baby Health Station nearest their home.

"These coupons are sent directly to the Bureau of Health Education of the Department of Health, and the boy and girl sending in the greatest number of coupons will receive suitable prizes, as will some ninety-eight other youngsters, graded according to the total of coupons returned. Clerks in the Bureau of Health Education will sort out these coupons and mail then, to the physicians whose names have been written in at the request of the parents.

"After the close of the contest each doctor to whom coupons have been sent will be requested to notify the Bureau of Health Education as to the number of parents who have lived up to their promise and have had their children immunized, as well as those who have failed to do so. Immediately upon receipt of this information Department of Health nurses will begin checking up and will make every effort to have the children of these parents taken to the offices of the respective doctors.

"We believe that the campaign, as above outlined, while not the first house to house canvass we have made in Brooklyn, will have the dual effect of a house to house canvass and bring to the fore the importance of diphtheria immunization. Added to this will be the spirit of competition among the young solicitors who, because of family ties, friendship or ability to convince, will be able to get many signatures to coupons which otherwise would be impossible.

"The campaign will reach its peak when in Prospect Park on Saturday, June 24, at 2:30 p.m., the Brooklyn Child Health Festival will take place. It will be distinctly a Brooklyn event with Borough President Henry Hesterberg as chairman."

NASSAU COUNTY

The regular monthly meeting of the Nassau County Medical Society was held June first in the Bar Association Building in Mineola. The meeting was entirely on the subject of Medical

Economics in Nassau County.

The Committee on Economics of the Nassau County Society has been studying the report of the National Committee on the Costs of Medical Care, and gave an extensive survey of Nassau County's problem in the light of that report. Exceptional credit is due Dr. Everett Jessup for his devotion to this work.

The first part of the report of the local committee was a comparison of the factual data in Nassau County, read by Dr. P. A. Williams. He presented the figures for the rate of growth of population, and the ratio of doctors, specialists, nurses and hospital beds per capita; and outlined the present clinic system, concluding that free clinics were not needed.

Dr. David Gurin read a careful criticism of

the report of the National Committee.

Dr. E. R. Nodine presented the final conclusions of the Nassau County committee, which included the following recommendations:—

1. A Medical Examiner's office to replace the coroner's.

2. The creation of a public health plan similar to that of Detroit.

3. The continuance of state aid to unemployed through private physicians.

4. The formulation of a hospital insurance

4. ine formuli lan.

5. The election of physicians to the directing boards of the hospitals and lay organizations.

6. The adoption of a special decreased price for x-ray examination of chests where tuberculosis is suspected.

7. The establishment of more semi-private

beds in the hospitals of the county.

The guest speaker, Dr. F. E. Elliott of Brooklyn, Chairman of the Committee on Economics of the Medical Society of the State of New York, commended the Nassau County Medical Society for its complete analysis of the local situation.

Dr. Charles Goodrich of Brooklyn and Dr. William H. Ross, of Suffolk County, added their commendations to that of Dr. Elliott, and talked briefly on the present economic problems of the practicing physicians of the County of Nassau.



THE DAILY PRESS



MEDICAL PATENTS

The address of Dr. Henry II. Dale at the dedication of the Research Laboratory of Merck. & Co., Inc., which is printed on page 723 of this Journal, elicited editorial comments of some of the Metropolitan dailies on the subject of medical patents. It is not surprising that editorial writers should not understand that the object of securing patents on drings and biologicals used in medicine is not merely money profit, but that a still more powerful incentive is that of controlling the methods of manufacture so that the product shall be of imiform quality and potency. Some views of laymen regarding medical patents are disclosed in the following editorials.—

The Brooklyn Lagle of April 27, says -

Profit and regulation do not absolutely exclude each other, but they make bid companions at times Sir Henry said enough to disturb lay understanding of the purpose and handling of in

stitutionalized pitents in medicine

"Profit making from a patent on a product that may save life is not in itself any more reprehensible in medicine than it is in the devising of better fire escapes or better functing devices for ships boats. But the medical profession has long followed certain generous ideas on the subject, and as for learned medical institutions, they generally and fairly claim the honor of being run for the public benefit. Those to which the remarks of Sir Henry may apply might do well to explain fully the finances of any patents that they hold."

The New York Times of May 1, says — 'There certainly has been no worshipping of false gods in the laboratories of the great German and American industrial organizations. Such Nobel Prize winners as Lingmuir, Bosch and

Bergius won their laurels as the employes of wealthy corporations Indeed, certain kinds of research can apparently be conducted most effectricly only with the financial aid and equipment of an industrial laboratory. If we want to learn anything about low-pressure chemistry, we must go to the General Electric Company, the best information on speech and hearing is likely to be obtained from the Bell Telephone Laboratories, the Eastman Kodak Laboratories are the recognized authorities on photochemistry The larger and more liberal corporations have learned to leave their research staffs alone Even pure science cannot help making discoveries that yield a profit when exploited with the aid of patents

'Yet physicians as a class will endorse Sir Henry's warning Deep down in all of us there is a repiignance to making money out of human suffering Even the men in university laboratories who patent their medical discoveries share They apply at least part of their royalties to conducting fresh research But it is a question whether royalties do not quench the disinterestedness that is the very essence of pure research A patented drug becomes the object of jealous Is it likely that the merits of a competitive product will be objectively appraised and conceded? Questions such as these were probably uppermost in Sir Henry's mind No doubt the men who have given us patented insulin, patented liver extract and patented ergosterol can be trusted to observe the medical tradition there is a clear need for some method which will enable a researcher to obtain the money that he needs and yet pursue his studies with a serenity that knows nothing of profits'

MILK REGULATIONS

The Department of Health of the City of New York has consistently promoted the highest practical standards in the production and sale of milk For years it has advocated the abolition of the sale of loose milk, and at last the availability and low price of pure milk in saintary containers his enabled it to forbid the sale of any other form of milk Commenting on the new regulation the New York Times of June 2 says editorially—

"Social historians will note that the legal suppression of the sale of loose milk in New York City came at a time of widespread intemployment and result int hardship and want. In other words at a time when the word "starvation" is not infrequently met when the community seemingly ought to be glad to have milk of any grade for the workless and the poor we actually go in for raising food standards

"The reason is, of course, that the word "starvation" does not justly apply to our present distresses. If there are people among us who go hungry, it is due to mischance and not to the lack of means for relief or the will to help. We are not in such dire straits that we must call a halt in the steady upward murch toward better food, better housing and a better life for our people."

NOTICE OF LIABILITY INSURANCE

It is sometimes difficult to interpret the provisions of an insurance policy in Workmen's compensation. The New York Sun of May 10 has the following editorial on a case which will be of

interest to physicians:—

"Having a staff of five domestic servants in his Saratoga residence, Mr. Wait voluntarily took out a policy of workmen's compensation insurance to protect himself and his employees. He was not required by law to do this. One of the servants was a nurse 59 years old who took care of a small girl. She received \$42 a week wages, board and lodging and transportation to and from her own home in another part of the city. When Mrs. Walt was driving the nurse to her home the car struck a rut in the street and the nurse received an injury to her spine, disabling her.

"The nurse brought an action for negligence against Mrs. Wait and the jury gave her a verdict of \$47,362. On appeal Mrs. Wait contended that she and her husband were coemployers of the nurse and that the case came under the work-men's compensation law. The Waits testified that in compliance with the law they had posted notices of compensation insurance in their home. The nurse said she had never seen the notices. The Court of Appeals has confirmed the verdict of the jury on the ground that even assuming the existence of an insurance policy covering the case, a question of fact was involved as to whether the notices were properly posted. It is common practice to take a receipt from each employee to the effect that he has seen the notice posted according to law and is aware of its contents."

ASPHYXIAL DEATHS

The meeting of the Society for the Prevention of Asphyxial Death, Inc., in the New York Academy of Medicine on May 24, reported on page 771 of this Journal, received the following editorial comment in the New York Times of May 26:—

"Only at first sight is there an odd touch about a Society for the Prevention of Asphyxial Death. Where is the enemy to be attacked, like the dread bacillus of tuberculosis or the unidentified agent that lurks behind cancer? Yet a moment's reflection will show that it is the magnitude of the problem which constitutes the challenge. What

difference does it make whether the toll of human life is paid to a micro-organism or to human carelessness and indifference?

"Asphyxia takes 50,000 lives annually in this country. This is more than half the number slain by tuberculosis and more than one-third the number of cancer victims. Carbon monoxide, as the run of the daily news has made plain, is one of the chief causes. The ancient evil of overlaying kills many infants in New York City. First on the society's program is the effort to educate the community, and in particular its health agencies, in the technique of resuscitation."

DEAF INDIANS

Dr. A. Hrdlicka, Curator of the Division of Physical Anthropology of the United States National Museum, Washington, D. C., is the author of an article entitled "Seven Prehistoric Américan Skulls with Complete Absence of External Auditory Meatus," which has just been published in the American Journal of Physical Anthropology, Volume 17, Number 3. Commenting editorially on these defects of hearing among the American Indians, the New York Sun of May 25, says:—

"That is strange, heretical doctrine that Dr. Hrdlicka propounds to the effect that approximately 30 per cent of all Indians in North America before the white man came were hard of hearing. If the doctor should wander out of the anthropological wilderness where in he habitually makes his camp and into the hands of a group of school boys he is likely to be scalped forthwithif school boys of today are as well up on their Indian lore, real and imagined, as were their

fathers and grandfathers. To assert that any Indian cannot see further or hear better than any Pale Face is to strike at a central article of faith, and to say that thirty out of every hundred were defective of hearing is to court trouble in such

dogmatic company.

"Yet Dr. Hrdlicka does so say. Examination of skulls taken from graves from Peru to Alaska has disclosed innumerable internal growths which, he asserts, must inevitably have interfered with normal hearing. These were never found in children's skulls, so the inference is that they developed in late youth and middle age. In some districts as many as 32 per cent of adult skulls showed this evidence of auditory defect."

A note from Dr. Hrdlicka to this Journal says: "An exhaustive treatise on the subject 'Ear Exostoses' is being printed in book form by Charles C. Thomas, 220 East Monroe Street, Springfield, Illinois, and is to appear in the latter part of this year."

BOOKS RECEIVED



- Acknowledgment of all hooks received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits or in the interests of our readers.
- DISEASES OF TRADESMEN BY BERNARDING RAMAZZINI 1633-1714 Compiled by Herman Goodman, M.D., bound with "Silk Hundlers' Disease of the Skin," by Herman Goodman M.D. 12010 of 95 pages, illustrated New York, Medical Lay Press, [c. 1933] Cloth, \$150
- Dietetics for the Clinician By Milton A Bridges MD Octavo of 666 pages Philadelphin, Lea & Febiger, 1933 Cloth \$6.50
- ROENTGENOGRAPHIC STUDIES OF THE URINAM SYSTEM BY WILLIAM E LOWER, M.D., and BERNARD H. MICHORA, M.D. OCLAYO OF 812 pages, illustrated St. Louis, C. V. Mosby Company, 1933 Cloth, \$1600
- THE VITAMINS IN HEALTH AND DISEASE. By BARNETT SURE, Ph D. Octavo of 206 pages. Baltimore, Williams & Wilkins Company, 1933. Cloth, \$2.00
- Surgical Pathology By William Boyd, M.D. Third Edition Octavo of 866 pages, illustrated Philadelphia, W. B. Saunders Company, 1933 Cloth, \$10.00
- Obstetrics and Gynecology Edited by Arthur H
 Curtis, M D Volume 1 Octavo of 1165 pages, illus
 trated Philadelphia W B Saunders & Company,
 1933 (To be published in three volumes and a separate desk index) Cloth, \$35.00 for the set
- HISTORY OF UROLOGY Edited by Edgar G Ballenger William A Trontz, Honer G Hamer and Bransford Lewis Volumes 1 and 2 Octavo of 746 pages, illustrated Baltimore, Williams & Wilkins Company, 1933 Cloth \$800
- THE ELEVIENTS OF MEDICAL TREATMENT By ROBERT HUTCHISON, M D Second Edition 12mo of 188 pages Baltimore, William Wood & Company, 1933 Cloth, \$200
- THE COMMON CAUSES OF CHRONIC INDIGESTION DIfferential Diagnosis and Treatment By Thomas C Hunt, M D 12mo of 341 pages, illustrated Baltimore, William Wood & Company 1933 Cloth \$4.25
- DISEASES OF OLD AGE B3 F MARTIN LIPSCOME, M D 12mo of 472 pages Baltimore, William Wood & Company, 1933 Cloth, \$4 50
- ACIPOSIS AND ALKALOSIS BY STANLEY GRAHAM M D & NOAH MORRIS, M D 12mo of 203 pages Balti more, William Wood & Company, 1933 Cloth, \$275
- THE BIOCHEMISTRY OF MEDICINE. By A T CAMERON, M A & C R. GILMOUR, M D. Octavo of 506 pages Baltimore, William Wood & Company, 1933 Cloth, \$\frac{5}{25}\$
- THE PRINCIPLES AND PRACTICE OF OTOLOGY BY F W WATEN. THOMAS M D & A LOWNOES YATES M D Octavo of 555 pages, illustrated Baltimore, William Wood & Company, 1913 Cloth, \$8.25

- SUBGICAL OPERATIONS A Textbook for Students and Nurses By E W Hey Groves M D Third Edition Octavo of 263 pages illustrated New York, Oxford University Press, [1933] Cloth, \$4 50 (Oxford Medical Publications)
- American and Canadian Hospitals Edited by James Clark Fiffeld with the cooperation of the American Hospital Association Quarto of 1560 pages Munne apolis, Minn, Midwest Publishers Company, [c 1933] Cloth, \$10.00
- Egg Wheat or Mill-Free Diets With Recipes and Food Lists B, Ray M Balyeat, MD, Elmer M Busten, MD and Ralph Bowen, MD Octavo of 149 pages, illustrated Philadelphia, J B Lippincott Co., [c. 1933] Cloth, \$250
- SURGICAL CLINICS OF NORTH AMERICA Vol 13, No 2, April, 1933 (New York Number) Published every other month by the W B Stunders Company, Philadelphia and London Per Chine Year (6 issues) Cloth, \$1600, Paper, \$1200
- An Elementary Handbook on Radium and Its Clinical Use. By D. F. Clephan and H. M. Hill. 12mo of 164 piges illustrated New York Oxford University Press 1933 Cloth, \$2.00 (Oxford Medical Publications)
- NEUROLOGICAL EFFECTS OF SYPHILIS Diagnosis and Treatment By Bryan B Sharp, M D Octavo of 92 pages, illustrated New York, Oxford University Press, 1933 Cloth \$200 (Oxford Medical Publications)
- THE INTERNATIONAL MEDICAL ANNUAL A Year Book of Treatment and Practitioner's Index Edited by Carry F Coomes, M D, and A Rendle Short, M D Fifty-first Year, 1933 Octivo of 572 pages, illustrated Baltimore, William Wood & Compuny, 1933 Cloth, \$600
- Orthopaedic Surgery By Walter Mercer, M.D. Octavo of 695 pages illustrated Baltimore, William Wood & Company, 1933 Cloth, \$10.50
- How to Budget Health B; Evans Clark Octavo of 328 pages, illustrated New York, Harper & Brothers 1933 Cloth, \$400 (Published for the Twentieth Century Fund)
- BROADCASTING HEALTH By J MACE ANDRESS, Ph D, and I H GOLDOERGER, M D 12mo of 401 pages, illus trated Boston, Ginn & Company, [c. 1933] Cloth 80c
- UROLOGY IN WOMEN A Handbook of Urinary Diseases in the Female Sex By E CATHERIAR LEWIS M S Octavo of 76 pages illustrated. Baltimore, William Wood & Company, 1933 Cloth, \$2.25
- International Clinics A Quarterly of Hustrated Chinical Lectures and Especially Prepared Original Articles on Treatment Medicine, Surgery, etc. Vol. 2 43rd Series 1933 Edited by Louis Hamman, M.D. Octavo of 314 pages illustrated Philadelphia, J. B. Lippinkott Company [c 1933] Cloth, \$30



BOOK REVIEWS



HANDBUCH DER ALLGEMEINEN HÄMATOLOGIE. Band I, Hälfte I and II. HERAUSGEGEBEN VON PROF. DR. HANS HIRSCHFELD, and PRIMARIUS DR. ANTON HITTMAIR. Large Octavo of 1523 pages, illustrated. Berlin, Urban & Schwarzenberg, 1932. Paper, RM 139.

This work is to be published in two volumes, and is a compilation of various fundamental haematologic subjects by acknowledged masters in the field.

The first part of volume one includes a consideration of the normal and pathological morphology of the erythrocyte; the chemistry of the erythrocytes and Haemoglobin; the normal and pathological morphology of the leucocytes of the circulating blood; the chemistry of the leucocytes; the normal and pathological physiology of the leucocytes, the blood and vegetative nervous system, the blood platelets and hemokonia; blood formation in the embryo; the metabolism of the blood and blood volume.

The second part of volume one concerns itself with leucocytosis and leucopenia; the lymphatic apparatus and its relation to blood cell formation in the light of physiologic and pathologic research; the lymph, normal and pathological physiology of the spleen; the bone marrow and reticulo-endothelial system; comparative morphology of blood; the blood and the cells of inflammation; the cytology of exudates and transudates.

This work, which will probably remain the masterpicce in its field for a long time reflects the minds and herculean labors of its contributors.

MAURICE MORRISON.

Organized Medical Service at Fort Benning, Georgia. By I. S. Falk, Ph.D. Octavo of 119 pages. Chicago, The University of Chicago Press, [c. 1932]. Paper, 90c. (Publications of the Committee on the Costs of Medical Care: No. 21.)

THE FUNDAMENTALS OF GOOD MEDICAL CARE. By ROGER I. LEE, M.D. and LEWIS W. JONES, Ph.D. Octavo of 302 pages. Chicago, The University of Chicago Press, [c. 1933]. Cloth, \$2.50. (Publications of the Committee on the Costs of Medical Care: No. 22.)

SURVEYS OF THE MEDICAL FACILITIES IN THREE REPRESENTATIVE SOUTHERN COUNTIES. By C. St. C. GUILD, M.D. Octavo of 173 pages. Chicago, The University of Chicago Press, [c. 1932]. Paper, \$1.00. (Publications of the Committee on the Costs of Medical Care: No. 23.)

THE INCOMES OF PHYSICIANS. By MAURICE LEVEN, Ph.D. Octavo of 135 pages. Chicago, The University of Chicago Press, [c. 1932]. Cloth, \$2.00. (Publications of the Committee on the Costs of Medical Care: No. 24.)

THE ABILITY TO PAY FOR MEDICAL CARE. By LOUIS S. REED, Ph.D. Octavo of 107 pages. Chicago, The University of Chicago Press [c. 1933]. Cloth, \$2.00. (Publications of the Committee on the Costs of Medical Care: No. 25.)

THE INCIDENCE OF ILLNESS AND THE RECEIPT AND COSTS OF MEDICAL CARE AMONG REPRESENTATIVE FAMILIES. Ry I. S. FALK, Ph.D., MARGARET C. KLEN and NATHAN SINAI, D.P.H. Octavo of 327 pages. Chicago, The University of Chicago Press [c. 1933]. Cloth, \$3.00. (Publications of the Committee on the Costs of Medical Care: No. 26.)

THE COSTS OF MEDICAL CARE. A Summary of Investigations on the Economic Aspects of the Prevention and Care of Illness. By I. S. Falk, Ph.D., C. Rufus Rorem, Ph.D., and Martha D. Ring. Octavo of 623 pages. Chicago, The University of Chicago Press, [c. 1933]. Cloth, \$4.00. (Publications of the Committee on the Costs of Medical Care: No. 27.)

Publications 21 to 26 inclusive like the twenty which have preceded them, describe in detail particular studies made by the research workers and investigators of the Committee. Space does not permit a review of each of these volumes, but their titles indicate the subject matter under consideration.

Publication 27, a book of over 600 pages summarizes the economic aspects of the prevention and care of illness. The material is compiled from data appearing in the preceding publications, plus information derived from inquiries pursued by other agencies. The topics are grouped to conform with the final recommendations of the Committee. Special consideration is given to the subjects of Group Service and Group Payments.

The amount of material in these 27 volumes is enor-

The amount of material in these 27 volumes is enormous. The questions and problems arising therefrom are varied and complex. The solution of these problems is by no means as simple as the final recommendations of the Committee in volume 28 would have us believe.

It seems a pity that the Committee did not conclude its researches and investigations with a series of questions raised and suggestions made, rather than with specific conclusions reached. By so doing, there would have been a rational basis for discussion of the many problems.

A. E. Shipley

Endocrine Medicine. By William Engelbach, M.D. Volumes 1, 2, 3 and an Index Volume. Octavo of 1795 pages, and 933 illustrations. Springfield, Illinois, Charles C. Thomas, 1932. Cloth, \$35.00.

It is given but to few people to see their own memorial erected within their lifetime. The late Dr. Engelbach has lived to see the publication of his monumental monograph on Endocrine Medicine, which was greeted by the medical profession with the approval due to such a remarkable accomplishment. The wealth of material accumulated in the course of years and the tremendous amount of labor required for the minute study of the cases described is truly impressive. Previous contributions to endocrinology by other authors were either restricted to the study of one particular gland or to even minor details while a few more comprehensive publications of the past labored under the lack of scientific exactitude. Dr. Engelbach's work is the first comprehensive survey of clinical endocrinology, based on both competent clinical studies and exact laboratory procedures. The tremendous strides recently made in the study of endocrine physiology were fortunately utilized in Dr. Engelbach's investigations. Thus the result is truly representative of the present status of our knowledge concerning function and pathology of the endocrine glands and their clinical manifestations.

Dr. Engelbach's greatest single contribution is the systematic classification of endocrinopathies according to the age period of their onset. Deficiencies or hyperfunctions of endocrine glands yield different results if they develop in early childhood, adolescence or adult life. Accordingly the clinical picture is altogether different and can not be properly understood unless the cardinal influence of the age factor is taken into consideration. Most impressive also are Dr. Engelbach's x-ray studies concerning the skeletal development. Influence of endo-

777

crine glands upon development and growth of the bones was known for some time, but the painstaking studies of Dr. Engelbach were needed to systematize our knowledge in this field. The charts which so profusely illuminate all three volumes make it possible now even for the average practitioner to recognize the different skeletal changes, in their relationship to the various endocrine disorders and enable him to draw the proper diagnostic conclusions. A fourth volume containing an extensive bibliography and general index greatly enhances the uscfulness of this work.

One may disagree with the author's views in some of the minor details. It is equally sure that our attitude concerning some other points will change with the rapid development of endocrinology, but this does not diminish in any way the great value of Dr. Engelbach's work which will remain the standard book for many years M. A. GOLIZIEHER. to come.

SURGICAL CLINICS OF NORTH AMERICA. Published every other month by the W. B. Saunders Company, Philadelphia and London. Per Clinic Year (6 issues): Cloth, \$16.00 net; paper, \$12.00 net.

Vol. 12, No. 1. February, 1932. (Chicago Number.)

This issue contains thirty-three articles covering general surgery and many of its special fields such as oral and nose and throat surgery, G-U. and neuro-surgery. The selections have been made with good judgment and their presentation is excellent. The illustrations are as usual more than adequate.

Vol. 12, No. 2. April, 1932. (New York Number.)

This issue emanates from the prominent clinics of Manhattan. Material is always plentiful in these clinics and it has been used successfully to make this number sting one. Particularly valu-ns from the clinic of C. G.

of the liver and gall-bladder, the thyroid.

Vol. 12, No. 3. June, 1932. (Lahey Clinic Number.)

The papers from this famous clinic are ever a source of inspiration to the surgeon. Clarity, terseness and practical importance characterize each one of the thirtyfive articles. The illustrations are not very numerous but all of them are adequate and well executed. The articles on Gall-bladder surgery are timely and reflect the mature judgment of the authors

Vol. 12, No. 4. August, 1932. (Mayo Clinic Number.)

This issue contains a wealth of clinical material gathered from the various surgical specialties of the Mayo Clinie. The articles are, as usual, terse, yet complete in every important detail. The illustrations are numerous and exceptionally good.

Vol. 12, No. 5. October, 1932. (Chicago Number.)

The first forty pages of this volume are devoted to a discussion of gallstone disease from the clinic of Doctor Bevan. It is complete and includes the interpretation of cholecystographic examinations. Other articles of note in this issue are the ones on bone tumors by Ryerson, on electro coagulation in oto-laryngology, on cancer of the recto-sigmoid, on chordotomy in intractable pain and numerous case-reports with comment and discussion.

Vol. 12, No. 6. December, 1932. (Philadelphia Number.)

This issue bristles with timely and practical articles. Babcock describes, in a distressingly short article, his one-stage operation for cancer of the rectum. Gastrointestinal hemorrhage is very completely discussed by

Eliason. Every surgical specialty is given space and just attention. The volume is closed by a very instructive discussion on surgical drainage by Crossan,

GEORGE WEBB.

THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Series 1932. General Medicine. Edited by George H. Weaver, M.D., and others. 12mo of 837 pages, illustrated. Chicago, The Year Book Publish-ers, [e. 1932]. Cloth, \$5.00.

As usual, this book furnishes a very useful review of the year's work in the field of General Medicine, abstracts from the leading journals are not too brief and are taken from 107 publications in different countries. The sequence as formerly used is followed. In the group of infectious diseases, stramonium finds increased use in Encephalitis, a specific antiscrum is reported for use in Tularemia and Undulant Fever is stated to have shown remarkable improvement from whole blood transfusions.

In the section on chest diseases the article of C. A. Hedblom after twelve years of study of Empyema is notable, also a summary of Pneumonia. The section on Diseases of the Blood, in addition to recent articles on Pernicious Anemia has several on the hypochromic or microcytic anemias. Disease of the Heart and Blood Vessels. Gastro-intestinal Tract, of the Kidneys and of Metabolism also receive adequate attention.

W. E. McCollom.

THE PRACTICAL MEDICINE SFRIES Comprising Eight Volumes on the Year's Progress in Medicine and Survolumes on the rear's Progress in Medicine and Surgery. Scries 1932. Chicago, The Year Book Publishers, [c. 1933]. General Surgery. Edited by Evarts A. Graham, M.D. 12mo of 816 pages, illustrated. Cloth, \$3.00

This is a volume from a scries which is welcomed each year by workers in various fields. The 1932 volume on Surgery is essentially the same in its make-up as previous volumes, containing more than 740 pages of abstracts on practically all of the surgical topics. There is an interesting group of abstracts on anesthesia. Several new operative procedures and improvements in technique have been described. Most notable of these is a scaleniothey for immobilization of the apex of the lung in tuberculosis. There are some very good abstracts of articles relating to gastrectomy and its benefits and effects upon the production of anemia and digestive disturbances. As always, this volume is a valuable asset to the practitioner of surgery for reference to the magazine literature appearing since previous volumes.

HERBERT T. WIKLE

A GUIDE TO HUMAN PARASITOLOGY FOR MEDICAL PRAC-TITIONERS. By D. B. BLACKLOCK, M.D., and T. Southiwell, D.Sc., Ph.D. Octavo of 271 pages, illustrated. Baltimore, Williams & Wilkins Company, 1932. Cloth, \$4.00.

The various phases of parasitology are only briefly discussed, although in a rather concise and impressive manner. The simplicity with which the discussion and classification of the subject is undertaken, renders the book a very valuable text to the technician, student and graduate. Certain phases of the subject lack, however, complete detailed description to render the book of particular value to the post-graduate worker in parasitology, who is seeking instructions for Diplomas of Tropical Medicine, Tropical Hygiene and Public Health. The diagrammatic presentation of the life history of the more eommon parasites, affixed to the end of the book, is a very ingenious way of impressing the more important facts on the mind of the reader. J. RABINOVITCH.



OUR NEIGHBORS



CONTRACT PRACTICE IN WASHINGTON

The April issue of *Northwest Medicine* has the following newsy editorial on contract practice in the State of Washington:

"The chaotic state of medical practice at the present time is a disturbing reality to the whole medical profession. During recent years groups of physicians and individual practitioners have rivaled each other in developing mass practice in order to attach to themselves as large a number of people as possible, ignoring the equal privilege for practice of the individual physician: form of practice has extended to such an extent that the existence of the old time general practitioner seems to be in danger of annihilation. To make the matter worse, comes the report of the Committee on the Costs of Medical Care which substantially endorses this threatening form of practice, advising the employment of the same principles in grouping patients in clinics connected with medical schools and hospitals. Naturally the many medical practitioners not included in these favored groups have become greatly disturbed as to their own future existence and have felt the necessity of considering methods by which they may compete with this apparently overwhelming trend toward concentration of practice in the hands of a few.

"The conditions of medical practice as they exist today may be illustrated by the situation in Seattle, Washington, which can be duplicated in other large cities. Data pertaining to contracts under the State Department of Labor and Industries are most available and illustrate the greedy spirit by which certain individuals have attempted to corral the practice of the state. The most hoggish example of this selfish practice is presented by Bridge of Tacoma, whose clinic has been industriously worked in Seattle so that out of one hundred and thirteen of the contracts this clinic controls fifty-five. A rival Tacoma group, the State Clinic, has annexed twenty-two contracts, while twenty other physicians or groups of the city have thirty-seven, twelve of these being possessed by one man. This demonstrates how the work under the state supervision is concentrated in the hands of a few practitioners. This, however, is not the cream of contract practice in Seattle. Including those mentioned in the above citation certain groups and individuals have systematically solicited the nonhazardous industries which are not under state control, such as department stores, hotels, restaurants, police, fire department, in short, any concern which employs a The profit herein lies not

so much in treating these individuals under contract, as the invitation at cut rates also to care for the members of their families and their friends. Naturally, likewise, they expect to treat at more favorable rates conditions not included in the contract, such as obstetrics, venereal, alcoholic and tuberculous diseases. This enumeration certainly presents a formidable concentration of medical practice, from which the bulk of practitioners are excluded.

"How to meet this situation has been the subject of much discussion. Expulsion from the medical society was the remedy in the early days, when contract practice was represented by the lodge doctor. Commonly he retained his practice while retiring from the society, later to be welcomed into the fold when his objectionable form of practice was terminated. This form of discipline today would wreck the medical society; since so many are engaged in it. The conclusion appears to be accepted that the only successful procedure will be to fight the devil with his own In other words, the county medical weapons. society in some form will supervise contract practice on the part of all members who wish to participate in it, adopting some methods hitherto condemned as unethical, but which seem necessary for successful competition with the other contractors.

"In Washington, under the designation of County Society Bureau, Yakima County Society has satisfactorily conducted such form of contract practice during the past year, including its entire membership. Pierce County Society launched such an enterprise during the past year, supported by some eighty per cent of its membership. In Oregon this form of practice has been carried on for the past two years by Marion County Medical Society and Salem physicians report it a success. In Multnomah County there has been a similar enterprise functioning during the past year, including a large proportion of the society membership. In California at least two county societies have conducted contract practice for some time and report satisfactory progress.

"In Seattle, King County society has appointed committees which have devoted much time to the study of contract practice by its members, and last month at one of the largest meetings in the history of the organization, it adopted without expressed opposition the launching of this form of practice. They have endeavored to profit by the experiences of other societies, hoping to over-

(Continued on page 780—adv, x)

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(Continued from page 778)

come some of the pitfalls which have been en countered, and to adopt the most satisfactor method of procedure that can be determined. An member of the county society may become member of the contract organization which wil be incorporated independently of the county so ciety but supervised by it. There will be a limita tion to the amount of practice that any member can attain during a single month, in order to pre vent a limited number accumulating the bulk of the work. An executive committee will have ab solute authority in the management of the enterprise. Since patients will have the choice from a large number of physicians, it is hoped that the personal contact between physician and the patient may be preserved in a manner not possible with the restrictions of a small group. If this form of practice develops to the satisfaction of all con cerned, it is expected it may counteract the objections of certain forms of contract practice which seem so destrutive in their nature.'

LEGISLATION IN INDIANA

The April issue of the Journal of the Indiana State Medical Association contains the following report on medical legislation in the State:

'Although a number of side issues and innumerable skirmishes took place, so far as the medical profession was concerned, the session may be divided into three major battles: the first, the cult battle; the second, against those who wanted to tax the physician and limit the fee he should charge for prescribing medicinal whiskey;

and the third, the tax battle.

"Many of the members of the general assembly had gained the conception that the medical profession was a closed corporation and a 'trust' which was keeping competing practitioners from other schools of healing out of Indiana merely for selfish reasons. Several of the members of the public health committee in the House were convinced this was a fact until the entire truth of the situation was explained to them, most effectively in the majority of cases by their own family physician. Nevertheless when the public hearing was called, things looked a bit uncertain. But if things looked uncertain before the hearing, when the spokesman for the chiropractors had completed a most impressive presentation of his side of the case, it was doubly uncertain as to how a group of laymen, such as largely made up the public health committee in the Whatever their senti-House, would react. ments and predilections may have been when they came to Indianapolis, and no matter how good a speaker the chiropractors had to advocate their cause, the committee reported the bill out with a unanimous recommendation for

(Continued on page 782-adv. Aii)

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(Continued from page 780—adv. x) indefinite postponement because of the following reasons:

- (1) The committee did not desire to create another state board.
- (2) The committee did not feel that a chiropractor should be empowered by law to do more than manipulate the spine.
- (3) The committee did not feel that the chiropractors should be allowed to do minor surgery (as they would have been allowed under the bill).
- (4) The committee did not want to give the chiropractors preferential rights over a regularly licensed physician before the compensation board.
- (5) The committee was not at all certain that chiropractors should be allowed to enter hospitals and state institutions on the same basis as a physician.

"The committee report was adopted by a voice vote in the House. But the trouble was far from over. Scarcely had the original chiropractic bill been killed than a bill that would strike out the injunction clause in the medical practice act and would leave the act without teeth was introduced. This was reported out of committee for indefinite postponement and was killed by a voice vote on the floor of the House."

The Senate also killed a Chiropractic bill which had been introduced during the last week of the legislative session.

A bill to tax physicians one dollar for each prescription for alcoholic liquor was proposed. The Journal says:

"It wasn't the fact that they were limited to a \$1.00 prescription fee that particularly concerned the committee, as much as the fact that the General Assembly of Indiana should place any limit on any fee that a physician might'charge for any prescription. That would be the entering wedge of state regulation of fees—a start in state medicine! So after various conferences with the authors of the bill and those in high places, your committee finally gained their consent to take off the prescription limitation fee.

"As the bill passed the House and went over to the Senate, it seemed harmless enough as far as the medical profession was concerned, but somehow, someway, when the bill passed the Senate a fifty-cent tax per pint was attached to be paid by the physician! This came about as the distillers, wholesalers and retailers were all battling as to who should pay the state tax and they finally decided on a compromise suitable to all of them—the tax should be paid by the doctor who wrote the prescription. This

(Continued on page 783-adv. xiii)

(Continued from page 782-adv. An)

sent your committee scurrying about once again, when this disturbing fact was discovered, for there remained only one chance to straighten this out—that was in the conference committee, if the House could be induced not to concur in the Senate amendments and a conference committee could be appointed which would agree to the change. This was quite some job but it was done and the tax was taken off the doctor."

The Legislature passed a law imposing a tax of one per cent on all gross incomes, including those of physicians. Commenting on this tax, Mr. Albert Stump, Attorney of the State Association says.

"The physician and surgeon would be required to pay a gross income tax of one per cent on all fees charged, including the funds collected by him for the cost of medicines used if he dispenses the incdicine himself. expression above quoted, 'without any deductions on account of losses,' in my opinion refers to losses that might be sustained through any causes whatever connected with this profession or business. But it does not mean losses of potential income through the failure to collect accounts The income is to be levied upon the actual receipts total amount of the actual receipts, and not the total amount of what may be on the books, is the basis of the computation of the gross income tax One might sustain losses on account of the deterioration of supplies and equipment, or through automobile accidents, or fire, or other such incidents, and that class of losses could not be deducted. The failure to collect an account, however, is not strictly a loss as the term is used in this Act, for in that event there never had been a realization of any compensation which could be lost. The account, until it is collected, would stand as a mere possibility of an item of income which would be realized and taxable only as of the time when it was collected."

VITAL STATISTICS IN TEXAS

The May number of the Texas State Journal of Medicine is promoting the efficient registration of births and deaths by printing the following editorial:—

"It will be remembered that a short while ago the Census Bureau made a test of the registration of births and deaths in Texas, in an effort to secure the admission of Texas into the Registration Area As it stands, Texas is, as it was then, the only state in the United States not admitted to this area. The Census

(Continued on page 784 adv xiv)

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(Continued from page 783-adv. xiii)

ureau is embarrassed, and Texas should be shamed. The decision to prosecute a test at his time is but an extension of the favors the ureau of the Census has been extending exas through several years in this connection. Not alone should it be worth our entervor to secure admission to the Registrator of Area as a matter of pride, but as a matter of appreciation also.

"It will be recalled that the requirement is nat 90 per cent of the births and deaths actually occurring in the state be shown to have een officially filed. The Bureau of the Census handling to a definite and very large proportion of our people post-card questionnaires, eaking data as to births and deaths. When the energy destionnaires are returned actual comparison will be made, and thus the percentage of reports of births and deaths will be determined. If 90 per cent of them have been exported, we are in the Registration Area and ill be accorded the distinction of being up-to-ate, at least in the bookkeeping of public ealth, and numerous advantages otherwise,

ome of them worth money.
"How can we as a profession help? By
imply seeing to it that the births occurring

in our individual and collective practices have been promptly registered. Undertakers are presumed to take care of deaths, but occasionally deaths occur outside of the range and knowledge of undertakers, exactly as sometimes births occur outside of the knowledge and range of physicians. We can help under such circumstances as this if we will, perhaps not greatly from an individual standpoint but collectively quite considerably. If the State Health Department can be informed of the circumstances surrounding these border-line birth and death cases, steps may be taken to secure reports from responsible parties, whomsoever they may be.

"We feel that it is hardly necessary to dilate upon the advantages—nay necessity, of proper vital statistics. Health work may not be satisfactorily carried on except in connection with reports of birth, sickness and death. Particularly is the matter of birth reports important to the individual. There are so many opportunities for embarrassment in this connection, and even distress, that we hesitate to undertake to discuss them. Doubtless our readers are advised, and if so our plea for a one hundred per cent registration of births, anyway, will be more effective."

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VENEREAL CLINICS IN MASSACHUSETTS

The New England Journal of Medicine of February 16, discusses venereal clinics in the following editorial:

"It is impossible, at least in the present stage civilization, to quarantine those persons afflicted with syphilis or gonorrhea; the only inportant way in which the State can exercise any control over them is by making certain that throughout the Commonwealth proper facilities

are provided for their treatment.

"The Department of Health is correct in assuming that this matter cannot be left entirely in the hands of the individual practitioner. Many physicians are unwilling to treat patients with syphilis or gonorrhea; a study recently conducted by the Department of Health shows that only 46 per cent of Massachusetts physicians admit that they treat gonnerhea and only 39 per cent admit that they treat syphilis. A proportion of those who do accept these cases are undeniably not qualified to eare for them properly. Aside from these considerations, there are many patients who are unable to pay the cost of adequate treatment by private physicians.

The best way to meet these conditions, the State has wisely decided, is by the establishment of clinics. Clinics can be geographically located to respond to the distribution of patients; in clinics, those physicians in each community who are best trained to care for gonorrhea and syphilis can be further trained and utilized to best advantage; clinics can be assisted financially and educationally in a way that individual physicians cannot be, and can be kept under supervision to make certain that they maintain a minimum

standard of efficiency.

"Twenty-eight public elinics have been so established, but it must be understood that none of these are maintained or operated by the State Department of Health. All but six are located in and maintained as a part of the out-patient departments of general hospitals or general dispensaries. Fourteen of these clinics have received financial aid from the State, the annual subsidy varying from \$500 to \$1,200, and totaling \$12,000. The amount contributed by the State has been but a small proportion of the cost of maintaining these clinics; it has amounted to approximately one dollar per year per registered case, or a little over six cents per visit. In addition to the subsidies, the State distributes free of cost arsenicals for the treatment of syphilis. The drugs so distributed to the clinics cost the State about \$5,000 a year. The fourteen elinies aided by the State admit in the neighborhood of 2,200 new eases of syphilis and 2,700 or 2,800 new eases of gonorrhea each year.

"The State Department of Health has recently prepared a set of Minimum Standards for Clinics

for the Treatment of Gonorrhea and Syphilis. (Continued on page 786-adv. avi)



THE RATIONAL METHOD OF CHANGING THE FLORA

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GEYSER WATER

(Continued from page 785-adv 1v)

These standards prescribe the physical equipment and the personnel of a clinic, formulate general rules pertaining to frequency of visits, and state the requirements which must be met before the patient may be discharged as cured. These 'Minimum Standards' have been submitted for criticism to various venereologists and to the Neisserian Society of Massachusetts and to the New England Dermatological Society, both of which have officially expressed their approval

"It is not at all infrequent to discover that a physician not interested in the management of gonorrhea or syphilis will refer a patient, perfectly able to pay a physician, to the nearest clinic rather than to some physician who does treat these diseases. The Lowell Clinic turns back to some twenty or thirty physicians each year almost as many cases as are referred to the clinic by physicians.

"It is difficult to see how the State Department of Health could better meet the challenge of syphilis and gonorrhea than through the establishment of these clinics. Opportunity for adequate care is provided for the indigent; and for those who can afford to pay, physicians are being trained to help them through their difficult hours. A standard of treatment is set up in every community; if the public will but take advantages of these opportunities, the danger of communicating these diseases to others will be materially reduced."

DOCTORS AND THE HEALTH BOARD OF TENNESSEE

The Journal of the Tennessee State Medical Association of April contains the following editorial description of an attempt to reorganize the Health Department of the State:—

"Members of the Association received copies of the bill to re-organize the health department. You were told that the bill had the approval of all the committees of the State Association that were concerned: the approval of the Governor and the approval of the Commissioner of Health. These statements were facts The bill was introduced, passed first and second reading and came up for hearing before the Committee on Public Health and Sanitation on March 23.

"The profession sought to have placed over the State Department of Health a board of governors, or councilors, whose duty it would be to make sound policies and not to destroy activities as has been alleged so often.

"To the great astonishment of the Legislative Committee a large number of people were brought to the hearing by members of local health units and over the state by members of the State De-

(Continued on page 787-adv. xvii)

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(Continued from page 786-adv. xvi)

partment in opposition to the bill. The Commissioner did not appear to lend his endorsement to it.

"The members of the local health units and the people they brought with them applauded the slurs hurled at the medical profession. The principal slur was that the medical profession was prompted by motives of selfishness in sponsoring this bill.

"It is becoming increasingly obvious that the Public Health organization in Tennessee is better organized for political activities than it is for health protection. To support this statement two facts are cited:—

"First, appropriations for the department were increased enormously in the bicnnium now ending, notwithstanding the fact that our state was in the midst of the worst depression ever known; that our school teachers were not paid; that taxes are delinquent on a high percentage of homes and at a time when almost everybody was agreed that expenditures by the state should be reduced.

"The next fact of importance is that a comparison of the mortality rates from preventable causes in counties with full time health units with the rates in counties without full time health units shows a difference in mortality so slight as to be negligible.

"In fact there are counties in the state without full time health units with a mortality rate more favorable than counties with a full time health unit. Robertson county without a health unit and Montgomery with a health unit are examples.

"It has been intimated time and again that the medical profession was prompted entirely by selfishness, in the face of the fact that the medical profession of Tennessee has taken care of the indigent sick without cost during this entire depression. It has carried the burden uncomplaintingly, but the point is approaching, in fact it has already been suggested that the medical profession will not much longer carry the burden of earing for the indigent sick while various public agencies draw handsome salaries for giving medical care to the well-to-do.

"The question then is not whether the state has local health units or not, it is not whether the State Health Department has larger or smaller sums to spend or whether this or that person is the head of the department. The real question is, 'Shall the state continue on a course which leads to communism and do it in the false name of health?'

"Should that day come, the public will have brought about through false leadership and false philosophy, the most tragic circumstances that can be imagined. It will then be a communistic system of medical practice.

"We do not believe that the people of Tennessee, if informed, would travel a road that leads to such an end."



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MATERNAL MORTALITY IN PHILADELPHIA

The April issue of the *Pennsylvania Medical Journal* discusses maternal mortality in Philadelphia as follows:

"According to the records of the Department of Public Health, Philadelphia, there were reported in 1932, sixty-three cases of puerperal septicemia with sixty-two deaths. Evidently only those patients the physician thought would die, were reported.

"Notwithstanding all that has been said and done regarding the lowering of maternal mortality, very little is being accomplished. The distressing feature is the inability to secure the cooperation of the one who most of all needs proper instruction—the general practitioner.

"The Committee on Maternal Welfare, of the Philadelphia County Medical Society, under the able chairmanship of Dr. Philip F. Williams, has worked most valiantly during the past two years upon the reduction of maternal mortality from

every possible angle.

"As a grand climax the Committee arranged for an identical program to be used in eight different sections of the city at 9.15 p.m. February sixteenth. It was thought that the time arranged would allow the physicians to complete their evening office hours and arrive on time for the meeting that was being held in their respective communities. The outline of the program was arranged by Dr. Barton Cooke Hirst, in order that the subject matter would be uniformly covered in all centers. The program was divided into three papers. The readers of the papers did not live in the center to which they were assigned. The chairman of the meeting, however, was a local physician.

"It is of extreme interest to note that with all the details worked out, the publicity of the meetings given in the county society's publication, and a last minute reminder by a postal card notice to all members of the county society, there was a total attendance of 120 at all the eight meetings. Of this number, eight were the chairmen; twenty-four were the readers of the papers, and the remainder, ninety-three, were the audience (eleven plus at a meeting) and the greater number of these were specially interested in obstetrics.

"The most frequent cause of maternal death is infection and it is the most certainly avoidable. Two-thirds of the maternal deaths in childbirth are due to three causes: Infection, hemorrhage, and toxemia.

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COMMITTEE ON PUBLICATION

MEDICAL POOR RELIEF IN INDIANA

The May number of the Journal of the Indiana State Medical Association describes the plan of medical relief of the poor adopted in Grant County. This is a rural county in the north central part of the State having an area of about 400 square miles, and about 35,000 population. The Journal says:

"With the advent of Reconstruction Finance Corporation funds in the county came also a Governor's Committee on Relief for the entire county. They took the profit out of the furnishing of food, fuel, and clothing to the indigent, and felt that the profit must also come out of the furnishing of medical relief. They asked that the Grant County Medical Society submit a plan to do this, with the understanding that this was an emergency and that the question of funds in the county was critical.

"The essence of the agreement as stated in the first paragraph is good faith. It is based on a desire of the Governor's Committee and the county commissioners to furnish the best medical service possible at the least eost. The members agree to furnish the same type service to the indigent as they do to their private patients, but with the understanding that they shall render the minimum of service in keeping with good medical or surgical judgment; and that the service shall be rendered to only those cases in actual need of the services. Services that may be postponed or withheld without threat to life or important function shall not be rendered under the agreement.

"The county is divided into eight districts, each of which includes a town and the surrounding territory. In the Marion district and in such other districts as may seem necessary there is to be set up a sick call headquarters where all calls for medical aid are to come. These headquarters are to be in charge of investigators who shall investigate the case, call the doctor if necessary, and follow the case through its entirety. Where the applicant for services has no choice of doctor, the doctors are to be called in rotation. There is a special fee scheduled for this agreement which is from 50 to 75 per cent below the minimum of our former schedule. Any disputes are provided for by setting up of an adjudication committee of two doctors and one layman who will review the case, and their decision is final. Bills are checked; and if any question arises about the bill, it is referred to the committee for settlement. Time alone will tell if this method of handling the problem will be satisfactory. Our only hope is that it will keep the practice of medicine in the hands of the physician, where it rightfully belongs."

Two pages of the article set forth the agreements and the fees.



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I picked it up, saw the pictures of all the ducks and read all the printing on the can. When I read—it sheds water like a duck—that caused me to investigate and what do you think I found when I removed the top? A can about half full of powder and the remainder of the can filled with water. I poured the water off and let the powder remain in the can. The powder was just as dry and dusty as any powder could be.

I think your powder is a little better than you advertised it; you said it would shed water like a duck. Well I believe a duck would leak a little if it would stay in water for five years without coming out. I am almost sure the can of powder had been in the well for at least five years, if not longer.—Adv.

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THE FIRST DECADE OF THE SECOND CENTURY OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS

By FRANK D JENNINGS, M.D., BROOKLYN, N. Y.

Read before the Medical Society of the County of Kings March 21 1933

T the end of 1922 certain unsatisfactors situations existed in the Medical Society of the County of Kings There was disaffection in some quarters based on a feeling that the Society had been inactive when adverse legislation threatened Our inaguificent home, in proportion to its potentialities, was used relatively little. Individuals, to be sure, visited the Regular monthly meetings scientific in character, were held Special societies met in the section room The atmosphere generally was that of a closter Membership languished We had gone through tremendously active legislative years contending against measures which we deemed unwise among them compulsory health insurance, health centers, narcotic bills, sundry and varied, workmen's compensation law chiropractic and osteopathic measures, the Sheppard Towner Act, the proposed statute compelling each physician to have a female attendant in his office and annual registration measures, proposed annually from 1919 on We learned that as a potent, medico civic unit we fell somewhat short of the mark, even in the public health field. We had no Bulletin Contacts with legislators were casual The Professional Guild was an alert and efficient agency in those forays on Capitol Hill up which so many of us marched, up and down

That may serve as a reminder of the atmosphere then Have we stood still or have we progressed? To answer these questions has imposed in the writer the pleasant duty of scanning the records of our organization for the decade. To have read them thus collectively, is to have read an opic of progress that is breath taking. To peruse in cold type, from year to vear, the annuls of this Society, recording as they do effort loyalty and devotion without end, is soul satisfying. The pithways of 1923 very definitely pointed to certain needs and duties, viz.

- I Larger membership
- 2 Greater utilization of our property for all purposes, and the creation here, if you like, of a medical center

- 3 A clearly defined need for wider and more purposeful educational opportunities in the graduate field not wholly uset by monthly scientific assemblage.
- 4 Greater coupliasis on our public health activities
- 5 The carrying on of our great library, a public service and duty, on the most liberal basis
- 6 The strengthening of our structure and the broadening of our influence as the representative medical organization of the County of Kings

With that as a basis let us view retrospectively this span of ten years

Membership-The backbone of any organization is its membership. Ten years ago our membership was about 1,250 and at the end of 1932 was approximately 2 100 a gain of 850 members The increase is substantial and has been effected only because of valiant effort on the part of the Membership Committees from year to year Our membership in proportion to the total number of physicians in the county remains about the same, roughly sixty per cent The difficult times of the last four years have operated to keep our membership down and there is every reason to believe that with the return of better times our membership will continue to show an in crease and reach a total that will be ninety per cent, or more of the available physicians in the counts

The Headquarters—The Library Building has come to be a real medical center. The regular meetings of the Society, the Friday afternoon lectures of which 223 have been given, the meetings of the Special and Dental Societies, the steady and increased influx of visitors to our hibrary, the great number of eallers, both Iay and medical the location here of a Health Department station have all combined to make our home an exceptionally busy place. The incoming telephone calls from members and others seeking information of all kinds are amazingly numerous For example, during eleven months of 1929,

when an effort was made by the Society to establish a Bureau of Information and Guidance, the total number of inquiries, both in person and by telephone, were nearly 1,800, of which 573 emanated from physicians, 535 from lay individuals, and 124 from organizations. The character of these requests for information was most astonishingly varied, and gives an excellent idea of what a dynamic and beneficent force such a Bureau could be, had the Society been able to continue it. As it is now our over-worked and numerically small staff carries on, doing a most wonderful job in helping to make this the real health information center of the county. It is no news to say that we have long since outgrown our present quarters. However, during the decade there has been greater and greater use of this building in all ways, the increasing demands on it only emphasizing the inevitability of expansion.

Graduate Education—In 1923 there was increasing appreciation of the necessity for wider and better planned educational opportunities for all the doctors in the county. The Friday afternoon lectures had evoked great popular response, illustrating anew the avidity of the medical profession for knowledge. Beginning modestly, and with no little apprehension, the lectures were continued and immediate consideration given as to the best and most practical way of enlarging the service that this Society might render in the field of graduate medical education.

A committee on graduate medical education was formed and a liaison established with the then Long Island College Hospital leading to joint and mutual effort on the part of both organizations functioning through a joint committee. The work of this committee was that of a pioneer in every sense. Under its planning and leadership during the decade 417 graduate courses were offered in 19 branches of medicines, and for these courses 1,922 doctors registered. Eighteen of our local hospitals participated, throwing open their facilities to the matriculants. Over a hundred of the medical profession of Brooklyn

engaged in teaching.

No more significant, or more practical, or more valuable step has ever been taken in the field of graduate teaching than this, so aptly termed "The Brooklyn Idea." Any physician practicing medicine in this county who sought to improve himself, to widen his knowledge, to make himself a better doctor, had ample opportunity to gratify these ambitions without leaving home or practice. The effect and influence of this plan in improving the standard of practice in this community cannot even remotely be estimated. The obligation rests on every county medical society to do all that it can to bring about and maintain the highest standard of practice possible. In that connection, no county society within our knowledge has made any greater effort than ours, the successful consummation of which was made possible by the fortunate and happy combination with out local medical school, now the Long Island College of Medicine.

The Library—The carrying on of our great library as a public service and duty on the most liberal basis possible is a manifest obligation. You will recall that Dr. Bradley Parker in his inaugural address as president in 1844 broached the idea of a library. As a result a committee was formed which one year later, 1845, reported a library of 60 volumes and a balance of \$50.00. Such was the modest beginning of that possession which marks us as distinguished and unique among county medical societies. In the fabrication and perpetuation of our library many names shine with lustre notably Dr. Joseph Hunt who started the first, formal library organization. He secured a salaried, part-time librarian and in addition classified and indexed material himself. He installed the collection in our first home at Bridge Street and threw the doors open making it a true public library. Equally notable has been the inspired and devotedly unremitting service of the Nestor of our organization and our profession, William Browning. This brief mention is pitifully scant homage to one of the finest medical citizens Brooklyn has ever known. It is not too much to say, Mr. President, that a special meeting might well be set aside in honor of Browning so that he might know to the full in his life time something of our admiration and affection for him. Some measure of the growth and demands on the library may be gleaned from the following figures. In 1922, 5670 individuals made use of the library taking out and consulting 13,087 volumes; and in 1932, 12,538 individuals used and withdrew from the library 59,491 volumes, increases respectively of over one hundred per cent in borrowers and over four hundred per cent in books borrowed. This does not take into account the use of journals, and it is of interest to record that we now receive 1509 journals from all over the world and in all languages. We receive more current Russian journals than any other library with the possible exception of the Surgeon-General's and New York Academy of Medicine Libraries. The number of volumes at present is estimated as 130,000 and our library ranks fourth after the Surgeon-General's.

Through these years, under the wise counsel of Drs. Browning and Rushmore, Mr. Frankenberger has continued to conduct the library on a high plane. He is most indefatigable. His recent trip to Europe, made possible by our Medical Library Association of Brooklyn, resulted in the enrichment of our library with many medical publications and old medical classics. In addition, he lectures at Long Island College of Medicine in Medical Literature and Medical Bibliology.

ology.

Corporate Structive-A radical revision to which our constitution and by-laws were subjected by a committee headed by Dr Charles A Gordon did much to strengthen our corporate struc-It provided for many changes and simplified and clarified the old constitution materially It created a number of new committees, discarded some old ones, provided for greater latitude in membership viz, student, intern, associate and wisely enlarged the Board of Trustees from five to fifteen, a number more in consonance with the increased membership and increasing responsibili-There have been changes ties of the Trustees made in this instrument since that time all of which have represented advances, notable among them the provision for the office of President Elect allowing the holder of that office one year in which to prepare for the duties of the presi-The importance and significance of these changes are self evident

Our influence has steadily widened because of the initiation of new activities and broadening of

old ones

Milk Commission—The milk commission has held the level of efficiency which has marked its work since its inception in 1901 with Dr E H Bartley as chairman. The production of certified milk has continued the assurance to our great constituency of clean, raw milk. The certification of our milk commission still stands on a pinnacle of its own. The details of the work of the commission constitute a most faseinating story which is commended to you for reading. A readjustment of the relationship of the Milk Commission to the parent society, brought about by the vision, wisdom and forcefulness of Dr. John E. Jennings, contributed immeasurably to more harmonious and efficient functioning of the commission

Illegal Practice—The Committee on Illegal Practice was instituted in 1923 Its first chairman was Dr Joseph E Golding who established a close entente with the District Attorney's office, the Health Department and the County Clerk Much valuable work was done in chiminating from our borough charlatans and illegal practitioners His successors have carried on this work with great fidelity among whom was the late Dr Joseph Behan, whose sudden death was a great loss Since 1926 when the Webb Loomis bill became a statute this committee has worked with the Gricvance Committee of the State Department of Education This combination seems to be operating efficiently as a report from that Department in February, 1932, showed that during 1931 and for the first two months in 1932 42 cases for complaint had arisen in Kings County, in 21 of which there was no cause for In 9, violations were stopped without prosecution There were 12 criminal prosecutions with 11 convictions and one awaiting trial at the time of the report The work done by the Committee on Illegal Practice is a community service of the first rank, one of the many tendered by this great organization

Press Reference Committee-This Committee came into existence during 1924 during the administration of Dr Charles A Gordon As, in many of our activities, this was a pioneering adventure. It was created to provide an instrumentality to which the Press might turn for information on medical matters and through which organized medicine niight speak. It so happens that the speaker has been chairman of this committee during its existence. While it is true that the plan has not accomplished all that we hoped for and that mistakes have occurred, it is equally true that during these nine years there has been a minimum of the publication of stories glorifying quacks and charlatans. No more cures for the blind or for caneer have been exploited in the columns of our local press. It would be impossible to compute the number of stories that have been denied publication because of the existence m our borough of such an agency as this, to which the gentlemen of the "Fourth Estate" could turn when in doubt. The Society through this committee has rendered a very distinct community service which has undeniably enhanced our civie standing

The Bulletin—A factor steadily growing in importance and in further improving our standing and influence is the monthly "Bulletin". Drs Gordon and Welton were its Acconclicurs and Editors during its infancy, until 1926 when Dr Alec N. Thomson was appointed Editor. Under use detorial guidance and supervision the "Bulletin" both in format and content is a splendid publication, a dignified, efficient and houest representative of a great Society, a welcome visitor everywhere. Its circulation is about 4,000

During the years under consideration many other publications appeared under the aegis of the Society and its committees, many of which have escaped your memory. Some were in conjunction with the Brooklyn Chamber of Commerce Brooklyn Tuberculosis and Health Association, the Health Department of the City of New York and others. As a reminder for us all of these phases of our work Dr. Thomson and Mr. Frankenberger have grouped them in the form of an exhibit, which hangs on the north wall of the anditorium.

Coordinating Committee of Fire County Societies—In 1926, when Dr Humpstone was our Chief Executive, he invited to a meeting all the presidents of the county medical societies in the greater eity taking office in January of that year for the purpose of discussing problems of city wide import and of interest to the medical profession. Following the first meeting, many more followed in the months and years that ensued. It became increasingly evident that only by joint effort of this character could organized medicine be heard as a unit in the greater city. A plan of organization has been evolved after long consideration providing that the committee will consist of three members from each county society, its President and two members, each of the latter to serve two years.

The Committee is restricted to consideration of matters involving community welfare from the medical point of view, and the relation of the profession thereto. It reports to the component county societies with its recommendations and acts officially only upon authorization by them.

The central office, or headquarters, is at this address. The Chairman now is Dr. Walter Lud-

lum, the Secretary Dr. Alec N. Thomson.

To illustrate the varied questions and problems that pass in review by this Committee let me cite the following:

1. Neighborhood Health Centers and Districts.

- 2. Cooperation with the Welfare Council in relation to Health Administration and Education.
- 3. Health examination work in continuation schools.
- 4. Municipal Hospital Law in reference to the remuneration of physicians for caring for those injured and coming under the provisions of the Workmen's Compensation Act.

5. Physiotherapy in the school system.

- 6. Regulation of Clinical Laboratories under section 105 of the Sanitary Code.
 - 7. Principles of popular medical publicity.
- 8. Drug store practices and other phases of venereal disease quackery.

9. Health examination program.

10. The unemployment situation as it relates to the physician and the utilization of the physician in caring for unemployed in their homes.

There are, and have been, many others, all of vital importance to the profession and to the people we serve. It is fortunate that, in meeting and attacking these problems, unity of action by the five county societies through this committee may be attained. It is a definite milestone, very clearly in line with the suggestion made by our President in his sterling inaugural address. It is good to know that the original impulse arose here, that our members have done such sound work in the committee, that headquarters is here and that for the first time organized medicine of the great city has a legitimate mouthpiece.

Leaders—In a survey such as this it may be invidious, even dangerous, to single out individuals for mention. However, any history would be incomplete if it failed to remind you of the fine service rendered to this society by Fowler and his Centenary Celebration Committee; of the Medical Library Association and Jewett, Beck, and Charles A.

Gordon, and their unceasing work in behalf of the library; of John J. O'Reilly's unselfish and devoted interest in our welfare; of the late Wm. Schroeder and his thirty-one years' work on the Historical Committee; of Babbott's generous and numerous gifts to the library; and of our unknown benefactor whose grant has exceeded eleven thousand dollars.

Medical Economics—There are left, then, for review two of our committees, two of transcendent importance to us as individual physicians, to the Society and to the public. Of these, let us first consider that of Medical Economics. For the first half of the decade the annual reports do not register a great deal of activity, the latter half is a different story as economic picture changed. McGoldrick and his committee have had to face and cope with very serious and fundamental problems, among them, the abuses of well baby stations, the ever present dispensary problem, medical representation on hospital board of managers, the rates to physicians for electric current in their offices and homes, the administration of the Workmen's Compensation Act, in which a plan of arbitration was worked out with insurance companies which is said to be giving satisfaction and aiding doctors in collecting controverted medical bills; certification of the indigent poor, central registration of such persons, and other related and kindred questions. Some are still under consideration, some have been referred to the co-ordinating committee of the five county societies.

Dr. McGoldrick has brought to the work of this committee patience, together with great insight and sagacity. They have not solved all our economic impasses. Many of them are not possible of local solution. Their answer may be written at Albany, possibly at Washington. Governmental structures are in flux the world over. What lies ahead of us no one can predict. The situation of medicine in the future governmental fabric will not be easily determined. But so long as we have gentlemen of the type of McGoldrick on our Economic Committee and Goodrich on the Economic Committee of the State Society, we may feel confident that the point of view of organized medicine will be adequately presented and that so far as lies within their power any changes to be made will be equitable, not our way, not any one's way but in the way best calculated to provide our people with honest, adequate medical service at a living honorarium for the practitioner.

Public Health and Public Relations—And now last, our Public Health and Public Relations Committee, the Committee, in the speaker's opinion, that is the most important

of all. Through it as an organized medical body we contact with more societies, organizations, and public health problems than through any other committee, in fact, more than all the others combined. Its activities are varied, often overlap those of other com-There is hardly a function of this society that does not, sooner or later, contact with this committee. Its renaissance began with Dr S R Blatters at the helm and has been carried on by Dr A E Shipley since 1924 It is difficult in such a review as this to do justice to the prodigious work done by the gentlemen of this committee, to the unending hours given by them in meeting the many difficult situations that have arisen, to their generally excellent judgment and particularly to the practical and well thoughtout plans evolved by them

The organization of this committee at the beginning of the decade provided for representatives of the Health Department, of unofficial health agency workers, of industrial medicine, of women physicians, general practitioners, and those interested in neurology, surgery, venereal diseases. As time went by representatives of the local medical societies were included together with men in special branches of medicine such as gastro enterology and rochtgehology, physiotherapy, obstetries, tuberculosis and oto laryngology Personnel of this kind makes it possible for the committee to have expert coursel and ad-

vice at all times

The committee has in substantial degree through sub committees functioned on special subjects, such as blood donors, 1-ray laboratory regulations, physio-therapy radio broadcast a neer, maternity icer, maternity service lectures, of w hich nged for given through the Y M C A, Boy Scouts and other organizations, cardiac clinics, hospitals, mental hygiene As a result of their deliberations in conjunction with official agencies regulations governing blood donors and laboratories were promulgated, the standing orders of the Visiting Nurse Association were written and approved and the committee was designated as the equivalent of a Medical Advisory Board to that Association

Significant accomplishments of particular and intimate interest to us as practitioners, follow

1 Physical examination of students in continuation schools

2 The Herith Examination Idea, a Five County Procedure a direct development of the demonstration by this committee in 1924

3 The diphtheria program of the city of

New York was the outgrowth of conferences following an invitation of our President in 1925 to the Presidents of the other county societies. The first diphtheria announcement was prepared here.

4 Physical examination of children entering school for the first time was stimulated by this committee in conjunction with the Brooklyn Tuberculosis Committee and the

Department of Health and Lducation

5 The Committee has been most active and helpful in emphasizing that the fundamental purpose of Neighborhood Health Development is the promotion of health through preventive medicine, therapensis being reserved for the niedical profession

6 By its alertitess and activity no new dispensaries, other than dental, have been opened except as part of a new hospital development

7 By its vigorous action the examination of food liandlers was preserved as a function of general practice rather than is an exclusive health department function

Dr Shipley, now Professor of Preventive Medicine at Long Island College of Medicine, may well be proud of the record of the Public Health Committee as he enters the tenth year of his meumbency as Chairman Harassed by lack of funds and secretarial help, his achievement is all the more remarkable as we scan the scope and detail of the work glimpse its magnitude and infinite value to our commitmity and our society

Broad Accomplishments—Further developments of the last decade that insure the permanence of the work of the Society may be mentioned

1 The acquisition of land to provide for needed growth when funds are available

2 The creation of a general endowment fund, begun by Charles H Goodrich, and the receipt of the two largest bequests in our listors

3 The establishment of the position of Di-

rector of Medical Activities

4 The absorption of the Long Island Medical Journal into the Medical Times with a circulation of 13 000 assuring a constant flow of five hundred journals to our library

Icademy of Medicine—Ours is a record of which we may be proud and for which no apology is necessary. It is the story of an organization that has displayed a deep sense of civic obligation and social consciousness, and has endeavored to live up to both. For this period aye and longer, our functions and activities have been those of an Academy of Medicine. In recognition of this fact our corporate title has been amerided and the change was approved by the Secretary of State on Tebruary 27, 1933, to read now "The Medical So-

ciety of the County of Kings and Academy of Medicine of Brooklyn." This is a definite and significant change denoting as it does that in this jurisdiction the County Medical Society will function as such and, in addition, as an Academy of Medicine. In so doing, we will continue those activities, essentially of an academy, that have been carried on in the past and will now be in a position to bring about the development of sections in the various branches of medicine, increasing and

amplifying scientific and educational opportunities. With added emphasis on our public health work, and the increasing demands on our public medical library we shall be in better position to seek public support. As this elaborate structure stands tonight it is wholly and entirely the product of physicians, "the house that doctors built." On our record we have a right to expect that the citizenry of Brooklyn will aid and help us in maintaining and enlarging this temple of medicine.

THE INFLUENCE OF TRAUMA IN ACUTE AND CHRONIC ENCEPHALITIS* By ABRAHAM M. RABINER, M.D., NEW YORK, N. Y.

ELDOM does one meet with a patient who has not at some period had an injury of one sort or another; and so, we find trauma listed amongst the etiological factors in the great majority of clinical syndromes. Students are taught that if a given disease has a large number of causes, it is logical to regard none of them as the true cause. It is quite obvious, therefore, that we should evaluate with careful scrutiny the part that any trauma may play in disease.

That trauma plays a very important role in medicine must be accepted without hesitancy. The scope of this paper is too limited to discuss here the numerous illnesses produced, aggravated or activated by it. In later communications the relationship to certain other neurological dis-

orders will be continued.

The writer's interest on the influence of trauma in epidemic encephalitis received its impetus in 1923. Working in the laboratory of the late Professor Alfons Jakob at Hamburg, and because of his interest in certain dyskinesia syndromes, he was asked to study the brains of two cases that had presented interesting disorders of motility.

In life, the diagnosis in both instances had been dementia præcox. To the amazement of Professor Jakob and the writer, microscopic study revealed a typical picture of epidemic encephalitis. The story of antedating trauma in both patients created an added interest. A detailed study of these most unusual cases was published at the time¹. These two cases have served as a nucleus, and to them there has been added a series of cases of varying types of trauma associated with clinical pictures of epidemic encephalitis.

As is to be expected, differences of opinion exist as to the role the trauma plays. Such varying thoughts are often voiced in public and create criticism. A review of the literature reveals a veritable chaos of contradictory viewpoints.

* Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo, N. Y., May 24, 1932.

A paralysis agitans syndrome is a most common sequel of encephalitis. Paralysis agitans, before its dependence on basal ganglia pathology became recognized, was commonly believed to occur following trauma. In such instances the injured part of the body was regarded as the site of the disease's onset. Oppenheim² and Patrick and Mendel³ emphasized this view. Levy4, studying one hundred and forty-six cases, found a history of trauma in twenty, and also stressed the correlation between the region of the trauma and the site of the first symptoms of the disease. They did not consider the trauma predisposing in any sense except as to the site of the initial symptom.

Emotion as an occasional cause of Parkinsonism has often been described. J. A. Barré, discussing a report of J. Lhermitte and Mile. Parturier before the Paris Neurological Society, stated that during the bombardment of Strassbourg in 1870, there had been a small epidemic of paralysis agitans, and that during the World War there had been cases of sudden onset in people hidden in caves when in fear of bombardment. He also cited the case of a bricklayer who had fallen thirty feet into water, escaping physical injury, but who at once became Parkinsonian. He added further that he had seen dilated blood vessels in the basal ganglia and assumed that perhaps vasomotor disorders may bring about the syndrome in connection with emotional shock.

A. Souques expressed himself as very skeptical about the alleged emotional cases. He had investigated the Strassbourg epidemic of 1870, and found that it only included three cases. He further stated that he had never seen a convincing traumatic or emotional case, but in view of reported cases, he had to admit the possibility of a traumatic origin in rare instances.

Heussge⁶ also stresses the occurrence of rigidity and tremor first appearing in the part injured, and directs attention to the existence of proliferation of connective tissue and of sarcolemma nuclei in the affected muscles. He suggests that possibly alteration from trauma in muscle tissue may react on the central nervous system. He also cills attention to the unfavorable blood supply of the basil ganglia which may favor the occurrence there of semile changes at a relatively early age. As an illustration of this he cites the case of a 39 year old man who sustained a severe confusion of the left shoulder, and developed, two veris later, a tremor of the left land as the first symptom of paralysis agitans.

Other instances of injuries to peripheral parts of the body and subsequent development of Parkinsonian Syndrome are reported by Lotinar⁷, Sonques⁸, Klippel and Lhermitte⁸, and Grossoni¹⁰ Robert Bing¹¹ does not accept Lotinar⁸, second case I lecause the injury was to the back, and not of the head and because there had been a tremor

prior to the accident

O Cronzon, R Levy and Justin Besancon?" describe the case of a 47-year-old man who developed a typical Parkinsonian syndrome after a head injury, the tremor appearing in the right arm one month after the injury. He also presented mental dullness and a right hemianesthesia which was considered hysterical. The authors thought that training might have been a factor, but commented on the extreme scarcity of Parkinsonism in connection with the enormous number of head injury cases which had been seen during the war

Among other reported instances of Parkinsonism following trauma to the head are those of M Faure Beauhen and G Desbuquois¹¹, Mayer, Trabund¹⁴, and Guillan and Alajouanine¹⁵

With numerous reports of such neurological symptoms apparently following traumata, the opinions expressed as to their relationship may be followed with interest. Songnes evidently considers trauma of little, if any, value in these Mendel' looking with favor on a tran matic influence mentions however the necessitive for a predisposition to the disease, a determined age and a given interval between the injury and the onset of symptoms Soughes admits, however that a severe head injury may produce a strio pullidal lesion capable of giving a Parkinsonian syndrome Lambranzi allows trauma a concountant value Guillan and Alajonanine15 give to training a hypothetical value in the absence of any other pathogenic element Catola18, Marotta1, Negro 0, and Ciampolino21, are decidedly against allowing tranna any importance in this In cases of so called peripheral connection trainin, Heissge, Frahmd14, Cronzon12 and others talk of an unshackling action capable of exaggerating or bringing into evidence a symptomatology until then mobserved. Many of the observers seem opposed to the view that trauma may cause Parkinsonism. Some say that in the cases cited, the tranma is merely a coincidence, while others, basing their opinion on statistics, i. c., the rarity of cases in comparison to the numbers injured, deny it any value; and among those favorable to a traumatic influence, Cronzon¹², Faire Beaulieri and Deshiquois¹³ admit it only in crainal injuries. Kehrer¹⁷ rejects trauma completely as a cause of paralysis agitans

Out of all this complexity, Bing11 attempts to set up three definite postulates to warrant the

admission of a transmitte etiology

1 That the trainin has affected the skill, and at least must have produced the picture of concussion

2 That the injured person must be known to have been free from eerebral symptoms before

me mjiny

3 That after the injury he must have shown prodromal pons symptoms which gradually developed into those characteristic of paralysis agitans

In this paper it is not proposed to discuss so called trainmatic encephalitis. A severe head injury with at least the clinical picture of concussion may cause such cerebral pathology. It is with the clinical pictures recognized as lethargie or epidenic encephalitis and its se quicke that we are concerned. When may training be regarded as influencing such symptomatology? An analysis of such cases makes necessary grouping the problems as questions which one should attempt to answer.

1 When a patient developing acute epidemie encephalitis gives a history of a previous in jury, what effect, if any, has that injury had in the production of the disease?

2 With a listory of a previous acute encephalitis, what influence does traum; have on a later developing chronic dyskinetic syndrome such as Parkinsonism?

3 When a patient presenting a partial elinical picture of chronic encephalitis such as a fremor in one hand, etc., sustains an injury, may a later, more complete development of the chronicity be attributed to such a training?

4 What type or degree of injury should be regarded as influeneing any part of the clinical course of acute epidemic encephalitis?

Case I Acute epidemic encephalitis myoclome radicular life a mental picture resembling demental precore extensite dyskinetic phenomena and a history of cerebral concussion nine days before the onset of illness F, a 19 year old baker, on February 24th 1923 fell

F, a 19 year old baker, on February 24th 1923 fell about five feel from a lidder, landing on the sacrum For a brief period he lay unconscious. He liten climbed the ladder and continued to work but had pun over the back of the neck. After continued pain for nine drys he attempted to resume work, could not because of increased pain and went home. There then ensued stiffness of the neck pain in the right arm and twitching in the same extremity. He was then admitted to Civiliaven Hospital and from there because of motor resilessness and a speedily developing mental picture, was transferred to Friedrichsberg (Hamburg). Here he present

ed muscular rigidity with lack of associated movements, facial grimacing, rhythmic twitching of the right arm, head, and neck, and the head was held bent backward. The neurological examination revealed the dyskinesia as noted, gait was unsteady, he reeled to both sides but did not fall, speech was indistinct, and there was twitching of the lower jaw. The neurological status was otherwise negative. Psychically, he presented a peculiar picture. At times he was quite sensible and oriented, obeying orders Generally, however, he appeared confused, emotional, with visual and auditory hallucinations, and showed mannerisms. Death occurred twenty-two days after the accident.

Microscopic study revealed chief characteristic changes in the hypothalamus, pons, substantia nigra and in the floor of the fourth ventricle. There was perivascular infiltration predominantly with lymphocytes, but also with plasma cells. The infiltrating cells were always confined to the perivascular spaces, but were occasionally also found in the neighborhood of blood vessels in the parenchyma (Fig. 1). Throughout the sections, especially in the grey matter, the nuclei and ganglion cells

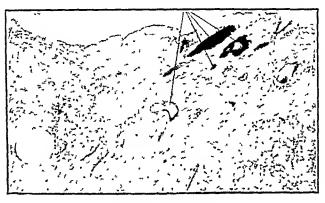


Figure 1. Case 1

Medulla oblongata. Perwascular infiltration. Markedly dilated blood vessels with fresh extravasations of blood.

Nissl stain.

showed degenerative changes and there was extensive glial proliferation. Frequently one noted extensive glial masses in which the ganglion cells had largely disappeared. In parts, the nuclear regions were so altered by formation of small vacuoles, as to give an appearance of a sieve, and one may almost speak of a finely meshed status spongiosus (Fig. 2). The perivascular spaces were considerably widened, and the vessels themselves markedly dilated; in fact many of the larger empty spaces are probably to be considered as widened perivascular spaces. In these regions the ganglion cells had undergone severe degeneration and acute swelling. It is noteworthy that these parenchymal changes were in no way dependent on the infiltration process, and that in many areas no infiltration was noted. The substantia nigra showed similar changes. Markedly dilated vessels and fresh extravasation of blood were seen in the floor of the fourth ventricle (Fig. 1). The ganglion cells of the thalamic nuclei were definitely altered, their protoplasm was clouded, the nuclei were often swollen. and pushed into eccentric positions. The pallidum was lightly involved. Many of the ganglion cells were still in good condition. On the other hand, the striatum was considerably altered in its entire extent. There was a name parently and degeneration with the rescale was a lightly and rescaled a state of the control of pure parenchymal degeneration, with no vascular infiltration. The ganglon cells, especially the small ones, took the Nissl stain poorly and their nuclei were swollen. The large ganglion cells were similarly, though to a lesser extent, affected. There was slight glial prolifera-tion, and the widely distended vessels and lymphatic spaces were striking. The infundibular region and the

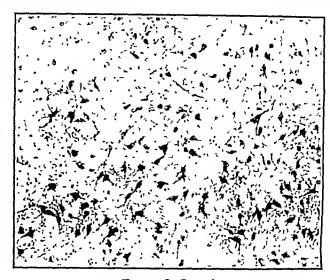


Figure 2. Case 1

Pons. Ganglion cell degeneration. Vacuole formation.

Nissl stain.

tuber cinereum showed slight parenchymal degeneration. The cortex in general showed very marked changes. In places the ganglion cells had almost entirely disappeared, and seemed as shadows of themselves. The nuclei at times appeared swollen. Foci with no cells interrupted the normal cortical architecture and were noted particularly in the frontal and temporal regions. Here the ganglion cells had disappeared and were replaced with a thin protoplasmic glial reaction. In the vicinity of these foci the remaining ganglion cells were distorted in position. These foci were predominantly in the lower layers of the cortex, laminæ IV to VII. (Fig. 3).

Comment: The pathological study of this case leaves no doubt that this man had an acute epidemic encephalitis. The changes in the basal ganglia, especially the striatum, account for the dyskinetic phenomena. The cortical findings may be considered the basis for the mental symptoms.



FIGURE 3. CASE 1
Frontal cortex. Degenerated foci in laminae VI and VII. Nissl stain.

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The dilutation of the blood vessels and lymph spaces noted throughout the sections is of in terest in explaining the relationship the training played in the production of this extensive patho logical disorder. It is possible to assume that this man developed the encephalitis independently of the traum? Many patients have had encephalitis without ever having any transmaview however, of the litstory that the trauma was severe enough to produce a concussion, it must be regarded as capable of causing dilatation of blood or lymph spaces. If so, the door for admission of the infectious agent into the central nervous system was opened. This type of case then warrants the conclusion that a trauma suffi cient in severity to produce at least a concussion. may cause pathology that permits the entrance into the central nervous system of the infectious agent causing acute epidemic encephalitis

Case II Acute epidenne encephalitis choreo athetoid no ements a mental picture and a history of a se ere cranial minry secen years prior to ouset of illness

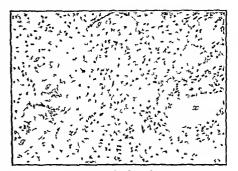
H was born in 1892. He was a laborer and had been well until 1916 when in the war he was lut on the head with a piece of an exploded shell sustained a severe con cussion and the left eye was enucleated. Though he was later able to work there was persistent headnehe and he was never considered the same as before the mjury On January 3rd 1923 he became restless excited at times was confused could not sleep developed twitch ing of the eyelids and made constant chewing move On admission to the hospital it was noted that the left eye was missing. The neurological examination was negative except for a slight right friend weakness Serology was entirely negative. He presented involun-tary movements of the entire body. He was quite sensi-ble followed all commands and was oriented in all spheres. He complained bitterly of the twitching which he could not control especially the head which at times bent backwards. He often heard voices and would winder off to a corner of the room. He showed good usight realized his condition but continued to answer the voices he thought were talking to him. The involuntary movements disappeared during sleep days the restlessness assumed a distinctly choreic char noter varying with a slower periodicity giving the im-pression of athetosis. During the last few days there developed coma with fever and death January 26th 1923

The brain appeared hyperemic. In the cortex of the third left temporal convolution in the vicinity of the corni ammonis there was embedded a clierry stone sized

ell fragment

Microscopic examination rescaled the characteristic changes of epidemic encephrilitis in the brain stem with marked lymphocytic and plasma cell infiliration price clipinal degeneration and protoplasmic glar proliferation. These changes were of served in the poins substantia mgra hypothalamus and the infundibilium. The thala mus reveiled little of note. The ganghon cells of the pullidium showed changes and the strutum presented a more severe diffuse parenchanial degeneration. Here as through the entire central nervous system the vessels were markedly dilated (Fig. 4). The subcortex showed distended lymphatic permissionary spices and rare permissionary infiltration. In contrast to the first case the cortex presented quite a good ganghon cell appearance. Here two types of mathology were noted.

Here two types of pathology were noted
Firstly Scars of distinctly long duration were there
The left temporal lole vicinity of the macroscopically
found shell fragment was characteristically altered
After removal of the foreign lody a cavitation in the
cortex surroinfield by a strong flail reaction with con-



Streatum Diffuse preschynal degeneration (g) di lated blood ressels with distended perceasular spice (x) Lacuole formation. Nissl stain

siderable iron containing pigment remained and formed at the loundary to the sulcortex a thick clind will lin the cells of amnoiss horn a degenerated focus was noted. Older searred points of cortical disintegration were found in other parts of the temporal and frontial lolgs with occasional caleified ganghon cells (Fig. 5).

Secondly In the cortex especially in the occupital temporal post central garns and in the frontal lobe were seen frequent small fresh hemorrhages with widened vessels and envilances (lag 6)

In isolated portions of the cortex confined to the 6th and 7th ganglion layers were seen distinct protoplasmic glas productation slight perivascular infiltration and marked gaughon cell changes

Comment Again we have an acute epidemic encephalitis in an individual who had a previous eramal injury. Here however the traum was

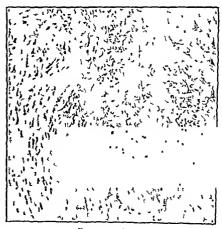


FIGURE 5 CASE 2

I rontal certex Old degenerated area eith calcified

Janglion cells Nissl stam

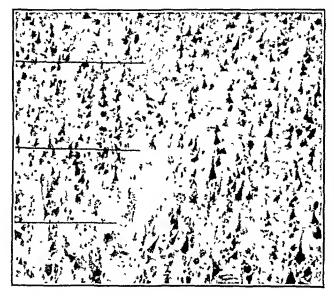


FIGURE 6. CASE 2

Post Rolandic cortex. The lines point to fresh hemorrhages in lamina III. Nissl stain.

of seven years duration. The long interval between the war trauma and the onset of encephalitis would ordinarily be considered sufficient ground for disregarding the trauma entuely as in any way concerned in the final fatal illness. The persistence of headache throughout the intervening period, the microscopic findings of old and new lesions, and the dilated blood vessels and lymph spaces, make it necessary that the trauma be regarded as having facilitated the entrance of the later infection into the central nervous system.

Case III. Acute epidemic encephalitis coming on several days after a mild cerebral concussion.

S. S., on April 18th, 1920, a middle-aged salesman, while traveling in a sleeping car, struck his head against the berth. He was briefly stunned. The following morning his actions were peculiar and he felt queer. Several days later there occurred severe headache, pain in the left shoulder, and general malaise. Examination then revealed the presence of temperature, diplopia, facial asymmetry and extreme drowziness. The diagnosis of encephalitis lethargica was then made. Later a typical parkinsonian picture ensued.

Comment: Again a typical clinical picture of epidemic encephalitis, this time with an apparently mild injury to the head a few days prior to the acute onset of the illness. But the fact that he was stunned contradicts the apparent mildness of the injury. A fracture of the skull without concussion may produce less intracranial involvement than a so-called mild concussion. One may visualize in this man a latent infection, and its entrance into the central nervous system made possible by widened blood vessels resulting from the concussion.

Case II'. An acute epidemic encephalitic picture occur, ug three weeks following an injury to the head.

J. D., on December 29th, 1918, this 32-year-old man

struck the back of his head against a desk. He apparently continued at his usual work, but thereafter complained constantly of headaches, was irritable and cranky, and his wife and fellow employees stated that he was not the same man mentally. Eighteen days later, January 16th, 1919, he became acutely ill, was considered a case of influenza, and when he became worse and stuporous was admitted to Bellevne Hospital. He presented a varying stupor from which he could be easily aroused. The cyclids were incompletely ptosed, pupils were innequal and reacted sluggishly, upward and downward gaze was impaired, the facies were like those of an advanced myasthenia gravis, and there was marked muscular rigidity. Because the observers had seen no other cases of encephalitis, and in view of the history of a head trauma, he was diagnosed as a fracture at the base. When Dr. Foster Kennedy saw him, he was impressed by the unusual clinical picture and could not fit it into that of a skull fracture. Later, he made the diagnosis of encephalitis lethargica.

Comment: This case is of extreme interest, as having been one of the earliest seen in this country. The relationship of the trauma to the encephalitic picture occasioned considerable controversy. Irrespective of opinions expressed at the time, our analysis now must take in the criteria of the present paper. Though there is no mention made of symptoms suggesting a concussion, such as loss of consciousness, or of having been stunned or dazed, the fact that he worked steadily despite continuous persistent headache would indicate that he was an individual who would minimize an injury so long as it did not incapacitate him. If so, a transitory dazed period would not be emphasized. That he had a concussion would also seem likely from the testimony of the wife and fellow employees who noticed that he became irritable, and was a changed person. It is evident, therefore, that here again, we have a case of a trauma to the head with cerebral concussion preparing the central nervous system for the entrance of the acute infection.

Case V. A case of acute epidemic encephalitis with recovery, no symptoms for twenty months, and development of a parkinsonian syndrome after injury to the head.

F. D., in January, 1920, a twenty-year-old male was observed at Bellevue Hospital, where he presented a violent dyskinesia of the extremities, had ocular signs, was drowsy, and the diagnosis was encephalitis, chorec form. After discharge from the hospital one month later, he was apparently well for twenty months. In November, 1921, a heavy case fell fifteen feet striking him on the left side of the face and body. He was dazed for fifteen minutes and bled from the nose. Two days later a tremor developed in the left hand. From that time on he gradually developed a complete parkinsonian syndrome.

Comment: A parkinsonian syndrome is a frequent sequel or residual of epidemic encephalitis. Nevertheless, every acute case is not followed by such a chronic course. The injury to the head, with a cerebral concussion, may here be considered as having activated a latent pathological process or possibly hastened the development of the parkinsonian syndrome.

Case VI Acut, epidemic encephalitis occurring eight months ofter o frocture of the pelvis and mijnry to the testicles

D G On May 4, 1920, this 23 year-old mile fell from a roof to a fire escape. He sustained an injury to the testicles and a fracture of the pilvis. There was no loss of consciousness. After several months' treatment he returned to lus regular work. Eight months later, Lebriary 21, 1921, he was admitted to Bellevue Hospital with insomin was confused, irritioue restless, and at times stuporous and somiolent. On exminiation there was strabishies of the right eye, unequal pipplis and masked facies. He remained three days, was observed again for seven days in March 1921, and when exmined in October 1922, laid misal speech biliteral external rectus werkness and the eyes stared. A definite diagnosis of epidemic encephalitis was made without difficulty.

Comment This patient did not sustain any injury to the head and there was nothing in the history to suggest the possibility of cerebral concussion. The acute illness that developed after many months was an independent infection, and the trauma may be channed as an etiological factor.

Cose VII On the doy of the onset of an ocute epidemic encephalitis the left forcarm is sprained

W W On April 9, 1924 this man pulled a belt and sprained the left foreign. He continued working. That creming he became drowsy and saw double. The next day he had headache and fever. This continued for ten days. The dramous of epidemic encephalitis was undeat Post Graduate Hospital where he was later observed.

Comment How a sprain to the forearm can he regarded as related to an acute infection of the central nervous system is difficult to understand. This case is cited, however, for controversies in just such cases are not uncommon. In the absence of any skull injury or concussion, the writer feels that the forearm injury may be ruled out from consideration as a factor in the encephalitic picture.

Case VIII Acute epidemic encephalitis occurring two months ofter injuries to the shoulder and knee

S I A 39 year old min on January 5 1923 fell from a wagon sustaining injuries to the left shoulder and right knee. There was no liead injury and no in terription of consciousness. He was treated at a physician soffice for two weeks. Two months later, March 10th he had a 'cold' which persisted five drys. Eight drys later, March 23rd he was admitted to Gouverneur Hospital with a history of diplopa for three drys, put pils irregular, reacting to light and accommodation and there was vertical instagnius. He was confused disoriented and talkative. He became comatose and died March 25 1923. The hospital diagnosis was encephalitis lethargica.

Comment Here again the injuries were to the extremities and were not associated with any eramal symptoms. In conformity to the criteria of this communication, such injuries play no part in a later developing acute epidenic enceptiolitis.

Case IA Two days after occurrence of pain in the lower lack there ensues an extensive ce tral nervous system disorder diagnased as epidenne encephalitis

I G On November 13 1923, while lifting a barrel this man's left foot shipped and he felt somethings may in the fower part of the back. Two days lifer there developed a paralysis of the right side of the face, and workness in both lower and the right inper extremities. For one month there was fever and he was delirious. At traces he saw double. Examination revealed inhibit to close either eye. The right pupil was larger than the left, motor innervation was impured on both sides of the face, and taste was absent in the anterior two thirds of the toigne. The facies were regarded as typical of paralysis agitans and the draghosis made was encephalists lethargica.

Comment Here we have an acute onset of cranial nerve involvement plus motor weakness in the upper and lower extremities. In the absence of any cranial injury or of cerebral concussion, the lustory of the snap in the brek may be disregarded as participating in the production of the central nervous system affection.

SUMMARY AND CONCLUSIONS

A series of cases with a clinical picture of epidemic eucephalitis is presented, in whom the chief interest is a history of trauma. An effort to determine what effect such traumita may have on this disease is attempted. Cases are presented in which the trauma plays an important role in the production of epidemic encephalitis, and similarly, other cases where the trauma is simply a concidental or chance occurrence. To facilitate analysis of the problems encountered, four questions are presented, and as conclusions are here answered.

1 Following an injury to the head in which there is present evidences of intracranial involvement, the minimal degree being a cerebral concussion, a later developing epidemic encephalitis syndrome must be regarded as having been influenced in its production by the trauma

2 A patient who has had an acute epidemic encephalitis may have chronic manifestations, such as Parkinsonism, initiated or produced by an injury to the head. Such an injury must be severe enough to produce at least the picture of cerebral concussion.

3 A partial clinical evidence of chronic encephalitis such as a tremor of the haud, loss of associated movements, etc. may be regarded as indicative of the full syndrome developing. If such an individual then has an injury, the advance in symptoms is not attributable to the training

4 An injury to any part of the body excepting the skull, particularly when not associated with cerebral concussion signs, plays no role in any part of the clinical course of epidenuc encephalitis.

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MORTALITY IN 985 CASES OF DIABETES MELLITUS

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N 1926 we reported upon the mortality in 276 cases of diabetes in the Wards of St. Luke's Hospital, with special reference to diabetic coma and infection. The patients were divided into two groups: Group I. composed of 113 cases treated during the years 1920 and 1921, that is before the discovery of insulin. Group II. was made up of 163 cases admitted to the wards in 1923 and 1924, after the discovery of insulin. The year 1922 was intentionally omitted as the amount of available insulin was very small.

Up to and inclusive of 1930, 709 additional cases were collected so that our postinsulin series now comprises 872 cases. It is noteworthy that the general mortality during the early postinsulin period 1923-1924 is almost exactly the same as that of the entire group 1923-1930 inclusive. During the postinsulin period 1923-1924, 163 cases were treated, of these 20 died giving a 12% mortality. Comparing this with the postinsulin period 1923-1930, 872 cases were under observation, 101 of which died with a mortality of 11.6%. though there has been no change in the death rate of the early and later postinsulin years, the general diabetic mortality in our hospital has, nevertheless, decreased 7% over that of the preinsulin years.

The report of the Board of Health of New York City* on the other hand shows a marked increase in mortality in diabetes from year to year during the past ten years.

"Throughout the United States the death rate from diabetes is increasing. In New York

* Frissell, L. F., and Hajek, J., J. A. M. A., June 19, 1926, Vol. 86, p. 1903.

City this disease now causes over 1,900 deaths annually, and this despite the fact that the prevention and treatment of diabetes is well understood. The diabetes death rate in this city is about 50 per cent higher than it was only twenty years ago. Most of the deaths are in persons over fifty years of age, and among these there are twice as many victims among women as among men. Following is the record for the past ten years:"

TABLE 1. DIABETES, DEATHS AND DEATH RATE PER 100,000

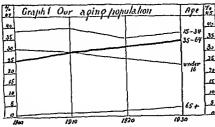
Year	Deaths	Rate	Year	Deaths	Rate
1922	1,448	24.4	1927	1,461	22.2
1923	1,360	22.4	1928	1,663	24.8
1924	1,177	19.0	1929	1,726	25.3
1925	1,313	20.8	1930	1,784	25.6
1926	1,485	23.0	1931	1,921	27.1

Since diabetes most frequently occurs in people past middle life, this increase in mortality can not be explained and may only partly be accounted for by the larger number of persons attaining to 34 years of age and over as shown in Graph 1. compiled from figures in the "Weekly Bulletin."**

The diminution in mortality at St. Luke's Hospital is considered in this paper with reference to coma, hypoglycemia, arteriosclerosis, infection, surgery, age and sex.

Coma: Our decrease of 7% in general mortality is entirely accounted for by the 10%

^{**} Wynne, S. W., Weekly Bulletin, Department of Health, City of New York, January 9, 1932.



GRAPH 1 Percentage of population by age groups

diminution in deaths due to coma Banting's discovery of insulin has taught us to treat diabetic coma and any diminution of mortality in diabetes at St. Luke's Hospital is due to that cause. In the premsulin period almost all of our coma cases died, while in the postinsulin cra out of 21 individual coma cases treated during the past 8 years only 057% It would appear, therefore, that while our diabetics seldom now die of coma their life is, nevertheless, taken from them by an intercurrent disease, of which arteriosclerosis and infection stand as the chief offenders may be argued from the foregoing statement that since the discovery of insulin the life of the adult diabetic has been prolonged. However, according to our figures the average age at death in the premsulin period was 55 years and remains the same for the postinsulin In the early postinsulin period, coma was for the first time in the history of the disease successfully compated. In the later postinsulin years the prevention of coma is practiced with gratifying results. Already we see coma due to diabetes 4 times less frequently than we did in the pre-Banting period The time is not far off when the occurrence of diabetic coma will be as infrequent as death due to coma is at present. It is much easier to prevent coma than to cure it With the development of hospital and clinics for diabetic patients early diagnosis and treatment are made possible. The widespread knowledge of the disease and its dietary management with or without insulin are factors contributing to the diminution and elimination of coma The complete cooperation of the general wards of the hospital with the diabetic clinic Social Service training of the is essential patient completes his educational cycle. Thus patients referred to the hospital from the clinic seldom show anything more than moderate Letosis

In connection with the early diagnosis of diabetes the problem of differential diagnosis between coma due to hypoglycemia coma due to ketosis, and come due to other diseases

comes up and should be stressed. The following illustrative case may be mentioned. A patient, who had long suffered from diabetes was found on the street unconscious. She was brought into a hospital, where it was assumed that she was in diabetic coma. Insulin was administered. It was soon found, however, after examination of the blood that the patient was thrown into severe hypoglycemia (hypoglycemic angina?*) and that her original state of unconsciousness was due to coronary thrombosis.

Hypoglycemia We had no deaths the cause of which could be ascribed to hypoglycemia but its effect causes much morbidity even if of short duration. I have yet to see a patient taking insulin for any length of time who sooner or later does not have an attack of hypoglycemia or of what he takes to be hypoglycemia We educate our insulin cases and rightly so to watch for the symptoms indicative of this condition and impress upon them the proper measures to be taken to overcome it. Nevertheless, it must be difficult for the patient accurately to interpret the onset of the symptoms which at their very beginning are puzzling to say the least. If the patient is an adult whose insulin career is comparatively recent, he will immediately take steps to combat the symptoms whether his interpretation is correct or not If the symptoms clear up, he assumes that his actions were proper. on the other hand, in spite of precaution the symptoms persist, his mind is assailed with doubts, and the physician's help is then required Contrarily, if the patient is a child the first symptoms of hypoglycemia are most frequently overlooked and treatment is begun when severe reaction sets in So that no matter how painstaking our theoretical education of the insulin patient may be, it is, nevertheless his own personal experience with hypoglycemia which helps him most. One or two attacks successfully treated by the patient himself give him confidence and set his mind at rest. It is during this period, according to my experience, in the career of the diabetic that severe reactions are most frequently met "Familiarity breeds contempt" vs at la

Does hypoglycemia or its repeated attacks cause any damage? The effect upon children and young adults remains problematical. In the diabetic past middle life the situation is more complicated. At this time cardiorenal and circulatory diseases are met with, and hypoglycemia may at times add sufficient shock to complicate an already serious condition. I am especially referring to cases falling into the group of coronary scierosis and cardiac insufficiency. In this group of patients

^{*} Joslin E P J A M A August 29, 1931 Vol 97

an attack of hypoglycemia may have disastrous effects upon the heart in precipitating what Dr. Joslin refers to as hypoglycemic angina. Strict prevention of this condition is The difficulties indicated and attempted. under which the patient has to labor in such circumstances are obvious. The initial symptoms are often most perplexing and the best thing the patient can do is to treat all such symptoms as hypoglycemia until proven otherwise. Such procedure, however, is followed invariably by hyperglycemia and glycosuria, and possibly ketosis, if the patient's interpretation was incorrect. In children the initial symptoms of hypoglycemia are easily overlooked and when finally discovered so that preventive measures may be taken the little patient may be in convulsions. In connection with this statement the case of little D. S. may be cited. This boy is 10 years old and has had diabetes for the past 8 years. He had several admissions to St. Luke's Hospital and was seen by Dr. Joslin in his New England Deaconess Hospital. He has had at least 8 severe attacks of hypoglycemia with convulsions and coma as well as many milder attacks; this in spite of the fact that his mother is exceptionally intelligent and in a sense a specialist in diabetes. The boy is bright, cooperative, and honest. He is a moderately severe diabetic (taking about 30 units of insulin per day), who within 24 hours may pass through the symptoms of hyperglycemia, ketosis, and hypoglycemia. Because of this he is rather difficult to manage. It is easier to treat hypoglycemia than to prevent it, which should certainly be the other way around, but the prevention of hypoglycemia must not be at the expense of insulin.

	MORTALITY	
	% in 22 Deaths	% in 113 Cases
In 6 death was due to Cardiorenal Disease and Arteriosclerosis In 4 death was due to Infection In 12 death was due to Coma	28 18 54	5.31 3.54 10.15
GENERAL MORTALITY		19.00

Table 2. Analysis of the Causes of 22 Deaths in 113 Cases, Years 1920–1921.

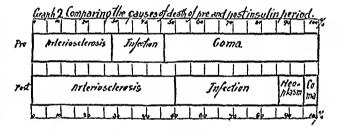
Arteriosclerosis and Infection: These two diseases continue to take a heavy toll of our diabetic patients. This field is largely unexplored and prevention remains the best insurance for these patients. Frequent periodic health surveys in addition to the proper management of diabetes is even of greater importance to the diabetic than to the non-diabetic. Much is accomplished in this direction, but nevertheless, cardiorenal disease, arteriosclero-

sis, and infection account for 86% of our diabetic mortality as may be seen from Tables 2 and 3.

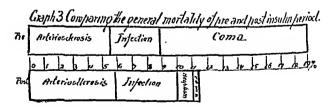
	MORTALITY	
	% in 101 Deaths	% in 872 Cases
In 51 death was due to Cardiorenal Disease and Arteriosclerosis	50	5.85
In 36 death was due to Infection		4.15
In 9 death was due to Malignancy In 5 death was due to Coma		1.03
In 5 death was due to Coma		0.57
GENERAL MORTALITY		11.60

Table 3. Analysis of the Causes of 101 Deaths in 872 Cases, Years 1923-1930

The above figures indicate that the percentages of deaths in the diabetic caused by cardiorenal disease, arteriosclerosis, and infection have almost doubled in the postinsulin period, while deaths due to coma decreased tenfold. This is shown to better advantage in the following Graph 2.



The diminution in general mortality at St. Luke's Hospital in the postinsulin period is shown in Graph 3. This clearly shows that the decrease of 7.4% in our general mortality is entirely accounted for by the 10% diminution in deaths due to coma.



From the above graph may also be seen a moderate increase in mortality caused by arteriosclerosis, infection and malignancy during the postinsulin period. This increase may be accounted for by the great reduction in deaths due to coma, the more widespread diagnosis of diabetes, and by the increase in the number of people living during middle life.

Surgery: Three out of every ten diabetics admitted to St. Luke's Hospital have a surgical condition necessitating an operation.

The surgical postinsulin group 1923-1930 comprises 257 cases with a mortality of 163%, a decrease of 50% as compared with the Pre-Banting period.

Age The mortality as to age was greatest between 41-70 years as may be seen in Table 4, with less cases under 40 than above 71.

Age	Number of Cases	Age	Number of Cases
up to 20	5	51-60	39
20-40	7	61-70	34
41-50	23	71 up	15

TABLE 4. AVERAGE AGE AT DEATH

Set In 1916 Osler gave the sex ratio of male to female diabetics as 3 2 In 1931 Dr Joshin* states "the proportion of males had decreased to 44% in contrast to 47% in 1921 and 55% a decade before" At St Luke's Hospital the proportion of males has increased

. Joslin, E F. J A M A, August 29, 1931, Vol 97, p 591

from 44% in 1920 to 49% during the postinsulin period up to 1931. The mortality sex ratio closely approximates the living sex ratio. The redistribution of sex is significant because it has taken place within the short space of two decades.

SUMMARY

- i The mortality in 827 cases at St Luke's Hospital decreased 7% as compared with 50% increase reported by the Board of Health, NYC
- 2 The decrease is entirely accounted for by
- 3 A redistribution of the causes of death is taking place. While deaths due to come diminished tenfold, those caused by cardio renal discase, arteriosclerous and infection have doubled.
- 4 Surgical mortality in the diabetic at St Luke's Hospital decreased 50%
- 5 Neoplasm as a cause of death is on the increase in the diabetic individual
- 6 The average length of life of the adult diabetic has not as yet been prolonged by insulin

THE ROLE OF CHILD GUIDANCE IN THE PREVENTION OF SCHIZOPHRENIA (DEMENTIA PRAECOX)

By H, L LEVIN, M D, BUFFALO, N Y

From the department of Clinical Psychiatry Buffalo State Hospital Buffalo, N Y Read at the Annual Meeting of the Medical Society of the State of New York, at Buffalo N Y, May 24 1932

EMENTIA praecox, or schizophrema according to the U.S. Census, incapacitates more individuals in this country than does cancer or tuberculosis. In point of the number involved, schizophrenia is thus the largest single medical problem of the day, and any procedure that holds forth promise of prevention or arrest or cure, if only in a comparatively small percentage of cases, is worthy of our serious atten-While the writer freely admits that we have not as yet gained a full and complete understanding of the various factors which bring about this illness, he holds that at present the etiologic theory that offers the best perspective for action, from both the preventive and curative viewpoint, the so-called "psycho biologic" theory formulated by Adolph Meyer in 19061 According to this theory, the manifestations of schizophrenia arise on the basis of a special temperamental make-up or personality, and the symptoms may be regarded as the natural development of faulty habits of reactions (or ways of feeling, thinking and acting), cultivated by the patient from his earliest years and fostered both by hereditary factors and faulty environment. These oddities in thought and behavior have been included by some authors under the general term of "shut-in personalities "2" One recent text-book3 describes five types of "shit in personalities"

(a) The "madequate" type of child, who is not feeble-minded, but he is entirely lacking in ambition and does not make use of his intellectual or physical powers He has no hobbies, no likes or dislikes Rewards or punishments mean little to him. He may play truant, but the truancy is not motivated by the desire to carry water to the circus elephants or to attend a baseball game These hours of freedom, gained through his truancy, are wasted in utter idleness or aimless wandering about (b) The "precocious" type has a brilliant intellect. He is serious, scholarly, and a model student. He usually captures most of the prizes for academic work, but his entire life is sharply circumscribed by his books and his studies The social life of his school, and often of his own family, means absolutely nothing to him He never takes the initiative in forming a friendship and responds only half-heartedly if others take the initiative (c) The third, is the neurotic type of child He escapes his responsibilities and unpleasant ditties by complaints of headaches and various other bodily ailments. He to always selfish and often tries to "get by" with the aid of deceit or temper transrums (d) The

fourth is the "day-dreamer." His chief occupation is day-dreaming. He shuns his companions with their adventures and heroics of the playground, but instead loses himself in phantasies or indulges himself in a play life peculiarly his own. (e) Finally there is the "juvenile" type. This child never grows up emotionally. He remains tied to the proverbial mother's apron strings. He becomes hopelessly homesick when taken away from home. He never enlarges his friendship beyond his own immediate family circle. He evades responsibility, but is forever seeking parental approval and protection.

Where the parents or others have been capable observers and are sufficiently co-operative to tell all they know, a history of these faulty habitual reactions in childhood can be obtained in a large proportion of the cases of adolescent or adult praecoxes who are committed to state hospitals. Four such cases are described below from the records of a state hospital, illustrating Meyer's conception that the psychotic symptoms necessitating commitment to State Hospitals are but natural outgrowths of faulty reaction habits of childhood. These are followed by the case records of four children treated at Child Guidance Clinics for abnormalities in mood and conduct strikingly similar to those of the committed adults, and treated with apparent success for two to four year periods.

Case I illustrates the juvenile type of shut-in personality.

John B. (No. 19644) was admitted to a State Hospital at the age of 25 because he broke dishes and furniture in his mother's home apparently in reaction to the delusion that he was being talked about and laughed at by practically every one who came in contact with him. His mother stated that his psychosis really began about two years previously when he fell in love with a girl and she would have nothing to do with him. From the mother we learn also that he had been showing abnormal conduct from early childhood in response to an equally abnormal home environment. At the time of his birth, his mother was suffering great mental anguish due to his father's excessive alcoholism and abusiveness. Because of this, his mother broke up the home when the patient was four, and she returned to her parent's with the patient. She apparently lived her emotional life through her son, and he in turn became intensely jealous of her. If a stranger showed any attention to her, he would often respond by temper tantrums. If he sensed that she was to go out to a social affair with any man, it brought forth the same response. He would allow no one to fondle him except his mother. He slept with his mother until he was thirteen. At about that time, as so often happens with extreme or unhealthy attachments, the emotion changed from its positive to its negative phase. Hence, from insisting upon

sleeping with his mother, at the age of 13, we find him at the age of 14 in an Industrial School because he repeatedly ran away from home and his wanderlust persisted until his admission to a Without going into the State Hospital at 25. deeper psychoanalytic implications, is it too farfetched to say that his psychotic reactions to the love situation at 23 were distorted by the pattern laid down when he attempted to monopolize his mother's affection at 13. And are we unreasonably optimistic if we surmise that psychiatric interference in his early childhood might have produced the beneficient modification both in the patient's environment and in his conduct that are described in a parallel case quoted below (Case V) from the records of a Child Guidance Clinic?

Case II (F. D. O. No. 17312) illustrated the precocious type of shut-in personality. She was committed to a State Hospital at the age of 34 because she insisted upon going about the streets attempting to convert strangers and making an unbearable nuisance of herself by calling on priests at unreasonable hours. Early in her childhood the family circumstances were such that outside of school hours her time was entirely taken up with helping her father in his store and her mother with the care of the younger children. She had practically no play life and formed no girl or boy friendships. However, she seemed to be entirely satisfied with her lot, particularly inasmuch as she was precocious in school, doing substitute teaching as early as her 13th year. Later she took up office work and became intensely interested in the business affairs of her employers, accepting extra duties and responsibilities with such cheerfulness that her co-workers thought her queer. This attitude toward her was further enhanced by the fact that she studiously avoided all opportunities for social contacts. Aside from her work, the only other interest she had was her church and as time went on her religious activities began to assume an impractical intensity. At about the age of 31 she gave up office work and accepted a teaching position in a Parochial School. After several months she became dissatisfied and entered a training school for nurses. Soon after that her religious activities began to assume a psychotic tinge.

With the knowledge that the modern psychiatrist has of the Oedipus (or Electra) situation and its potentialities for good or ill, one wonders whether her abnormally inflated desire to serve her physical, spiritual and business fathers could not have been socialized sufficiently, if dealt with during her childhood or early adolescence, and thus ward off her psychosis and save to society an intelligent and efficient worker.

Case III is a good example of the neurotic type. Mabel (No. 22653) at the age or 21, claimed she was entirely too weak to work, and when

she forced herself to take a job she soon was obliged to give it up because of peculiar confused spells She grew more and more apathetic, but nevertheless an attempt at suicide precipitated her voluntary admission to a State Hospital Physical examination did not disclose any foundation for her subjective sensations of exhaustion and confusion A perusal of her childhood history, however, discloses that at the age of ten she had an attack of measles from which she made a good recovery However, hecruse of the time she lost from school, she found it difficult to maintain her former high standing in her class and therenpon began to lose interest in her school work and began to complain of various bodily ailments and used these as excuses for further abscences from Being the youngest of five, her parents school indulged her and allowed her to continue along this path of least resistance so that she lost about four years of schooling From that time on she continued to react to difficult situations in the same pathological way. This case essentially has the same factors as the case of David (Case No VI) quoted below, whose withdrawal from reality followed two attacks of pneumoma and one wonders whether Mabel might not have suc ceeded in reclaiming herself, as did David, had she attended a Child Guidance Chinc

Case IV The Day-Dreamer type (F L No 17401)

Committed to a State Hospital at the age of 41 She talked of her mother and older sister ruling her and the entire world by "evil power," and her commitment was precipitated by the fact that she created a disturbance while attending church in reaction, apparently, to her hallucinating nude priests and worshippers. Even to the most rabid anti-freudian it should become apparent that there 17 some connection between the delusion at 41 that mother has an evil power over the patient. and the circumstance related by the mother that throughout her childhood the patient maintained a very irritable, stubborn and refractory attitude toward her mother, whereas the other children were quite obedient. Although she possessed normil intelligence, she was backward in school apparently because she was given to day-dreaming At home also she kept away from the other children During a certain portion of her childhood she was extremely fond of sechiding herself in her room and indulging in peculiar pliantasies of a religious inture Had there been a Child Guidance Chine which she could have attended some thirty years prior to her psychosis it would have been brought out then (as it was thirty years later) that there was almost constant wrangling between the parents, that our patient was de-cidedly an "unwanted child" and that whereas her mother was unduly severe her father was equally indulgent. Perhaps if a Child Guidance set up had been successful in establishing a more

normal emotional atmosphere in that home during the patient's early childhood, she would have avoided a psychosis, as have her brothers

The following four case records are from the Child Guidance Chine by Dr. Donald W Cohen Asst. Psychiatrist, New York State Department of Mental Hygiene, and I herewith express my appreciation of his generous co operation

Case V. Joseph, aged 14, referred to the clinic by the nurse in his school because of his peculiar conduct This peculiarity manifested itself chefly in the form of avoidance of others, temper outbursts, and a marked antagonism for his brother who was three years his jumor family history brought out the facts that both parents were unstable individuals The father. who deserted the family when Joseph was 21/2 years old (just prior to the birth of his younger brother), was described as being an irresponsible. madequate type of man who never earned enough to support his family He was strongly interested or hypnotism and mental telepathy The mother when about thirteen or fourteen years old suffered nervous breakdown and had to leave school for She easily became excited and two years nervous when faced with difficulties and she realized that she probably had not provided as good training for her children as she might have. She had supported the family by dressmaking since her husband's desertion. Up until the birth of the younger boy she had centered all her attention upon Joseph From Joseph's personal history it was learned that as a child he was not strong physically, that enuresis occurred until he was four years old, that at the age of seven he had what mother described as an "intestinal upset" and which was accompanied by high temperature for three days After this attack he was unable to walk but doctors stated he was not paralyzed Gradually he began to walk again, but for several years was clumsy in his movements He has always had a strong dislike for physical exercises and activity of any kind. As a very young child he played by himself with his toys, never seeking the companionship of others Frequently he would wander away from his home When first seen at the chinc he was in first year lugh school Throughout his school years he had little or nothing to do with the other pupils and remained by himself. It was during the few months prior to the initial psychiatric examination that he actually began going out of his way to avoid people, becoming irritable, and subject to temper outbursts when forced into contact with The younger brother who was interviewed at clinic was definitely the opposite type, an out and out extravert He realized Joseph was "different" and constantly made him the butt of his tokes and the subject of his teasing in which he seemed to take almost fiendish delight Joseph's only interests seem to be his school work in which

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aminer when spoken to. When asked a question he had to be niged to reply and his answers were very brief, one to two words in length. quently, instead of answering, he would shake his head in the affirmative or negative. His emotional response was entirely inadequate. made facial grimaces and gave vent to short outbursts of laughter. He realized school was becoming more difficult for him but he could offer no explanation. He acknowledged his desire to be by himself, rather than with other boys. had had two chums but now seldom had any contact with them. He complained of occasionally hearing noises in his ears that sometimes sounded like human voices, although he has never been able to distinguish any words. Often he would imagine hearing his mother's voice calling him when she was not present. All interest in athletics and boys' games was lost. He realized that he was becoming more irritable than formerly and losing his temper more easily. No definite delusional trends were elicited. In dress and appearance he was quite eareless. His main and only interest appeared to be electricity.

In the Stanford-Binet Psychometric Test he attained a mental age of eleven years, four months and an I. Q. of 78. No great amount of importance was placed on this result as he cooperated poorly and took little interest in the tests.

Physical examination was practically negative save for being about six pounds underweight.

At the conclusion of the initial examination, it appeared doubtful whether this boy would be able in adjust outside of an institution for any length of time. The diagnosis was very evident, an early case of schizophrenia (dementia praecox). However, it was felt that strennous efforts should be made to try and improve his adjustment in his present environment and that hospitalization should be used only as a last resort. With this aim in mind, his case was fully discussed with his mother, teachers, school principal and boys' director of the Y. M. C. A. The cooperation of all was elicited. No ungraded or vocational classes were available, but the teachers were asked to and did give him more individual attention. He was permitted to take two and a half hours ol sliopwork a day. An effort was made to have him join the Boy Sconts but he refused to cooperate and the matter was dropped. He would give no reason for this. His interest in the Boys' Y. M. C. A. was aroused and arrangements were made to give him a membership card for this organization. Both his mother and teachers were instructed to cater to his fondness for electricity, but also to foster an interest in athletics and group activities. It was further advised that he return to clinic at frequent and regular intervals for personal interviews with psychiatrist.

At the end of one year's treatment a marked change was observed in David's condition. His

school work was so improved that he passed eighth grade successfully and was doing good ninth grade work. He now displayed a healthy interest in group activities and competitive sports, having participated actively in baseball, basketball, football and swimming with the other boys in his neighborhood every day after school hours. He became more communicative and responsive. His emotional response was quite adequate. No facial mannerisms or impulsive outbursts of laughter and anger occurred as they had previously. The noises in his ears were something of the past. He appeared happier and brighter and was proud of his scholastic achievements. He expected to enter high school in the next term. He still maintained an interest in electricity. He now was very neat in his personal appearance and took pride in the way he dressed and carried himself,

It would, of conrse, be nawise to state that David lad recovered completely from his abnormal mental condition, or that the present state of the boy will remain as satisfactory as it now is But, at least, the development of the malignant condition has been arrested and modified for some two years and what appeared to be a social and economic liability has been changed into a social and economic asset.

Case VII. Katherine, aged 11, was referred to clinic by her father and teacher because she refused to talk to anyone at home and at school. It was said that she appeared to be normal up until the time she returned from her summer's vacation which was spent with her aunt. When Katherine arrived home she observed that her mother was pregnant. That day she talked incessantly and very peculiarly, her main trend of conversation centering about her having many babies when she was older. A day later Katherine became mute and would talk to no one, and slie had several crying spells. This conduct continued for about three months when she began talking in school. At home, however, she would talk to no one and would become very angry whenever her father went near the baby which had recently been born, or when he was near his wife. Frequently she was caught pinching the baby when she thought no one was observing her. She was never able to get along with the other children at home and often quarreled with them. From the history it was learned that Katherine's mother was an uneducated, ignorant woman, very unstable, usually exacting with the children, abusive towards them, a chronic scold, and frequently given to the use of vile language when dealing with the children. The father, on the other hand was an intelligent, affable, easy-going kind man. extremely solicitons of his children, nelfare, es. pecially Katherine's, who was the steethed and his favorite. Between Kathering and her father a strong bond of attachmen
There was nothing unusual in the personal history of Katherine. At the time of examination Katherine was in fifth grade doing excellent work.

Physical examination was negative.

In the mental examination she cooperated well. She was a bright appearing girl, quiet, friendly, well mannered, and quite willing to discuss freely with the examiner her present difficulties. stated that for as long a time as she could remember she has had a marked antagonism for her mother and a strong attachment for her father. She attributed this to the mother's attitude towards her. She said that mother was constantly scolding her vilely and without reason and that nothing ever suited her. All this Katherine resented strongly. Her father, on the other hand, she stated, was the antithesis of her mother and she loved him dearly. He was always kind towards her, and treated her more like an equal. le seldom scolded her, but when he did she felt ery depressed and unhappy rather than resentful. Then he was at home he spent much time playing ith the children, especially Katherine. She said ne resented somewhat his display of affection wards the other children. When asked why she ad stopped talking, she said it was to get even ith her mother for the latter's conduct towards She felt this would make her mother feel ad and feel sorry for the way she had acted. urthermore, she stated, that if she did not talk ien her mother would not bother her or scold er so much. She would not commit herself as what her attitude towards the other children t home was, especially towards the baby. aid that when she became an adult she wished marry a wealthy man, but one who must be as good as my father." On the psychometric est Katherine attained a mental, age of 13 years nd an intelligence quotient of 116.

In this case we were unquestionably dealing 7th a girl possessing an electra complex in a rarkedly pathological state. It was felt that this xaggerated pathological condition resulted from ne malignant situation at home, the attitude of ne parents, especially the mother. The mother ormally the rival of the girl for the affections f her father had by her attitude and behavior ncouraged the transfer of this rivalry from a passive state into one of active aggressive antagonism and hatred. The girl considered the mother her bitter rival whom she wished to get rid of in order that she, the daughter, could occupy in the home the position that the mother now held. This desire to replace the mother was encouraged by the father's conduct. The father by his display of excessive affection, his oversolicitous and over-protective attitude, was unconsciously encouraging this desire of Katherine's. Her mutism was precipitated by the pregnancy of the mother, for with the birth of another child her security in the home and her close relationship with her father became threatened. Each child meant a stronger bond between mother and father, as well as another one with whom to share the father's affection. Her mutism was an attempt to punish the mother and perhaps also the father for his betrayal. Her inability to get along with the other children and her animosity towards the baby were expressions of her jealousy and her dislike for the affection her father gave them.

It was felt that in treating this problem it was necessary to attack it directly through the father and the girl, in view of the mother's instability and limited intelligence. The dynamics at work in this case relative to the parental attitudes were thoroughly gone into with the father. It was impressed upon him that change in the motherdaughter relationship would have to occur. The mother's continual nagging and fault-finding would have to be replaced by a great show of affection even going so far as to favor her more than the younger ones. Household duties were to be assigned her so as to make her feel she had some part in the running of the household. Her father was also instructed as to the means he should employ in modifying Katherine's strong father fixation. It was explained to Katherine in simple terms just what the psychology of her conduct was, with all its ramifications and inter-relationships between her and the other members of the family. Advice was given her to what procedure she was to follow at home in order that a better adjustment might occur.

The results which occurred in this case, after treatment was instituted, can well be summarized from a few excerpts of a letter received from a local social worker recently, four years after the initial examination. "Mr. R., Katherine's father, can hardly believe that a child could change as They have tried to carry out your recommendations faithfully and certainly have had results. It was really pathetic to hear Mr. R. speak of all that has been done for Katherine. He told me he could never repay you but that he did want you to know how grateful he is. She is adjusting real well and at present is in first year high school, getting grades between 80 and 90 in all subjects. She is greatly interested in Sunday School work and is teaching a good-sized class in the church Sunday School.

Case VIII. Mary, aged 10½, had for a period of about 2½ years been subject to peculiar "spells" in which she appeared to be irrational, cried without apparent cause, complained of feeling dizzy and would fall to the ground in a seemingly unconscious condition. The teacher of the rural school she attended having witnessed some of these attacks referred her to a clinic for study.

The history described the father of Mary as being very alcoholic. When under the influence of drink he became cruel and abusive towards his wife and children. He was of subnormal intel-

hgence, irresponsible, a poor provider, and displayed little affection or interest in any of the members of his family. Because of his conduct congenial family life was unknown in this home. Working only irregularly the twenty acre farm he and his family lived on, the economic status was very poor. The mother, on the other hand, was somewhat of a better and higher class type of individual who cared as best she could for her family and home considering the handicaps of insufficient means, and the behavior of her husband. I requently she had to work for the neighbors to obtain funds for the upkeep of the home. There was no history of any mental or nervous disorder on the paternal or maternal sides of the family.

Nothing significant was observed in Mary's development save the occurrence of a convulsion at the age of five months which was thought by the physician to be due to a gastro intestinal upset Her birth was normal Teething, talking and walking occurred at the usual time. Habit formation was easily established. At the age of nine she had two menstrual periods but none since then. She had just the ordinary diseases of child-At the time of examination she had hood reached third grade and was doing fair school She did not enter school until eight years She was described by her mother and teacher as a fimid, quiet, modest, seclusive, nervous child who frequently displayed stubborn, garrulous tendencies and who easily became discouraged when things became difficult or unpleasant Neither felt she was a happy child

Physical examination of Mary was negative except for enlarged tonsils. During the first interview she cooperated poorly, as it was difficult to get her to talk Frequently, blocking occurred when the subject of her "spells" was mentioned Emotionally, she seemed somewhat depressed She stated that for two or three years she had been having at home and occasionally at school what she called "dizzy spells" During these "spells" she would often fall to the ground and everything would seem confused and mixed up There was no amnesia for events occurring during these episodes, and she was able to hear the voices of the people who were near her at the She had never injured herself in any way during these attacks. After the attack she would feel exhausted but not sleepy. No information could be elicited from her as to what might have precipitated any of the attacks. She stated her affection was centered chiefly on her mother, who was kind and considerate. For her father she had a marked antagonism and hatred The basis for this was his conduct towards her mother and toward herself, his constant drinking and abusiveness and his failure to properly care and provide for his family Frequently, he would whip her severely without any just reason Consequently, she developed a marked fear for him,

especially when he was near her. When asked about the content of her dreams, she stated that repeatedly she would dream of a fierce man carrying her away. After these dreams she would wake up in a state of fear and agitation. The mother also reported that often in her spells she would cry out, 'Mother, take me and the baby away from home.' Mary stated it was because of father's behavior and her fear of him that she was judhappy at home.

In the psychometric examination she attained a mental age of 7½ years and an 1 Q of 71. It was felt, however, that this was not an accurate estimate of her actual intelligence, but that she rated much higher and that this low result was due in large part to the blocking as a result of the mental conflict present.

After the examination was completed the factors underlying and producing Mary's peculiar conduct seemed quite apparent. The "spells' from their description by the mother, teacher and child were typical of the functional or hysterical seizure rather than the actual epileptic type of convul-It was felt that the causes of these attacks were psychological in origin. She had not learned to face reality and difficult situations sult of the unsatisfactory home situation produced by the father's attitude and conduct much mental conflict had developed in the child Faced with what to her were unpleasant and impossible situations she fled from them and sought refuge in these "spells" which simulated periods of uncon-In this way she blotted out difficulties and escaped from them. Here was already being laid the foundation for an actual psychosis of a schizophrenia nature

From the information gathered by the social worker relative to the home conditions and the father whom she interviewed, it was felt that Mary's remaining in her home under present conditions would result not only in a continuation of her maladjustment but that the schizophrenic reactions would become more deep rooted and more malignant With this in mind plans were minde to remove her from her own home and place her m a foster home. Here she would receive proper care and attention as well as some parental affection and be subject to a more normal type of home life rather than a home of conflicting and malignant forces. It was also deemed advisable that she report to chuic at regular intervals for interviews with the psychiatrist in order that the causes and forces producing her past conduct could be explained to her and to help in her ad-It was also arranged to have the **ustment** psychiatric social worker and local workers keep in close contact with Mary as well as her parents The latter was done with the aim of eventually changing the home situation from its past imdesirability to one in which proper adjustment of Mary might later occur.

This program could only partly be carried out, but the results have been most encouraging. She was not placed in a foster home as was recommended, for the cooperation of the Children's Court Judge could not be obtained. Instead, she was placed in the home of a relative, but after a short period she was returned to her parents, as this proved unsatisfactory. With cooperation of the local authorities, the psychiatric social worker and the local social workers attacked the problem of the father directly. He was placed on probation to provide properly for his family and to stop drinking. Efforts were made to give him some insight into Mary's difficulties and the relationship of his conduct to her maladjustment.

Over two years have elapsed since treatment was instituted and changes made in the home situation. There have been no "spells" or attacks of any kind. Mary's timidity has almost entirely disappeared. She does not become discouraged as she did formerly. Now she is happy and cheerful most of the time and quarrels very little with others. No signs of nervousness have been observed. She is helpful at home and interested in group play and outside activities. The father, who has turned over a new leaf, is working industriously, has not been intoxicated, and is aeting towards his family in an affectionate, fatherly manner.

Unquestionably, here was a child headed for a serious mental disorder had there not occurred early recognition of the malignant factors at work and treatment instituted. Not only has a more satisfactory adjustment of the child been accomplished, but, through the treatment of her problem, a better family inter-relationship has been affected.

SUMMARY AND DISCUSSION

The "psycho-biologic" theory formulated by Dr. Adolph Meyer some twenty-five years ago offers, for the time being at least, the best working hypothesis in the attack on schizophrenia, particularly in its incipiency or early stages. A group of four adult dementia praecox cases is cited from the records of a State Hospital illustrating Meyer's conception that the psychotic symptoms of the adult are but the natural development of faulty habits of feeling, thinking and acting cultivated by the patient during his childhood. Likewise four "child problem" eases are cited from the records of a Child Guidance Clinic showing a striking similarity to the adult praecox cases, both as regards the environmental factors and the Although the four problem ave been definitely started on

psychiatric intervention ap-

peared to have vitiated some of the malignant elements in the environment and brought about for a period now of from two to four years, an apparent arrest of the praecox process. The question is raised whether similar intervention during the childhood of the four adult praecox cases might not have been the means of preventing ehronic, if not life long, psychoses.

It is the opinion of the writer that the victory over schizophrenia will not be gained by the discovery of a brilliant bio-chemical or physiological specific, as was the case with diphtheria and typhoid, but rather by a long and tedious educational campaign as in the case of tuberculosis. This entails first the acquisition on the part of the medical profession of a thorough and intimate knowledge of the natural life history of the schizophrenie process from its incipiency in children to its full fledged form in adolescents or adults. Secondly, as in the fight against tuberculosis, the psychiatrist must educate the public, particularly that part of the public which comes in contact with the child, to be "schizophrenically minded." That is to say, the family physician, the nurse, the pediatrician, the educator, the reereational director, the social worker and above all the parent, must be educated up to the idea of reeognizing that certain oddities in childhood conduct may be the forerunners of a severe and chronic mental disease, just as certain physical signs, e.g., eough or loss of weight, may be the first indication of a serious physical disease. And they also must be reconciled to the fact that sometimes the path to mental health is a long and perhaps expensive one leading to radical and costly modifications in the child's environment.

Child Guidance elinics help in the prevention of dementia praeeox in two ways. They deal directly with the individual incipient praecox necessarily only in a small number of cases. But they have a much more potent contribution to offer. They are in a splendid position to amplify our knowledge of the development and the structure of dementia praecox, and they are coming to play the leading rôle in the educational campaign which will enable the family physician, the teacher, the parent and the others mentioned, to attack the praecox problem as frankly and as intelligently as they now are able to do in the case of tuberculosis.

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ARE X-RAYS OF VALUE IN THE TREATMENT OF RINGWORM OF THE HANDS AND FEET?

By RICHARD J KELLY, MD, NEW YORK, N Y

From the Laboratory for Medical Mycology and the Department of Dermatology Van Ierbill Clime College of Physicians and Surgeons Columbia University New York Read at the Annual Meeting of the Medical Society of the State of New York at Buffalo N Y May 24 1932

HIS report is presented with the hope of offering some concrete evidence concerning the usefulness of a rays in the treatment of imgworm of the hinds and feet. It is to be un derstood that the purpose here is not to compare the effectiveness of a rays with any definitely proven and accepted fungicides. Rather the undertaking has been prompted by the many discussions concerning the actual therapeitic value of rays in this affection More particularly did this subject arouse favorable and unfavorable comment at the meeting of this section in 1931 and also at the meeting of the American Medicil Association in Philadelphia last year in mind the controversial nature of this subject preparations for this report were begin at the Vanderbilt Clinic in September of 1931, at the suggestion of Doctor George Clinton Andrews The seasonal incidence of the disease as will be explained later, has affected the number of cases treated and likewise has made selection a difficult problem However, anticipating this difficulty at the outset, the following procedure was adopted as constituting the fairest and most unbiased attack on the problem

Each patient at presentation was carefully instructed to use nothing except bring and onthinent on all the affected members. A photograph was taken of the parts involved. Then one affected member was given τ ray treatment (½ crythenia dose infiltered) and the other was given to τ ray treitment, being used as a control. The member chosen for a ray therapy was always the more in volved, where differences in the severity of the involvement were present.

After an interval of one week the patient was again seen, when another photograph was taken of all the involved pirts and ½ crythema dose of a rays was applied to the previously exposed hand or foot. Following the original plan the other member was not treated by r-rays. Another week was allowed to elapse, the patient meanwhile continuing borie acid ontinent locally. At the end of two weeks all the involved parts were once more photographed. No a ray treatment was given at this point.

An initial dise of $\frac{1}{2}$ ed of r rays was used to hasten the interpretation of results rather than being arbitrarily selected as that form most adapt ed to the treatment of ringworm of the hands and feet. Furthermore it was considered that if any improvement from a ray therapy was to seen it should make some appearance after a total of $\frac{1}{2}$ of an exthema dose. Borie acid outment was

used throughout this procedure in the nature of a placeboots reputed functional effect, but being considered of any greater value than that of many other substances of improven ment. The results, to be detailed liter show that the choice of this outnient proved its functional nature in be negligible.

A total of seventy six cases was seen since the beginning of this work. Of these twenty were acceptable for treatment with 1 rays. These were chosen because of their history physical micro scopic and cultural qualities. Every case treated was definitely proven to be positive for fungus microscopically and culturally The majority were new and intreated cases. None had had any a ray therapy applied in any form previously Fire had made local applications of omtments at home with no appreciable curative effects case was acceptable if my form of dermatitis venenata from local treatment was cyidenced. Of the twenty cases subjected to the foregoing form of a ray treatment four were found to be positive for fungus on the hands and feet. Three were positive on the hands with no foot involvement Nine were positive on the feet with no hand involvement and four were positive on the feet with trichophytid on the hand. No discriminations other than these just mentioned were made concerning the physical aspects of the cases treated included objectively scaling, oozing, vesiculation, induration and erythema among the physical features observed at the time of the first visit

As this scheme of treatment was followed, the patients on consecutive visits were questioned concerning chincal progress somewhat as follows. At the date of the hist consultation a careful history of the patients' symptoms was taken ally included complaints of itching, borning, ooz ing reduces and often of small blisters appearing on the hands and feet Variable degrees of se verity in the affected parts were likewise care fully noted. After one week succeeding the application of 1/2 of an erythema dose of 1 rays to one affected member the patient was again seen Questioned at this time concerning the condition of the affected parts the nurform reply was that the member treated with borie acid omtinent was comfortable from twenty four to forty eight hours following the first application during succeeding days with constant use of this medication relief of symptoms did not continue but rather there was a return of the original state of irritation Contrasted to this, the patients stated that the member treated with a rays was

decidedly more comfortable. When reviewed objectively, the offending members showed little or no improvement in that to which the boric acid ointment had been applied while there was obvious benefit to the member treated with x-rays. The patient was instructed at this visit to persist in the use of the boric acid ointment for another week. At the end of two weeks, after 34 of an erythema dose of unfiltered x-rays had been given, the patients were again interviewed. At this time the difference in the condition of the hand or foot exposed to x-ray therapy and that treated only with boric acid ointment was even more accentuated. The untreated member showed no improvement whatever, or negligible amounts of improvement, while the member treated with x-rays was either entirely cured or well on the way to recovery.

It might be added at this point that, where vesicles appeared at the time of presentation on either member, some were opened and others were allowed to remain unopened. This procedure seemed to have made little difference toward recovery, since at the end of two weeks the part treated with boric acid ointment showed numerous recurrent vesicles as well as many new ones. However on the irradiated member, when the sites of the previously unopened vesicles were incised (after x-rays e.d. 34 had been given) the contents of the vesicles had apparently been absorbed and the lesions themselves resolved. Also there were no new vesicles present on this hand or foot.

At the end of three weeks it became necessary to institute x-ray treatment of the previously untreated member because of the discomfort of the patient as well as of his impatience. The results obtained after both hands or feet had been exposed to x-rays not only were satisfactory to the patient but definitely informative to the observer. Because of the apparent beneficial effects of the x-rays in those cases which had not shown a complete clinical cure after 3/4 of an erythema dose, further x-ray therapy was given. The total fractional dosage of x-rays given to any one case did not exceed 11/4 erythema doses. Where possible the cases were followed for six to eight weeks after the completion of x-ray therapy. This was done in order to observe any recurrence in the original condition presented by the patient. All but one case showed a continuance of the improvement noted at discharge. This case, which had received a total of 3/4 of an erythema dose of x-rays at the time of his discharge returned in two months evidencing a recurrence of itching and scaling between the fourth and fifth toes of The original condition in this patient both feet. had included, besides these recurrent symptoms, vesiculation and heavy scaling of the soles of the feet.

Three cases which illustrate these findings are:

M.H.—Female—White—Age 9.

Diagnosis-Ringworm of feet.

Location—feet.

Duration-four weeks.

Symptoms—itching, vesiculation and sealing on soles of feet.

Microscopic examination positive for trichophyton.

Culture-trichophyton gypseum.

First visit-April 25, 1932.

At this visit the patient was carefully instructed to use nothing but boric acid ointment on her feet. A photograph was taken of both feet. Sone vesicles were opened on both feet and x-rays e.d. $\frac{1}{2}$ unfiltered were applied to the sele of the right foot. The left foot, less involved than the right, was treated with borie acid ointment only.

Second visit-May 2, 1932.

At this time the patient stated that the left foot was quite comfortable for about twenty-four hours with only boric acid ointment. However, during the succeeding days the original irritation returned. The right foot (which had received $\frac{1}{2}$ of an erythema dose of x-rays) was quite comfortable.

Objectively old and new vesicles were to be seen on the left foot, while the right foot showed a few new vesicles with apparent resolution of the old. A photograph was taken and x-rays e.d. 1/4 were applied to the right foot. The patient was instructed to continue using the borie acid ointment.

Third visit-May 10, 1932.

At this visit the left foot showed old and new vesicles and was quite annoying to the patient. The right foot, however, was apparently healed and symptomless. Incision at the sites of the former vesicles on the right foot showed collapse of the vesicles and absence of contents. A photograph was taken of both feet and at the insistence of the patient x-ray therapy was begun on the left foot. Follow-up on this case shows the right foot continuing to be well and the left foot responding to x-rays satisfactorily.

J.G.—Male—White—Age 32.

Diagnosis-Ringworm of hands.

Location—hands.

Duration—six months.

Symptoms—itching, burning, vesiculation, fissuring and scaling patches on palms and dorsum of hands.

Microscopic examination—positive for trichophyton.

Culture-triehophyton rubreum (Castellani).

First visit-April 26, 1932.

Patient instructed to use only boric acid ointment on hands. A photograph was taken of the hands and x-rays e.d. ½ unfiltered were applied to the palmar and dorsal surfaces of the right hand, this being the more involved member. The left hand was treated only with borie acid ointment.

Second visit—May 3, 1932.

At this visit the patient related that the left hand was comfortable with borie acid ointment for about six hours. Subsequently there was a return of the itching and burning which lasted through the remainder of the week. The right hand, however, according to the patient was relieved of its previous symptoms in about thirty-six hours, and continued to be comfortable. Objectively the left hand showed no change from its original condition. The right hand, which had received x-rays e.d. ½ unfiltered showed no vesiculation, less induration, and no fissuring or sealing.

A photograph was taken of both hands and x-rays e.d. ¼ unfiltered were applied to the right hand.

Third visit-May 9, 1932

At this time the left hand showed a continuance of its original condition with no allevation of subjective symptoms while the right hand (after 1 rays 3) of an erythem does had been given) was apparently circular requiring no further ray therapy

After an interval of one more week, when the left hand continued to be unimproved with borie acid ointment treatment with a rays was begin

S McC-Male-Wlute-Age 27

Diagnosis-Ringworm of feet

Location-Toes and plantar surfaces of feet

Duration-four mentlis

Symptoms—itching vesiculation oozing crusting and induration of lesions on dorsiim of feet and sealing be tween foes

Microscopic examination—positive for trichophyton on feet lesions and in toe mails

Culture-trickophyton gypseum

First visit-May 2, 1932

Patient given instructions concerning use of boric acid outlined on both feet. A photograph was taken of both feet. The left foot being the more involved was treated with a rays of $\frac{1}{2}$ infiltered to the dorsum and interdigital spaces of the toes. The right foot was treated only with boric acid outlined.

Second visit-May 9, 1932

At this visit the patient stated that the left foot was very comfortable while the right foot was itching severly, although it had been improved during the first day after borie acid outlinent had been applied. Examination of the feet showed the right foot still cozing and crusting with no evidence of improvement. The left foot showed very marked improvement, there re maintain no cozing resiculation or other signs previously seen except very slight thickening.

A photograph was taken and the left foot given a rays ed 1/4 unfiltered

Third visit-May 16 1932

The left fool to all appearances was cured at this visit. The right foot however showed no improvement

objectively and according to the patient was decidedly uncomfortable

No further a rry therapy was necessary on the left loot, but a rays 1/4 erythema dose was given to the affected areas of the right foot. This case will be followed, as were the others of similar nature.

With regard to the normal medence of ringworm of the hands and feet the records of the Vanderbilt Clinic Mycology Department show that the greatest number of incroscopically and culturally positive eases occur during the spring and stunmer mouths with a subsequent decrease in the number of these eases throughout the fall and winter mouths

In summary the intent of this report has been to determine the usefulness of 1 tays in the treatment of ringworn of the hands and feet petus for this urdertaking was provided by the numerous controversies concerning the actual value of 1-rays in the treatment of this affection The procedure followed was chosen as such, he eanse it seemed to be the fairest and most un biased atlack on the problem. In the interpretation of the results provided by this work it has not been the intention to discuss the superior merits of 1-ray therapy in ringworm over those of a considerable number of other well recognized curative procedures. However, it is felt that the question which promoted this research has been answered and that it may be said that a rays are of value in the treatment of ringworm of the hands and feet

In closing, I wish to express my appreciation to Doctor George Clinton Andrews for his helpful suggestions and guidance throughout this work and also to Miss Mary E Hopper of the Mycology Department of the Vanderbilt Clinic

PSYCHOANALYTIC FACTORS IN FAMILY DISCORD*

By C P OBERNDORF, M D, NEW YORK, N Y

CCORDING to a legal decision a family is formed when two people marry opinion differs from the popular conception that a family comes into being only after the birth of a child The legal construction of the term corresponds with the new psychological attitudes which begin to take form in the two individuals from the moment they have been pronounced man and wife. The situation immediately after wed lock embodies many of the potential elements for happy or discordant family adjustment that moment each member is unconsciously in fluenced by his or her positive or negative attitude toward offspring. The mental attitude toward progeny is not deferred until the birth of the child nor does it await the actual knowledge of conception on the part of the woman. The marriage

* Read at the Annual Meeting of the Medical Society of the State of New York at Buffalo N Y on May 24 1932

ceremony releases many unconscious forces which have lain relatively dormant from early childhood.

The desire to marry, to form a family, begins to take shape and occupy the attention and fantasy of most children from the age of four or five nr even earlier. The interest is revealed in their games and stories Probably every adult sat as a wide eyed child in rapt attention on the floor and listened to the tale of the beautiful princess and And each adult remembers the stalwart knight throughout his life the ending-"They married and lived happily ever after" When the routing story of the prince and the princess began to pull a bit from its nightly repetition and a variation of the old theme replaced it, the child knew it was bed time when he heard the soothing voice saving "and then they grew up and married and lived happily ever after"

We may pause to reflect why the adult always

decidedly more comfortable. When reviewed objectively, the offending members showed little or no improvement in that to which the boric aed ointment had been applied while there was obvious benefit to the member treated with x-rays. The patient was instructed at this visit to persist in the use of the boric acid ointment for another week. At the end of two weeks, after 3/4 of an erythema dose of unfiltered x-rays had been given, the patients were again interviewed. At this time the difference in the condition of the hand or foot exposed to x-ray therapy and that treated only with boric acid ointment was even more accentuated. The untreated member showed no improvement whatever, or negligible amounts of improvement, while the member treated with x-rays was either entirely cured or well on the way to recovery.

It might be added at this point that, where vesicles appeared at the time of presentation on either member, some were opened and others were allowed to remain unopened. This procedure seemed to have made little difference toward recovery, since at the end of two weeks the part treated with boric acid ointment showed numerous recurrent vesicles as well as many new ones. However on the irradiated member, when the sites of the previously unopened vesicles were incised (after x-rays e.d. 34 had been given) the contents of the vesicles had apparently been absorbed and the lesions themselves resolved. Also there were no new vesieles present on this hand or foot.

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is a fallacy to suppose that marriage per se will markedly alleviate or cure such a pathological situation

A neurotic man and a neurotic woman may find themselves drifting together through a sympathy based upon an unconscious identification with each other. Marriage must be regarded as the most exacting form of psychosexual relationslip and social adaptation existing today. It entails not only the fulfillment of physical obligations but in addition a necessity for self sacrifice, affection and love which cannot be allowed to lapse for any considerable period of time capacity of the neurotic person to love is restricted -far more than he is consciously aware fact alone suffices to cause disharmony in marriage. A failure in adaptation on the part of either the man or the woman may show itself in any one of a myriad of symptoms ranging from sleeplessness to a severe phobin. However, the likelihood for disorganization in marriage is less if one of the individuals, husband or wife, is normal

The sources of incompatibility among the parents themselves are three firstly, the Cidipus situation, secondly, emotional immaturity, and thirdly unconscious homoseximity

1 The Edipus situation carries with it two stipulations—firstly, the desire to possess for one's self a person in the role which the individual so desired as a child, and secondly, the prohibition of meest. Thus when the individual has obtained through marriage the goal of possessing the hus band or wife, the prohibition against incest may arise unconsciously. This is especially so when the man's unconscious attachment to his mother or the woman's to her father has not been fully At the outset of every marriage the participants normally are handicapped by these two unconscious antagonistic strivings. It seems very likely that the waning of sexual interest after marriage cannot be accounted for entirely by the explanation of repetition and fulfillment of sex gratification but may be partly due to a recur rence of the unconscious prohibition against in The delay in the appearance of aversion to the wife is due to the fact that during the first period of married life the man regards the woman not so much in her wifely role but as a sex love object As this sensious desire is being appeared, the wife in her new surroundings gradually as sumes the mental image and some times even the body-inage of the mother of childhood with the reactivation of the prohibition against sexuality This feeling is apt to occur most signally when the individual's unconscious attachments are exceptionally strong and the mate in marriage is a replica of the forbidden parent Indeed this general formulation can best be demonstrated in decidedly pathological instances, but it is precise ly from the gross cases that we are able to reason the presence of similar mechanisms in subtler

2 Emotional immaturity in parents is closely associated with their own strong parental attach-Parents with a keen counter-attachment to their children artificially foster a dependency of the children and in order to assure this dependency impose unusual prohibitions against freedom. Only when the infantile affective ties to the home and parent have been finally ruptured It is well ean full entotional maturity develop known that emotional maturity does not neces sarily go hand in hand with intellectual develop ment Emotionally immature persons continue to yearn for excessive affection on the part of the parent and therefore are unable to give their fair measure to the mate and children in marriage relationship

3 Unconscious homosexuality, the third factor in discord between man and wife is usually a matter of identification with the parent of the opposite sex rather than of biological constitution In every male there are certain vestiges of femininity and in every female analogous remnants of masculanty When unconscious homosecurity is particularly strong in the female it leads to discord through the attempt on the part of the woman to assume authority in situations and at times which are particularly liumiliating to the male On the other hand, the femininely inclined male is apt consciously to resent domination with repeated outbursts of ineffectual protest Marriages which seem to be relatively happy but where the male is weak and the female strong depend upon a complementary adjustment of the inverted inconscious strivings. These cases are not numerous

While the birth of a child tends to cement a union through the establishment of a sense of mutual responsibility, at the same time it may tend to disrupt it through the fact that some of the love previously given by the parents to each other exclusively is visited upon the child Thus, the parent who is still emotionally immature, that is unconsciously over attached to his own parent is unable to relinquish his own desire for motherly or fatherly indulgence. Such a person is often incompetent to establish a satisfactory affective relation with his mate in a reasonably short time after marriage. He is apt to regard his offspring as a rival So the man who wishes to be mothered excessively by his wife uncon sciously begins to resent the presence of a male child who receives so much attention and especially in the form of infantile coddling which even though a father he still enjoys so fully

Disharmony among parents themselves is immediately and very clearly, though often unconsciously, transmitted to the children. The discord among siblings has its origin largely in rivalry and competition for the affection of the

parents. This is often unconsciously fostered by the parents themselves. Indeed, no two parents feel exactly the same towards any one offspring. No matter how earnestly parents may attempt to maintain a position of impartiality, they find it impossible not only because of their own unconscious predilections and because each new child in the family inevitably necessitates a readjustment of emotional distribution. Thus, no two siblings, even in the most static household, are ever raised in exactly the same emotional or even physical environment because each new child creates a decided and permanent alteration in the environment.

Among the siblings themselves when they are of different sexes, but at times when they are of the same sex, an attempt may be made to duplicate the parents' rôle in the nursery, and even in later social associations. A strong unconscious attachment between two siblings of the same sex may fixate a homosexual tendency which in later life prevents transition to heterosexuality. times the close attachment between brother and sister, for instance, which has all the unconscious emotional implications of marriage may be the unconscious cause of conscious hostility to each other or may lead to attempts later in life to prevent the marriage of one of the parties. brief citation of a case will serve to illustrate the operation of this mechanism in a family situation.

The patient, aged thirty-two, a college graduate, applied for treatment primarily because he could not decide to marry a young woman with whom he believed himself in love. In addition to this urgent social situation he had long been troubled with the fear of jumping from the window, a fear of cutting his finger, a constant irritability and a relative impotency. The patient had had an over strong attachment for his mother, who in turn occupied the dominant figure in the household. Indeed, the father had been relegated to the position of a negligible drudge. The patient at the age of twelve had attempted coitus with a sister aged sixteen, but she repulsed him. She grew into womanhood and while he was away at college became engaged to a man whom the patient had never seen. Upon his return home he immediately took a violent dislike to the sister's betrothed which continued unabated after her marriage. His sister and her husband then moved to another city so that the patient seldom came in contact with them.

About four years after marriage his sister's husband found himself in financial difficulties and the patient immediately began to agitate for a divorce of the couple. By this time he had become the most influential member of the family circle. Not only had he superseded his father but had assumed the rôle of head of the family. His sister seemed disinterested in divorcing her husband, but the patient insisted that his mother

visit the sister in her home and arrange for a divorce because he "could not bear to think of his sister in want." The mother returned from the visit to the daughter apparently unconcerned about the situation. In her opinion the daughter seemed reconciled to her reduced circumstances. When the patient heard that his mother had not carried out his wishes, he flew into a rage, accused his mother of incompetence and lack of interest in her daughter's welfare. On the very same day he took a train to the place where his sister lived and finally maneuvered to induce his sister to sue for divorce. She returned to live with the family where she passed under his control. He then permitted her to become a clerk in a department store although he could well have supported her.

The patient remarked, after five months of analysis, "Now I realize why I engineered my sister's divorce—I really insisted upon it—but when I did it I was entirely unconscious of my motives." The unconscious motive which prompted the patient to interfere was his own desire to possess the sister and this in turn made it intolerable for him to see her attached to any one else. The patient eventually began to realize that no matter to whom his sister might have been married his attitude to the husband would have been the same as it was to his inoffensive and incompetent brother-in-law.

The extent of the patient's attachment to his sister was revealed in frankly incestuous dreams concerning her after six months of analysis and three months after his own marriage. The patient's marriage during the analysis was contrary to the well-established rule that a patient should undertake no very decisive and relatively irrevocable decision during the time that he is under analysis. In this case the patient attempted to bind himself by the formality of marriage because he feared that without a precipitate and drastic step he might never be able to undertake it.

The value of the physician's experience in familial controversy has been recognized for many centuries, but his advice hitherto has been pri-The establishment of child marily intuitive. guidance clinics in many cities of this country and of matrimonial consultation bureaus under medical direction in some of the German cities has brought the scientific contributions of mental medicine into closer touch with the allied fields of pedagogy and social hygiene. The tendency of judges in domestic relations courts and of lawyers, who are often the first to be consulted in cases of marital discord, to refer the dissatisfied parties to psychiatrists for opinions and treatment indicates that the scientific application of psychiatric and psychoanalytic discoveries is on the increase in these difficulties.

Indeed, psychoanalysis has deepened our knowledge of the sexual and allied difficulties which exist in every marrige. The better we understand them the greater will be our capacity to alleviate the intricate situations which arise. The revelations of psychoanalysis may and already are calling for alterations in our social scheme. If science points the way to new regnlations in regard to certain institutions which have been regarded as permanent, or even sacred, it is merely following the inevitable changes in other social

views which have resulted from scientific discoveries—for instance, the prohibition against the custom of draining sewage into streams when it was proven that such practices led to pollution and typhoid. If our more enlightened grasp of underlying factors in family discord leads to greater latitude in divorce regulations, if it tends to shake the stability of the home or eventually lends its force to a recasting of marital obligations, morals and ethics, these possible sequences are not the primary concern of the scientific investigator.

CHRONIC DUODENAL OBSTRUCTION By ROSS GOLDEN, M.D., NEW YORK, N. Y.

From the Roentgen Ray Department of the Presbyterian Hospital and the Department of Medicine of the College of Physicians and Surgeous, Columbia University, New York, Read at the Annual Stetting of the Medical Society of the State of New York, at Bullalo, N. Y., May 24, 1932.

Tile roentgen ray examination of the gastrointestinal tract is usually undertaken for the purpose of determining the presence or absence of peptic uleer or malignancy. The absence of these pathological processes does not necessatily mean that the examination is without significance. It should be, in addition to a search for these important diseases, an anatomic and physiologic study through which may be revealed information of great value in explaining the patient's symptoms.

Among the less frequently encountered causes of digestive disturbance is the condition which may be termed chronic duodenal obstruction. The fact of its existence has been known for years; yet it seems to be all too frequently ignored, probably because its manifestations are often vague and indefinite. The recognition of it depends primarily upon the roentgenologist. Unless he appreciates the significance of abnormalities of physiology as well as of filling defects and crater shadows, it will not be detected.

Chronic duodenal obstruction is frequently associated with or arises from developmental variations in the duodenum and its attachments. It is not possible here to discuss the embryologic origin of these anomalies (see Dott). For clinical purposes they may be classified roughly under three general headings (Fig. 1). 1. Variations in the bepato-duodenal ligament. 2. Anomalies in the position of the duodeno-jejimal junction and in the peritoneal reflections about it. 3. Accessory peritoneal bands or membranes springing from the under surface of the liver and around the root of the gall bladder. Any one of these conditions may appear alone or in combination with the others.

Chronic duodenal obstruction may be eaused by pressure of the superior mesenterie or dextrocolic artery on the ascending limb of the duodenum and occurs most frequently when the duodeno-jejunal junction overlies the spine.

Recent observations on the physiology of the

duodenum are of great interest in this connection. Dragstedt and Dragstedt showed that extrinsic circular pressure by a rubber hand sufficient to resist the pressure of only six inches of water is enough to cause duodenal obstruction and death in a dog. Much greater pressure is necessary to produce the same effect in lower portions of the intestine. Ivy found that distending a rubber balloon in his own duodenum produced a characteristic type of nausea and, less frequently, pain.

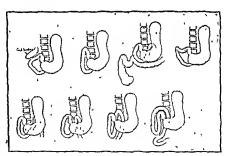


FIGURE 1

A diagrom of vorious types of developmental anomalies of the duadenum as seen on roenlyen ray examination. The upper row shows variotions in the hefoto-duadenal ligament. The lower row shows the various stages in the shift to the right of the duadeno-jejunal junction. The lower left sketch represents the average normal position; the lower right is the extreme degree of displacement where the third portion rises to the right of the second and the duadeno-jejunal junction overlies the right side of the vertebrol column.

SYMPTOMS

The most common symptoms are vague distress after eating, a full feeling after only a little food is eaten, nausea, voniting with relief and less frequently attacks of pain. Alkalies give

only moderate and temporary relief, if any. The symptoms are not relieved by eating as in ulcer. They are aggravated by coarse foods. The patients sometimes state that they would be comfortable if they could get along without eating. This leads to undernutrition and physical inefficiency. They frequently tell of having gone from doctor to doctor and of being told that nothing is the matter with them. They often present the picture of neurasthenia and maladjustment.

It is often difficult, particularly in border-line cases, to determine the importance of the emotional, functional or psychic elements in explaining the symptoms. That this aspect of the problem is of great importance and sometimes predominates was emphasized by Dr. Allen O. Whipple, speaking from the standpoint of a surgeon, in a recent lecture before the Chicago Institute of Medicine. Dr. Robert B. McGraw, our consulting psychiatrist, who has studied carefully a number of these patients, states that the emotional reactions are too variable to be classified in an orderly manner. He agrees that the physiological aspect is of prime importance but points out that anxiety neuroses and environmental maladjustments must nevertheless receive suitable attention.

The symptoms associated with this condition occasionally manifest themselves in infancy or childhood but may not appear until later life, even in middle age. If their source lies in a condition which has been present all the patient's life, why is their appearance delayed? It is frequently noted that the onset occurs after something which lowers the patient's vitality, e.g., an attack of influenza or a period of unusual strain. Dr Alfred Taylor's conception of the compensation of a viscus for an anatomical handicap and of decompensation under strain, analogous to what takes place in a diseased heart seems particularly happy. As long as the stomach and duodenal bulb, for example, can successfully overcome a hindrance at the junction of the first and second portions of the duodenum no symptoms are present. When, however, intercurrent disease, the increasing strain of life, or even some temporary indiscretion in diet intervenes, the balance is upset, proper emptying does not take place and symptoms develop.

DIAGNOSIS

The diagnosis depends primarily upon the roentgen ray examination. The importance of a careful fluoroscopy cannot be overemphasized. Aside from the developmental anomalies mentioned previously, it may disclose varying degrees of delay in and dilatation of one or more portions of the duodenum, a six-hour residue in the duodenum and even in the stomach, and sometimes the gastric dilatation, atonicity and abnormal peristalsis which go with chronic obstruction. Extraneous bands may cause deformities of the bulb

very difficult to differentiate from those of ulcer. Active reversed peristalsis in the second portion is frequently encountered. It is sometimes possible to see a thinned area where the duodenum crosses the spine or at the duodeno-jejunal junction when a bolus of barium is squirted through, suggesting pressure from without. The effect on the emptying of the second portion by changing from the upright to the prone position and of manual pressure on the lower part of the abdomen should be observed. It is usually not difficult to determine whether the second portion of the duodenum is intraperitoneal or is fixed behind the peritoneum as it should be.

The summing up of the evidence in such cases requires the correlation of the anatomic and physiologic data assembled from careful roentgen ray studies with the clinical picture.

TREATMENT

A brief statement of the measures ordinarily used in the treatment of this condition would include frequent small feedings of low residue, high-calory food, exercises intended to strengthen the abdominal musculature, a belt appliance to lift up the lower abdomen and gastric lavage with great care not to overdistend the stomach. In undernourished individuals an increase in weight is often associated with relief of symptoms. Adequate rest must be taken and undue fatigue and strain avoided. If symptoms persist in spite of these measures or if the maintenance of compen-



FIGURE 2. CASE 1

The stomach of a boby seven days old who had vomited all feedings since birth. This was watched with the fluoroscope at intervols for four hours during which time very little barium possed beyond the duodenal bulb. The obstruction of the junction of the first and second portions was thought to be rother more suggestive of a duodenal band thon of a developmental atresia.

sation so limits the patient's activities that life becomes difficult, the question of surgical intervention arises. The surgical procedure is usually intended to relieve the mechanical difficulty or to short-circuit it (Taylor; Duval, Roux and Beclere).

CASES

The following cases are shown as examples of the importance of recognizing this condition.

Case 1. A bahy seven days old was sent to the roentgen ray department by the obstetrician. Dr. Chas, E. Caverly, because he had vonited all of his feedings since birth. Fluoroscopic observation at intervals over a period of four hours showed that very little if any barium left the stomach. The obstruction seemed to be at the function of the first and second portions of the duodenum (Fig. 2). Congenital atresia and a duodenal band were suggested as possible causes. The latter seemed more likely because the obstruction was at the first and second portions. The bahy was operated upon by Dr. R. F. Carter, A duodenal hand (Fig. 3) was found and severed.

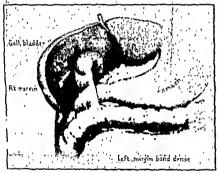


FIGURE 3. CASE 1

A drawing based on a sketch made by the surgeon. It shows semi-diagrammatically the band found at operation, on the week-old baby; a roentgenogram of whose stomach is shown in Fig. 2. The band seemed to be responsible for the obstruction at the function at the first and second portions of the dualenam.

A tube was passed through the esophagus, stomach and duodenum into the jejimum (Fig. 4) showing that no atresia was present. After operation the baby took his feedings in a normal manner and has thrived.

Case 2. A forty-two-year-old nurse had never been able to take more than the shiplest nuels without immediate gastric distress, frequently associated with nausea and vomiting. For years she subsisted on pureed food but had symptoms in spite of it. If she abstained from food the distress was relieved. During the year and a half previous to admission the symptoms became worse. She lost thirty-five pounds in eight months. For one month she vomitted every meal and the vomitus frequently contained bright red blood. There was apparently a large psychic element in the case, in which an unfortunate love

affair played a major role. During a period of years she had been seen by a number of doctors



FIGURE 4, CASE 1

effer the operation at which the duodenal band shown in Fig. 3 was severed, a tube was passed through the aesophagus, stomach, and duodenum into the jejunum, showing that no congenial arcsia existed and that the obstruction was fuc to the band. Since operation the baby has thrived, I am indebted to Dr. R. F. Carter for the film reproduced here.

and had been told there was nothing the matter with her. A barium meal disclosed, in brief, an



FIGURE 5. CASE 2

A film of the gastrointestinal tract of a 42-year-old nurse who had suffered from gastric symptoms for years. The duodenal bulb is enormously dilated, indicating obstruction at the junction of the first and second portions of the duodenum. At antopsy a band, analogous to that found in the body (case 1), was found running from the under surface of the liver across the upper part of the descending limb of the duodenum. Cystic gastritis was present in the autrum of the stomoch.

enormous dilatation of and a five-hour residue in the first portion of the duodenum and a very small gastric residue (Fig. 5). After admission, in spite of frequent small feedings of soft food, she continued to vomit and two weeks later developed gastric tetany. A jejunostomy was done, hoping to get her in condition for a more extensive surgical procedure. She lost all desire to She continued to vomit, developed a gangrenous cellulitis of the left thigh and died on the eighty-eighth day after admission. Autopsy disclosed a thick peritoneal band extending from the under surface of the right lobe of the liver to the upper part of the descending limb of the duodenum, five cm. in width and eleven cm. long. Cystic gastritis was found in the prepyloric region of the storach (Fig. 6).



FIGURE 6. CASE 2

Cystic yastitis associated with chronic duodenal obstinction due to a duodenal hand; a photomicrograph from a section taken from the autrum of the stomach

Case 3. A fourteen-year-old girl was sent to Dr. Robert B. McGraw as an emotional feeding problem. About four months previously she lost her appetite and began to lose weight. was some evidence that this was initiated by dieting to get thin. She was twenty pounds under weight. She resented all efforts to make her eat because she felt stuffed and at times nauseated A roentgen examination of the gastro-intestinal tract (Fig. 7) disclosed a small six-hour barium residue with considerable fluid in the stomach. The second portion of the duodenum contained a good-sized six-hour barium residue, was freely movable, dilated, showed marked delay in the passage of barium with active reversed peristalsis and regurgitation into the stomach (Fig. 8). The third portion of the duodenum rose over the spine and was seen to move rhythmically and synchronously with the pulse as if it were in contact with the aorta or the superior mesenteric artery. The delay in the duodenum seemed to be due to an obstruction at the duodeno-jejunal junction. Attempts at treatment for a time were futile. She was sent to a sanatorium where she was tube-fed for over a week during which she gained seven pounds. Then her appetite suddenly returned, she began to eat and gained thirty pounds in two months.

Case 4. A man of thirty-eight came to the hospital in 1924 complaining of gastric symptoms



FIGURE 7. CASE 3

el siv-hour residne in the stomach, bulb and second portion of the duodenum in a 14-year-old girl. The patient was 20 lbs, nuder weight. She was referred for evanination of the stomach by the psychiatrist to whom she was sent as an emotional feeding problem.

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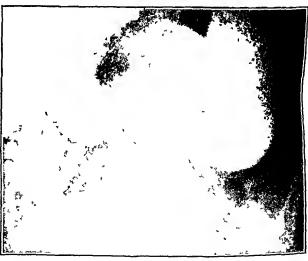


FIGURE 8. CASE 3

Chronic obstruction at the duodeno-jejunal innetion (same case as in Fig. 7). The second portion of the duodenum is dilated. The third portion of the duodenum ises over the right side of the spine and its upper part was seen fluoroscopically to move rhythmically with the pulse indicating intimate contact with the aorta or some large artery. The second portion slauts to the right, suggesting an extension of the hepato-duodenal ligament ont over the gall-bladder and over the anterolateral margin of this part of the duodenum.

three to four hours after meals almost daily and for one week severe epigastric pain, worse at night and relieved by vomiting. He was markedly undernounished. A roentgen examination of the gastro-intestinal tract (Figs. 9 and 10) dis-



Figure 9. Case 4

An enormously dilated stomach with puddles of barium in the first and second portions of the duodenum. The fatient was a man of 35 years of age who had symptoms of several years duration suggesting a duodenal ulcer. (See Fig. 10.)

closed a dilated hypotonic stomach with a large six-hour barium residue and much fluid, duodenal bulb was very long and seemed to be angulated at its junction with the second portion where there seemed to be a hindrance to the passage of barium. Three examinations failed to disclose evidence of peptic ulcer. Small feedings of low-residue food gave relief only as long as the patient remained in bed. After two months of dietary treatment he was operated upon by Dr. D. C. Bull. Although the lower end of the stomach and the duodenal bulb were opened and examined from within, no evidence of peptic ulcer could be found. There was a band between the inferior surface of the gall-bladder and the anterior surface of the duodenium running back to the angle between the cystic duct and the duodenum. It was about eight em wide. surgeon's impression was that this band was causing obstruction. He severed it, removing the gall-bladder to peritonealize the cut surface. The position of the junction of the first and second portions of the duodenum was lowered. After an uneventful convalescence the patient's symptoms disappeared. When seen by Dr. Bull in 1930, six years after operation, he was having no trouble except after eating calbage or indulging too freely in soda water. In the spring of 1931 I requested him to return for another roentgen examination and found that he had been having indigestion for the preceding few weeks.



FIGURE 10. CASE 4

The stomach shown in Fig 9 in the right prone position. The duodenal bulb is very long. The junction of the bulb with the second portion is sharply angulated A operation the upper part of the second partion was unted to the goll-bladder by a dense band which seemed to be causing obstruction. The removal of the band was followed by freedom from symptoms for over six years when the patient developed a gastric ulcer.

The examination disclosed a peptic ulcer of the lesser curvature of the stomach. The duodenal bulb was still long but its contour was different and there was no evidence of delay in the passage of barium through it.

SUMMARY

Cases 1 and 2, presented above, show duodenal obstruction from essentially the same type of band in a new born iofant and in a woman in the fifth decade of life. In the latter it was associated with definite pathologic changes in the stomach wall (cystic gastritis) which are undoubtedly the result of a chronic inflammatory process, probably based on long continued gastric stasis. In the former it was immediately relieved by the severing of the obstructing band. Case 3 was a chronic duodenal obstruction located at the mis-

enormous dilatation of and a five-hour residue in the first portion of the duodenum and a very small gastric residue (Fig. 5). After admission, in spite of frequent small feedings of soft food, she continued to vomit and two weeks later developed gastric tetany. A jejunostomy was done, hoping to get her in condition for a more extensive surgical procedure. She lost all desire to She continued to vomit, developed a gangrenous cellulitis of the left thigh and died on the eighty-eighth day after admission. Autopsy disclosed a thick peritoneal band extending from the under surface of the right lobe of the liver to the upper part of the descending limb of the duodenum, five cm. in width and eleven cm. long. Cystic gastritis was found in the prepyloric region of the stomach (Fig. 6).

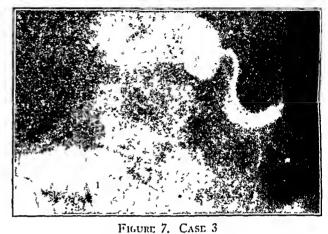


FIGURE 6. CASE 2 Cystic gastritis associated with chronic duodenal obstruction due to a duodenal band; a photomicrograph from a section taken from the antrum of the stomach.

Case 3. A fourteen-year-old girl was sent to Dr. Robert B. McGraw as an emotional feeding problem. About four months previously she lost her appetite and began to lose weight. was some evidence that this was initiated by dieting to get thin. She was twenty pounds under weight. She resented all efforts to make her eat because she felt stuffed and at times nauseated. A roentgen examination of the gastro-intestinal tract (Fig. 7) disclosed a small six-hour barium residue with considerable fluid in the stomach. The second portion of the duodenum contained a good-sized six-hour barium residue, was freely movable, dilated, showed marked delay in the passage of barium with active reversed peristalsis and regurgitation into the stomach (Fig. 8). The third portion of the duodenum rose over the spine and was seen to move rhythmically and synchronously with the pulse as if it were in contact with the aorta or the superior mesenteric artery. The delay in the duodenum seemed to be due to an obstruction at the duodeno-jejunal junc-

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A six-hour residue in the stomach, bulb and second portion of the duodenum in a 14-year-old girl. The patient was 20 lbs, under weight. She was referred for exami-

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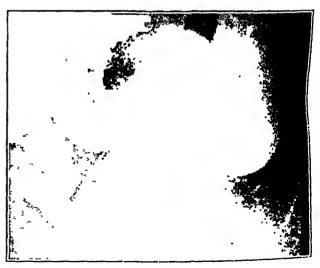


FIGURE 8. CASE 3

Chronic obstruction at the duodeno-jejnual junction (same ease as in Fig. 7). The second portion of the duodenum is dilated. The third portion of the duodenum rises over the right side of the spine and its upper part was seen shoroscopically to move rhythmically with the bulse indicating intimate contest with the gorge or some pulse indicating intimate contact with the aorta or some large artery. The second portion slants to the right, snggesting an extension of the hepato-duodenal ligament out over the gall-bladder and over the anterolateral margin of this part of the duodennin.



Figure 1.
Parasaggital meningcoma. Localized increased vascularity.

the sites of election of the meningeomas, it is fairly certain that this is the type of tumor we are dealing with, which proved to be the case in the skull shown in Figure 2.

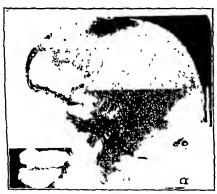


Figure 2.

Calcification in a Parasaggital meningcoma

In Figure 3 we have a skull harboring a meningeoma arising along the olfactory groove of the ethmoid. This is a fairly common site for these tumors. They occasionally calcify, as can be seen in the illustration, and also frequently produce some bony overgrowth of the floor of the anterior fossa. They not infrequently are found to be of the rather flat, spreading, so-called "en plaque" type, and they often extend back as far as the sphenoid ridge. Tumors in this location, as might be expected, produce as their earhest

symptoms, anosmia and vague personality changes, so often associated with frontal lobe lesions.

In Figure 4 we have a meningeoma of the sphenoid ridge. In the illustration this may appear very similar to the case seen in the previous illustration, but instead of calcification in the



Figure 3
Meningcoma arising along the olfactary groave,

tumor this case shows bony production which usually can be differentiated by careful examination of stereoscopic films including postero-anterior views. These tumors not infrequently invade the orbit and produce unilateral evolutialmos. In Figure 5 we have the same case showing the thickening over the orbit and along the sphenoid ridge.



Figure 4
Meningcoma extending over sphenoid ridge



Figure 5.

Same as Figure 4 Note bone thickening of sidge and over orbit.

In Figures 6 and 7 we have illustrations of these tumors invading the orbit and producing unilateral exophthalmos. In Figure 6 the posterior wall of the orbit can be seen to be partially destroyed, as in this case the osteolytic tendencies predominate, but in Figure 7 the osteophytic tendencies have the upper hand and the orbit is seen to be almost filled with an over-growth of bone.

In Figures 8 and 9 we have a case in which the meningeoma originated in the wall of the lateral sinus and spread upward to involve the petrous pyramid, producing a large amount of dense, bony over-growth. In Figure 8 fine lines of calcification can be seen which roughly outline the extent of the tumor itself. In spite of the size of this tumor, it is interesting to note that the sella is practically intact.



FIGURE 6
Meningcoma which has destroyed posterior orbital wall.

Figure 10 is of a skull which shows several poins of interest. In the first place, the 1ay-like sunburst effect in the frontal bone is quite characteristic of the meningeoma which has both osteolytic and osteophytic tendencies, but in this



Figure 7.

Meningeoma invading orbit and producing hyperostosis

case a shadow of calcification is seen just back of the sella which I rather think may well be the site of another tumor, although, unfortunately, this was never definitely proved. It is also to be noted



FIGURE 8

Meningcoma near lateral sinus. Note dense bone production and calcification in tumor

that the sella shows considerable destruction. The dorsum is almost completely absorbed.

In Figure 11 we have a case in which a large

meningeoma was found in the parieto-occipital region. Here again, osteolytic and osteophytic tendencies are to be seen. There is also marked increase in vascularity.

Figure 12 shows still another manifestation of



Figure 9. Same as Figure 8.

these tumors, in which we have considerable hyperostosis along the sphenoid ridge, and another area of hyperostosis under the bregma but, strange to relate, this area under the bregma, when removed, seemed to be perfectly normal bone.

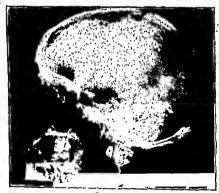


Figure 10,

Meningeoma of frontal region. Note "sun burst" effect
in the bone,

The last case that I am showing is illustrated in Figures 13 and 14. This is of a rather large parasaggital meningeoma which, beside showing



Figure 11.

Large meningcoma in parieto-occipital region.

calcification, has also invaded both tables of the skull and emerged under the scalp, producing a lump, which was the only thing worrying the patient. The soft tissue film shown in Figure 14 clearly demonstrates the spiculations on the outer table, produced by these tumors, not unlike spiculations often seen with the osteogenic sarcomas in other parts of the skeleton. It is not uncommon for these comparatively benign looking lumps under the scalp to be diagnosed as sebaceous eysts or other simple lesions, because the intracranial symptoms are frequently so vague and obscure that they do not impress either the patient or the physician.

In summary, then, let me call attention to the



FIGURE 12.

Large meningeoma with hyperostosis of sphenoid ridge
and under bregma.

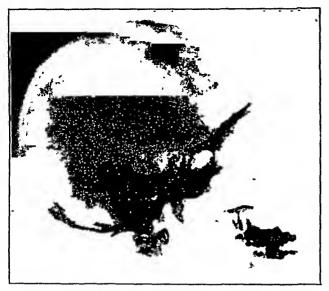


FIGURE 13. Parasaggital tumor with calcification and extension through skull.

manifold changes these lesions can produce, but they nearly all will be seen to have some tendencies toward bone production if only by the formation of small spicules. Increased vascularity is another characteristic which, when seen unilaterally, may be of considerable significance, but it must be borne in mind that unilateral increased vascularity can also be caused by the haemangeomata. These, however, are comparatively rare, and very frequently by the use of the stethoscope a bruit can be heard which makes the differentiation from the meningeomas comparatively easy.

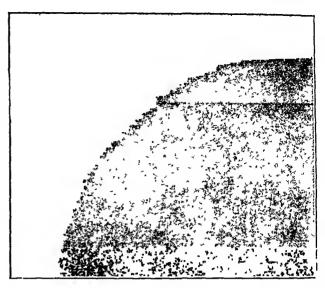


FIGURE 14. Same as Figure 13. Soft tissue film showing spiculation on outer table.

When we see a shadow indicating bony overgrowth in the sites of election of these tumors, and when the patient complains of a long, rather vague clinical history, we are usually justified in making a positive diagnosis of a meningeoma.

In closing, let me emphasize the importance of obtaining stereoscopic films with the aid of a Bucky diaphragm, and also it is equally important not to attempt to interpret skull films without being thoroughly acquainted with the clinical findings, for all meningeomas do not manifest themselves as unmistakably as those I have selected for the illustrations.

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THE AMERICAN MEDICAL ASSOCIATION

The New York State Delegates have given glowing accounts of the Annual Meeting of the American Medical Association which was held June 12-16 in Milwaukee, Wisconsin The absence of lengthy discussions on the floor of the House of Delegates was reflected in a meagerness of the news of the meeting carried by the daily papers, but in fact more discussions than usual

took place before the committees, many of which held lengthy hearings at which an opportunity to speak was given to scores of physicians besides those who were duly accredited delegates

New York State was honored by the unanimous election of Dr Nathan B Van Etten of Bronx County, as Vice Speaker of the House of Delegates

INSURANCE FOR HOSPITAL SERVICE

A confusion is sometimes made between the consideration of a question and a decision regarding it.

A patient often asks his physician to give an opinion regarding an advertised method of treatment. If the patient is merely curious, he will be satisfied with the casual opinion of the doctor; but if the patient is anxious to try the advertised treatment, the doctor will be compelled to give serious consideration to the method, to ascertain the facts regarding it, and to take positive steps to influence the patient either for or against it.

Likewise a medical society is often compelled to consider an activity which is widely advertised by methods of propaganda. When medical societies refuse to discuss the medical problems which are common subjects of newspaper articles and radio talks, or when they discuss them only in ridicule, the medical profession suffers in its reputation for broadminded judgment. Medical leaders in these modern days realize the desirability of giving serious attention to the new problems which are constantly arising, especially those regarding medical economics and medical administration.

When a new subject is under consideration, the usual course which is taken by medical societies is to appoint a committee to ascertain the facts, and to advise the members as to the attitude that they should take,—either rejection, or further study, or approval, or active support of the plan. The fact of appointing a committee of investigation is not to be interpreted as support of a proposed activity. It may simply mean that the members do not know enough about a subject to form an intelligent opinion regarding it; but that they have an open mind and are willing to learn the basic facts about it.

The significance of the appointment of a medical society committee on a new subject may be interpreted in diametrically opposite ways. The propagandist may claim that the society has taken the first steps toward adopting his plan,—when it might equally well be interpreted as its rejection. On the other hand, those of the reactionary group may claim that the disclosure of the facts will forever dispose of the further consideration of the new plans.

A specific illustration of the different interpretations of the attitude taken by a medical society is contained in an article in the *New York Times* of Sunday, June 18, 1933, on the subject "Sickness Insurance Gaining New Ground," in which the author, an employee of one of the large "Funds." says:

"In New York the State Medical Society, at its annual meeting in April, adopted a committee report which endorsed two of the plans which had been recommended by the committee on the Costs of Medical Care: first, more adequate medical care of the unemployed and indigent and payment to physicians for such service; and, second, group hospitalization,—paying for hospital care by an annual fee."

The two plans which are mentioned in the quotation were discussed in the report of the Special Committee appointed to consider the report of the National Committee on the Costs of Medical Care. This Special Committee made its report to the House of Delegates on April 3, 1933, and the report with its recommendations was unanimously adopted. (See this Journal May 1, 1933, page 594).

Regarding the worthy poor and the indigent, the Special Committee approved a system of relief which has been required by a Statute Law of the State of New York for over three years, and which has operated satisfactorily wherever the medical profession and the public officials have worked in cooperation.

In contrast with the demonstrated efficiency and desirableness of the New York State system of medical relief of the worthy poor, the insurance of hospital service is in its formative stage only, and has not been put in force except in a very few small groups operating under exceptional conditions. What the Special Committee recommended was "The adoption generally of a plan of hospital insurance whose principles may be stated as follows." The report then goes on to enumerate the five principles under which the insurance of hospitalization is recommended, the last one reading:

"In each community, under the supervision of its organized medical group, there shall be developed the details of this plan so as to meet local conditions and make it workable."

It has been the policy of the Medical Society of the State of New York to follow the laboratory method of extending the scope of its activities under the initiative of county societies in which conditions are favorable to the experiment. So far no county society of New York State has formulated a plan for hospitalization insurance, much less started to put one into effect. It is possible, and even probable, that the need of an assured income for some hospital will impel its medical staff to devise an insurance scheme which will be a pioneer demonstration for the encouragement or warning of others.

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MEDICAL PROGRESS



Angina Pectoris Diaphragmatica .- It has long been recognized, says L. Hofbauer, that three entirely different causes may form the starting point for an attack of angina pectoris: (1) overdistention of the stomach or intestine, (2) the effect of cold, and (3) exertion or movement. The common factor in these three causes is their influence upon the respiratory movement, upon the statics and kinetics of the diaphragm. For a number of years Hofbauer has uniformly observed in angina pectoris, as an "accessory finding," changes in the position and movability of the di-Especially impressive is the typical connection between operatively treated empyema pleurze and states of angina. Here the causes at work can be demonstrated on both sides, and it is possible to explain the connection between the changes produced in the diaphragm and the resultant angina. Again and again it is the change in position of a patient which in such cases gives rise to the attack, and in one and the same case it is always one definite change-right or left decubitus, a forward or a backward inovement, etc. The patient who has felt perfectly well up to the moment of change of position suddenly becomes deathly pale, is unable to draw a breath, feels an indescribable oppression in the chest, and a sensation of pain which compels him immediately to resume his former position. In all these cases the x-ray reveals a quite definite change in the position of the diaphragm, as well as an obstacle to the movability of this organ. The same impediment to breathing is observed when the diaphragm is pushed far upward by increased abdominal pressure, and also in purely functional hindrance to the activity of the diaphragm. Hofbaner cites two cases to show that even in diapliragmatic liernia the angina disturbances are not in every case caused by secondary changes in the coronary arteries. That an attack of angina pectoris may be caused by a disturbance of the diaphragm is at once understandable in cases where there are cicatricial adhesions of that organ; but in cases where no such mechanical cause is present, pain and obstruction to breathing may arise as the result of a "viscerosensory reflex" in Mackenzie's sense, since the heart and diaphragm correspond to the same segment of the spinal cord. Where there are no organic changes in the diaphragm, a hyperesthesia of that structure may result from changes in the central circulatory apparatus (coronary arteries, aorta, myocardium) by way of this reflex, producing a sense of oppression, inability to draw a long breath, and a painful contraction in the chest-in other words, angina pectoris .- Münchener medisinische Wochenschrift, March 17, 1933.

Insulin and Glucose in the Treatment of Heart Disease.-K. Shirley Smith, writing in the British Medical Journal, April 22, 1933, i, 3772, discusses the insulin and glucose treatment of heart disease with special reference to angina pectoris. After reviewing the literature on this method of therapy in cardiovascular disease, he says that more and more evidence is accumulating to show that auginal pain in general arises not in the aorta, but in the heart muscle, and is attributable essentially to deficiency of coronary blood or blood flow rather than to alterations in blood pressure. Insulin and glucose were given in angina pectoris in the belief that a defect of carbohydrate combustion in the heart muscle is at the root of anginal pain. In an earlier communication Smith drew attention to a group of conditions in which diffuse parenchymatous myocardial damage exists independently of any disease of the coronary system. Examples of these states are general malnutrition or starvation, hypoglycemia, myxedema, and severe di-The evidence that perversion of myocardial function accompanies these disorders of malnutrition is a characteristic deformity of the electrocardiogram, which shows a depression of the RT interval or inversion of the T wave in one or two or all leads. In all of the above-mentioned disorders the electrocardiographic abnormality disappears when the metabolic fault is rectified. The use of insulin and glucose in heart disease is based upon the belief that the promotion of glycogenic utilization in the heart may prevent the accumulation of substances producing anginal pain. But there is evidence that insulin has a further effect upon functional efficiency and nutrition of the coronary arteries. It is well known that accumulations of fat in the deeper layers of the intima constitute one of the earliest stages of atheroma. Dieting experiments have shown that these deposits of fat are removable. It is suggested that the removal of such fat is part of the action of insulin in angina pectoris. The work of Himwich and Spiers supplies evidence in support of this view. During the Past year Smith has studied some forty patients suffering from angina pectoris from the standpoint of treatment by insulin and glucose. He cites six of these case reports in detail, in all of which there was marked improvement under this method. The treatment consisted in giving 5 units of insulin before breakfast and before the evening meal, each dose being followed by 30 grams of glucose taken with the meal. The period during which this treatment was administered ranged from two to seventeen weeks. It is suggested that this method deserves careful and extended trial.

Experimental and Biologic Researches in Diabetes Insipidus (Grafting of Calf Hypophysis in a Patient).—Sacorrafos describes in the Bulletin de l'Académie de Médecine of March 28, 1933, the remarkable results that followed implantation of the hypophysis of a calf in a young man suffering with such an exaggerated case of diabetes insipidus that he had made attempts upon his own life in an effort to rid himself of his misery. Treatment with ordinary extract of hypophysis had brought only fleeting relief, the injections having to be repeated 2 or 3 times in the course of 24 hours to control the intolerable Under the influence polyuria and polydipsia. of this treatment the quantity of urine (14,000 to 16,000 gm. in 24 hours) diminished but never fell to normal, hovering between 2,500 and 3,000. As is known, the mechanism of the treatment is based on the regulating function exerted upon dinresis by the posterior lobe of the hypo-With a view to accomplishing a more lasting result, Sacorrafos implanted the hypophysis of a calf into the sheath of the right rectus The quantity of urine fell at once abdominis. in the first 24 hours to 300 gm., or 1/4 the normal amount. At the same time a repugnance toward water appeared, it being difficult to persuade the patient to drink 400 to 600 gm. per day. This condition lasted two weeks, after which the disease began to return, but never to anything like its former degree during an observation period of approximately three months. It was observed that the lowering of the water threshold and the consequent renewed polyuria preceded by 48 hours the reappearance of polydipsia. The determination of the acid-base equilibrium prior to the grafting showed a shift toward acidosis, revealed in two distinct ways: (1) in the blood. by a diminution of the alkali reserve, and (2) in the renal tract, by chloride retention. After the grafting operation, this equilibrium was re-established almost immediately, tests being made in the morning with the patient fasting. Another interesting observation was the increased difference between maximal and minimal blood pressure after the implantation, a maximal pressure of 9 cm. (Vaquez) and a minimal of 7 cm. becoming respectively 12 cm. and 6 cm. for several days. The calf hypophysis used weighed 850 mg., and thus contained 121 international units of posterior lobe of hypophysis. If 5 injections are made in 24 hours of products which contain 1.4 c.c. per ampule, about 20 units are introduced in 24 hours, so that in 20 days 400 units would have been required, by the standard treatment, to maintain the water equilibrium in the organism. If we take into account the fact that to obtain 121 units nearly 4 calf hypophyses are necessary, the result from implantation of 1 single hypophysis can hardly fail to be surprising. Sacorrafos thinks this observation points the way

to the future treatment of diabetes insipidus by fresh gland.

A New Therapy of Peptic Ulcer: Continuous Alkalinized Milk Drip into the Stomach. -Asher Winkelstein discusses the rôle of the acid factor in the pathogenesis and therapy of peptic ulcer and stresses its importance. He says he has not encountered a single instance of peptic ulcer, proved at operation, without free hydrochloric acid in the gastric contents. He has also been impressed by the rôle of the nervous system (vagus nerve) in the hypochlorhydria of ulcer patients. Furthermore, as demonstrated by the charts here presented, patients with peptic ulcer have a high nocturnal curve of acidity. Because of this observation it may be questioned whether any method of ulcer therapy thus far advocated accomplishes what seems the logical and desirable state, namely, the institution of chronic achlorhydria. For these and other reasons, the following plan of treatment was formulated. A Relifuss tube is passed into the stomach of the patient and connected by a fairly long piece of rubber tubing to a gravity flask, and a Murphy drip indicator is interposed in the system. A solution consisting of milk containing 5 grams of sodium bicarbonate to the quart is allowed to drip into the stomach at the rate of 30 drops a minute. Thus the patient receives three quarts of milk and 15 grams of sodium bicarbonate per day. Such a solution will theoretically neutralize nine quarts of decinormal hydrochloric acid. Certain obvious difficulties in the treatment will be avoided if the following procedures are added: (1) Accustom the patient to the tube by doing a day and night fractional test meal first. (2) After forty-eight hours of the drip, study the chemistry of the blood; if the alkalinity approaches 80 volumes per cent or if the symptoms of alkalosis appear, decrease the alkali. (3) Use sedatives, luminal during the day and a hypnotic at night. (4) For dryness of the throat, allow an occasional sip of the mixture. As adjuvants to the treatment local heat is applied to the abdomen and atropine, 1/75 to 1/150 of a grain, is administered by mouth or hypodermic three times daily. The tube is allowed to remain in the duodenum for two to three weeks. Then it is removed during the day, and the patient is given the conventional ulcer therapy. Among the features worthy of comment in the author's series of 42 cases were the loss of all symptoms in four to six hours after the institution of the drip, the complete comfort of the patient while on the drip, and his willingness to return to the treatment on the recurrence of even slight symptoms. -American Journal of the Medical Sciences, May, 1933, clxxxv, 5.

On Pain.—As so little is known concerning the mechanism of the production of pain, David

Waterston carried out observations for the purpose of ascertaining what the tissues are in which it can be excited, the nature of its recep tors, and the peripheral pathways by which the impulses travel which give rise to the sensation of The general procedure was that a sharp needle was introduced through the skin and passed to underlying tissues-muscles, tendons, periosteum, into the walls of veins and arteries The observations recorded have disproved the theory that pain might be due to overstimulation They show that in the skin the pain apparatus is distinct and separate from that for touch proof of this was afforded by showing that it was possible to shave off a layer of epiderinis, for example, from the tips of the fingers, without causing any pain, in spite of the fact that the terminals of the nerves of tactile sensation were divided This finding has a bearing on the much disputed problem of peripheral sensibility and especially on Head's theory of its mechanism. There is now no doubt of the correctness of Head's views of the separateness, anatomically, of the tactile and the pun mechanisms of the surface of the body The prin apparatus which responds to the widest range of stimuli and which is the most sensitive is that of the corinm where it is apparently intimately connected with the nerves accompanying blood vessels and especially the capillaries The deeper tissues of the body can as a rule give rise to pain, and arteries especially are a source of acute pain from mechanical stimulation seems strange that arteriosclerosis may transform the walls of the arteries into degenerated tissues without producing pain. The walls of veins are much less sensitive to mechanical stimulation than those of the arteries Muscles have a pain ap paratus which is usually excited by a special form of stimulus 1e, spasmodie contraction, as in cramp, or by contraction with impaired blood supply Pain is usually regarded as a protective mechanism and as being primitive in character, but it is a more tughly specialized sense than would at first appear. The cornin is furnished with nerves responsive to a wide range of stimuli -in other words, protective against many injurious agencies The tissues lying deeper also have a pain apparatus, which in the case of arteries re sponds to mechanical injury, but in muscle is responsive rather to harmful conditions originating in the muscle than to mechanical injury Pain is not a sensation produced by nerves of other forms of sensation but has its own apparatus its own nerves, and probably its own receptors -The Lancet, May 6, 1933, ccxxiv, 5723

The Etiology of Grip—The grip epidemic of 1933 says H Schter, writing in the Munchener medizimscher Wochenschrift of April 7, 1933, raised anew the question as to the exeiting agent of this disease, which Pfeiffer's discovery in 1891

seemed at that time to have settled. Even before the War, Kruse expressed doubts concerning the rôle played by the influenza bacillus as an agent pointing out that this bacillus was never observed by anyone during the 1889-90 epidemic, and that at a later time it was more frequently observed without having any relation to a chincal influenza as for example in measles, whooping cough, etc. The hope that the great grip epidemic of 1918 19 would answer the question of its etiology was doomed to disappointment, it seemed rather to confirm Kruse's view, for very few influenza bacilli were found. Even in the Pfeiffer Institute in Breslau they were encountered in the sputum m only 51-76 per cent of the cadavers Meyer has rightly pointed out, one single proved case of grip in which the influenza bacilli are not present destroys once and for all the theory that these microorganisms are the sole cause of grip The negative results of experiments in mice during this year's epidemie led to the same conclu-Pfeiffer himself in 1920 took up the state ment that influenza bacilli are present almost obiquitously in all kinds of disease and in healthy persons too with great regularity, and admitted that if this were true it would dispose of the sigmificance of the influenza bacillus as the primary exciter of pandemic influenza. He believes there are chronic cases which produce the spread from one epidemie to another, but that no ubiquitous distribution has ever been demonstrated raises the question whether the great pandemic scourges separated from one another by many intervening years could have developed from these influenza bacilli commonly found in the healthy The supporters of this theory take refuge in the assumption of an increased virilence of the bacilli and a decreased resistance on the part of the public. It is hardly to be supposed, however, that widespread pandemics can arise out of such endemically present exciters It would be more rational to conclude that pandenue grip and its exciter ought to be separated from smaller epidemics for which the name influenza might be retained. A search should be made for a still unknown and probably invisible filtrable virus, but thus far all such attempts have failed

Infection and Resistance in the Upper Respiratory Mucosa—C S Linton, writing in the Laryngoscope, April 1933, xlin 4 calls attention to the fact that the mucous membrane of the upper respiratory tract must be regarded as a complicated mechanism which may be affected adversely or favorably by many factors from the outside world. In order to evaluate the relatinal importance of these various factors he has correlated the observations of various investigators. He attacks the problem from the standpoint of infection and resistance. The factors of importance in natural resistance to infection of the

upper respiratory mucosa are mucous secretion, ciliary action, phagocytosis, lysozyme, local reaction, natural immunity and local immunity. Each of these factors is not only accessory to the others but dependent upon them, for the full realization of its function. The mucociliary layer is marvellously efficient in its action and must be considered as the first line of defense, while phagocytosis and other factors, although showing some surface activity, constitute second and third lines of defense. Many influences tend to impair the natural resistance of the mucosa. The most important of these are: diet and physiological effects, including chilling, ventilation, chemical irritation, metabolic fluctuations and obstruction of drainage, also allergy and trauma. In regard to diet Linton calls attention to studies showing that in vitamin A deficiency there is an atrophy of the lining cells of the trachea and bronchi, while epithelial metaplasia is not common. Vitamin B deficiency seems to lead to respiratory infection. All of the other factors are likewise important in the sense that any one may be the limiting factor in causing a break in the defense of the mucosa. It is impossible to separate local factors of decreased resistance from systemic factors, since the respiratory tract seems to be a favorite site for the manifestation of decreased systemic resistance.

Infection is not only dependent upon factors operating in the host, but also upon certain properties of microorganisms. The most important of these are: the production of toxic products, capsule formation, adaptibility to environment, and ability to lodge in intercellular spaces. That great variation in the virulence of many strains of bacteria occurs cannot be questioned. All of the above properties of bacteria are probably quite variable and depend upon the particular environmental conditions. Toxic products of bacteria may be considered as an extending arm which reaches far out beyond its immediate environs. Capsule formation and adaptability are protective phenomena for the bacterium in its struggle against the host. Ability to lodge in intercellular spaces is a little understood phenomenon which must exist, however, in order for a bacterium to penetrate an apparently normal mucosa. It may be partly the result of properties of the bacterium and partly the result of changes in the host. Electrochemical and interfascial tension phenomena may be of importance in this connection.

The Present Position of Manipulative Surgery.—Philip Wiles, writing in the Practitioner, May, 1933, cxxx, 5, calls attention to the greatly enlarged scope of manipulative surgery in recent years, and discusses minor injuries which respond well to manipulation. The actual lesion in these

cases is not a "bone out of place," but the endresult of some strain or misuse of the affected part, as, for example, the man who finds his wrist locked in the dorsiflexed position while making a stroke at golf. What has occurred is that the lubricating synovial fluid has been squeezed from between the opposing joint surfaces; separating them by manipulation will effect a cure. chronic back strain a cumbersome support merely aggravates the trouble. The treatment is mobilization by manipulation with the patient under an anesthetic, but never until an x-ray examination has been made. In manipulating the sacroiliac joint the patient is placed on his left side, near to and facing the edge of the table. The left leg is allowed to hang over the edge of the table and is steadied between the operator's legs. The right arm is placed forward and the left backward, so that the body is twisted. The operator grasps the patient's left arm near the shoulder with his left hand and his right arm lies along the crest of the ilium, with the elbow over the sacroiliac joint. With a rotary movement the patient's left arm is forced backward and the pelvis forward and downward, so that the trunk is twisted and the ilium is rotated about the sacrum. If the case is a severe one massage should be started at once, applying heavy, deep work. In acute painful back and acute stiff neck the immediate relief afforded by manipulation is sometimes startling, and this treatment makes bed rest unnecessary. In treating foot strain it is well to remember that the tone of the muscles is of prime importance. Immediately it is lost the ligaments are called upon to maintain posture; this injures the ligaments and causes adhesions. Very stiff feet should not be mobilized at one sitting, as the reaction is so severe that the patient cannot maintain the correction.

It is much better in most cases to repeat the manipulation several times. Foot exercises should be instituted as a part of the daily routine. When arthritis is the cause of painful feet, there must be no mobilization during the acute stage of the disease. In this condition stock-size arch supports are useless; very careful fitting of the whole shoe is necessary. In knee-joint strain there is no need to stop weight-bearing unless a ligament is severely damaged. The manipulative treatment must be energetic from the start. In case of injury to the semilunar cartilage, manipulation may be tried after the first attack, but if the trouble recurs the cartilage should be excised. minor exceptions tennis elbow is the only condition around the elbow which calls for manipulation, and the results of this treatment are not uniformly good. With the patient under an anesthetic the movements which had been found to produce pain should be carried to their extremes.



LEGAL



HOSPITALS-POWER TO DISCIPLINE PHYSICIANS ON ITS STAFF

By LORENZ J BROSNAN, ESQ

Counsel Medical Society of the State of New York

The power of the authorities of a hospital to exclude certain physicians or surgeons from its staff, has a number of times been the subject of litigation. A leading case on this subject carried to the Court of Appeals illustrates the principle involved.

The hospital in question was a membership corporation which derived its meonie in part from amounts paid by patients, from endowments and charitable gifts, and also from public moneys received from the city in which it was located It had been approved by the State Board of Charities. The affairs of the hospital incre minaged by a board of directors. The hospital liad a set of by-laws which could be changed only by a vote of its members, and also a set of rules and regulations adopted by the directors inhich could be changed at any time by the board.

A certain doctor who was a member of the corporation and of its visiting staff, and who resided and practiced in the city where the hos pital was located, became involved in a series of differences and disputes with those in active charge of the hospital. In the report of the case there is no suggestion that there were any charges of illegal or unethical practices on the part of the doctor. The board of directors passed a resolution dropping him from the visiting staff. The secretary of the hospital by letter notified the doctor that he had been dropped, with the privilege of continuing to treat at the hospital such patients of his who were at that time confined at the hospital. The doctor brought suit against the hospital in equity, seeking to nullify the resolution of the board of directors and to enjoin the carrying out of the order barring him from the hospital The lower court decided in favor of the aggrieved doctor, but the Appellate Division of the Supreme Court reversed this ruling and sustained the action taken by the hospital The Court of Appeals affirmed the latter ruling without opinion

In deciding against the contentions of the doctor plaintiff, the Appellate Division handed down a decision which is worthy of comment. The plaintiff had taken the position that the defendant was strictly a public corporation, the court refused to so hold. Public corporations, according to the court, "are the instrumentalities of the State, founded and

onned by it in the public interest, supported by public funds and governed by managers deriving their authority from the State." The defendant hospital on the other hand, the court ruled, was a corporation organized by permission of the Legislature, to undertake similar duties, it was a private corporation, supported mainly by voluntary gifts, and engaged largely in charitable work for the benefit of the public, it still remained a private institution even though it received a donation from public funds, and even though it would be exempt from liability for negligence and evenipt from taxation. In tuling that the hospital had been within its rights in the action it had taken, the court said.

"The selection and retention of physicians to treat patients admitted to the hospital are matters of judgment and discipline power to appoint usually implies the authority to remove. In common experience instances are not imusual where some physician disagrees with hospital management. When such disagreement becomes so pronounced as to interfere with orderly management and discipline, and when there is persistent violation and disobedience of necessary rules and regulations, we think the directors may bring the inharmonious conditions to an end by summary action They are not required, in our judgment, to give notice and conduct a trial in every such case Public-spirited citizens, usually having business of their own, who act as directors without pay, having many duties relative to finance and management, would no doubt find their time fully occupied if the duty of holding trials on all sorts of complaints were superadded. If in every detail of minagement involving the relation of the hospital with the physician and patient, they have no power of final decision but must be guided and directed by orders and judgments of the court therein, then their duties are little more than perfunctory"

The court said further

"The law does not require a corporation like defendant to furnish its services and accommodations to every one who applies, whether patient or physician. There can be no absolute right in individuals to claim the benefit of its privileges. Such a thing would be impossible

There must be discretion vested in the management to make selection from applicants with regard to accommodations available. It may reject one who has some trivial ailment, and accept another whose needs are greater. This is not illegal discrimination depriving a person of his rights; nor do we deem it such discrimination if from a large number of physicians it selects members of its visiting staff with regard not only to their medical skill, but to their adaptability to the rules and discipline of the institution."

The court suggested that if the plaintiff had received unjust treatment, his remedy was not with the courts but to bring public opinion to exert pressure in his favor upon the institution. The opinion said:

"The usual remedy for persons dissatisfied with the internal management of corporate affairs is to elect a new board of directors. If the acts of the directors are generally regarded as arbitrary and unjust, contributions, without which the hospital cannot operate, will be withheld; and public opinion, the most potent regulator of public affairs will furnish the remedy."

In another State some years ago, where a somewhat similar set of circumstances were presented, the court ruled in a similar manner. In that case also, the hospital was managed by a board of directors empowered, according to the court, "to adopt any regulation for the government of the hospital which is reasonable and consistent with the general purposes of the corporation." A by-law was passed that only physicians who comply with the code of ethics of certain medical associations could practice in the hospital. The plaintiff in that case, seeking a decree to compel the directors to permit him the privilege of treating patients at the hospital, had indulged in public advertising in his medical practice. He had issued circulars wherein he promised cures and boasted of his knowledge, skill and success. The court found that the hospital had acted within its rights in enforcing its by-law against the physician. It was stated by the court that the plaintiff's practices were in flagrant disregard of the standards of his profession and were unprofessional and discreditable. The court said:

"The requirement of the by-law was reasonable and within the power of the directors to adopt, and we think entirely right and proper."

In certain of the States in which the laws regulating the practice of medicine are not so stringent as in New York, other problems have been presented as to the power of a hospital to restrict the membership of its staff. A most noteworthy case was a few years ago

carried to the Supreme Court of the United States to test the question. The case arose in one of the southwestern States, the State Constitution of which included a provision that "The Legislature may pass laws prescribing the qualifications of practitioners of medicine in this State, and to punish persons for malpractice, but no preference shall be given by law to any schools of medicine." plaintiff was an osteopathic physician who was duly licensed to practice medicine in the The board of managers of a certain municipal hospital, maintained by a city in conjunction with the Medical Department of the State University, had made regulations excluding osteopathic physicians from practicing in the hospital. The osteopath sought to enjoin his exclusion from practice in the city-maintained hospital, and the case was taken to the Supreme Court on the ground that the osteopath had a constitutional right to practice his profession in a hospital maintained by the State or a political subdivision thereof. The court held against his conten-

tions, saying in part in its opinion:

"It is argued that if some physicians are admitted to practice in the hospital all must be, or there is a denial of the equal protection of the laws. Even assuming that the arbitrary exclusion of some physicians would have that legal consequence in the circumstances of the case, the selection complained of was based upon a classification not arbitrary or unreasonable on its face. Under the State Constitution and statutes, anyone who shall 'offer to treat any disease or disorder, mental or physical, or any physical deformity or injury, by any system or method or to effect cures thereof,' is a physician and may be admitted to practice within the State. We cannot say that a regulation excluding from the conduct of a hospital the devotees of some of the numerous systems or methods of treating diseases authorized to practice in the State, is unreasonable or arbitrary. In the management of a hospital quite apart from its use for educational purposes, some choice in methods of treatment should seem inevitable, and a selection based upon a classification having some basis in the exercise of the judgment of the State Board whose action is challenged, is not a denial of the equal protection of the laws.*** The limitation of the provision (the Constitutional provision above quoted) is obviously directed to the qualifications of those to be admitted to the practice of their profession in the State, and has nothing to do with the qualifications of those who are to be allowed to practice in a State hospital or to participate in an educational enterprise conducted by the State."

SUBGLENOID DISLOCATION OF HUMERUS

A doctor engaged in the general practice of medicine was called to attend a middle aged woman at her home. He was given a lustory of her having had a dizzy spell, and fallen, injuring her right shoulder. She was a fleshy woman weighing about 180 pounds. The doctor examined her shoulder but was unable to note any affectence in its continuity or to determine any specific injury. She complianed of her shoulder hurting on extension. He told her that in order to make a suitable examination she should allow an 1-ray examination to be mide of the part.

The doctor saw her again the following day and was unable to detect anything further. He again requested an r-ray evanilation which was refused. He did not see her again until about two weeks later when she called at his office for some medicine. She answered in response to questions about her arm and shoulder that they were 'first-rate'. However, about ten days thereafter she again came in complaining of pain about the shoulder, and the doctor again advised 1-rays to be taken. She then had 1 rays taken.

and a subglenoid dislocation of the right humcrus was disclosed. The next day the doctor together with a surgeon reduced the dislocation under an anaesthetic by manipulation. An 1-ray picture, taken after reduction, showed the same to be completely reduced but that there was some slight thickening of the capsule, which prevented the head of the humerus from settling back to within three-sixteenths of an inch of its normal position. The patient rapidly regained the use of her arm and her functional result was excellent.

She brought suit against the general practitioner charging him with negligently failing to discover and properly set the dislocated shoulder. The plaintift claimed that by reason of the alleged negligence she had suffered great pain, an unnecessary operation and impairment of ability to move the arm. The action was brought on and tried before a judge and jury. At the close of the testimony introduced on behalf of the plaintiff a motion was made on behalf of the defend ant for a non-suit which was granted by the court, thereby terminating the matter in the doctor's favor.

MALPRACTICE CAUSE OF ACTION BARRED BY THE STATUTE OF LIMITATIONS

A married woman about forty-five years of age was sent by her family physician to a specialist in gynecology and obstetrics for possible operation. The doctor examined her and a diagnosis of ovarian cyst and possible uterine fibroid was made. Since she was a large woman and possibly a bad surgical risk, he put her in the hospital for several weeks, where she underwent a course of diet and treatment to prepare her for the operation. As soon as her condition appeared to be favorable for operation, the doctor under a spinal anesthesia opened her abdonien and found a small filiroid tumor and a large cyst of the left ovary. He performed a supravaginal hysterectomy and also removed her appendix.

The patient lind a very smooth and uneventful recovery, and in about three weeks was able to leave the hospital in good condition. About a month later, when the doctor examined her at his office, he found that the wound had entirely healed and that she was apparently cured.

After sometime had elapsed, the doctor instituted suit in the City Court to recover his bill for professional services which had remained in paid. The patient put in an answer denying the value of the services that the doctor had rendered After the case had been three years on the cal-

endar waiting its turn for trial and as it was about to be reached, a motion was made by the attorney for the defendant patient for leave to serve an amended answer in which the defendant sought to include a counterclaim alleging malpractice. The City Court Judge denied the motion ruling that the Statute of Limitations had run against any cause of action for malpractice which the patient might have had, and that therefore the amendment could not be permitted.

Thereupon the patient instituted a Supreme Court action against the surgeon, setting forth as a cause of action for malpractice the same facts which she had sought to set up as a counterclaim in the City Court action. The doctor's attorney then made a motion in the Supreme Court for Judgment dismissing the patient's cause of action on the ground that the City Court Judge had already determined that any cause of action based on alleged malpractice was barred by the Statute of Limitations, and that said ruling was conclusive in the Supreme Court action. Upon receipt of the motion papers, the attorney for the patient agreed, in order to save his client the costs which would be imposed by the Court, to discontinue the Supreme Court action and to settle the City Court action by proments of the doctor's bill



NEWS NOTES



COMMITTEE ON PUBLIC RELATIONS

The regular monthly meeting of the Committee on Public Relations of the State Society was held in the Albany office on May 29, 1933. There were present Drs. Sadlier. Johnson Hambrook, Cunningham and Ross; also the Executive Officer, Dr. Lawrence.

Venercal Disease Clinics:—A letter was read from Dr. E. McD. Stanton of Schenectady regarding the clinic facilities for the treatment of indigent cases of syphilis, objecting to the two-page article published in the Health News of the State Department of Health under date of May 15, 1933, on the subject "How cities are caring for indigent cases of syphilis. This article begins with the following statement:—

"When should a community have a clinic? Generally speaking, a clinic should be organized when a community can care for its indigent syphilities at less cost by providing clinic service than by paying physicians a nominal fee per visit for the medical supervision of such cases."

The article then gives tables for seven counties, mostly rural, showing that the annual cost of efficient treatments in those counties would be from \$6,000 to \$13,000, while it would be only \$1,000 or \$2,000 on a county clinic basis.

Members of the Committee questioned the desirability of publishing the figures, and stated the general principle that other considerations were as important as economics in deciding the method of treating indigent syphilitics.

While the committee felt that it was not in a position to take formal action, its members were favorably inclined toward the following principles:—

- 1. The field of the State Department of Health in venereal diseases is that of education rather than treatment.
- 2. Physicians object that the responsibility for treating syphilities be transferred from competent practitioners to the State Department of Health.
- 3. Physicians are willing to do what they can to stamp out venereal diseases.
- 4. Efficiency rather than economy is the proper basis for judging any plan of treatment.
- 5. Diagnostic clinics should be continued in larger places because it may well be that clinics have greater facilities for diagnosis than every doctor has for diagnosis. However,

not every facility is necessary in every case in order to make a diagnosis or carry out efficient treatment.

The committee voted to refer the subject of venereal clinics to the chairmen of the two committees—that on Public Relations and that on Public Health and Medical Education.

The Hard of Hearing:—A communication was received from Dr. Wendell C. Phillips of New York, asking the help of the Committee on Public Relations regarding plans for more adequate examination of the hard of hearing. It was decided to grant an audience to the New York League for the Hard of Hearing, consider its plans, and help to work out methods for more adequate examination of the hard of hearing, and that Dr. Emily A. Pratt of the State Education Department and Miss Estelle E. Samuelson of 480 Lexington Avenue, New York City, be invited to attend the next meeting of the Committee on Public Relations.

Examination of School Children:—Regarding the relation of the family physician to the examination of school and pre-school children, letters were read from Dr. Haake of Homer, New York, about the lack of facilities in schools for adequate examinations, the lack of opportunity to follow up defects, and the insufficient salary of physicians for making satisfactory examinations. Dr. Haake called attention to the "folly and uselessness of the present examinations which discover only the grossest defects, but do not correct them; and only subject the child to a wrong impression of a health examination and give the idea that it is of no value because nothing is done about Dr. Haake suggested that abnormalities." two courses might be followed, either the total discontinuance of these examinations in communities where they are doing more harm than good both to the child and to the medical profession; or the establishment of a system which will function satisfactorily.

A letter was read in reply from Dr. William A. Howe of the Educational Department, referring to the letter from the State Medical Society regarding school examinations, commending it as stimulating fresh interest among physicians. He believes that with the cooperation of the medical profession of the State there will be ultimately worked out a satisfactory system of health service in schools. Dr. Howe deplores the low salary paid for school

examinations, and the lack of facilities in

These letters were referred to the chairmen of the Committee on Public Relations and on Public Health for further consultation

Dr Lawrence reported that this subject was of increasing interest in the District Branches Dr Lawrence was asked to write to Dr Daniel Reilly, Commissioner of Health in Cortland County, in which Homer is located to take the matter of school examinations in that county into consideration, and to undertake to bring about a satisfactory situation there

After further discussion it was decided to stand by the principle of the family pliysician's relation to all school work, and to undertake to encourage the family pliysicians of the State to undertake pre-school work. After considerable discussion Dr Lawrence was asked to communicate with the officers of the State Parent Teachers' Association, and the secretaries of the County Medical Societies regarding this whole subject of the relation of the family pliysician to school work, and the cooperation of the State Health Department in providing adequate facilities

County Nuises -A letter was read from Dr J D Olin of Watertown regarding the public nursing situation in Jefferson County service in Jefferson County has been discontinued by the Board of Supervisors because of the ex-Dr Sadher's reply to Dr Ohn's lutter was read, in which Dr Sadher said that the Committee on Public Relations would try to think up some way of solvin gibe public nursing situation in Jefferson County The members of the committee felt that they are compelled to balance the necessity of certain health services against their cost, but on the other hand the curtailment of necessary services should receive the unqualified disapproval of the medical profession

It was decided that the Chairmen of the Committees on Public Relations and Public Health should advise the Committee on Public Relations of the Jefferson County Society

Public Welfare Relief —There was a long discussion regarding the future status of the Special Committee of the State Society on Temporary Emergency Relief. The committee approved the leadership of the Special Committee in State aid for the medical care of the indigent.

A report on the Buffalo City Hospital dispensary plan was considered and endorsed

There was a discussion of the status of the relation of the profession to the medical administration of public welfare in Washington County (See this Journal, May 15, 1933, page 663) It was decided to seek further in formation regarding the county

There was a discussion of the medical administration at the Lowville State and County Hospital. It was decided that informal friendly advice was the best course to follow.

Crippled Children—A letter was read from Dr. Sherman M Burns of Oswego regarding the compensation allowed by the State Department of Health for the after-care of crippled children and a letter in reply from Dr Sadlier that the matter would be presented to the Committee on Public Relations After a long discussion the Secretary was directed to write to Dr Burns that the Committee on Public Relations is considering a fee bill

State Physicians in Private Practice—The State Department having charge of prisons is taking steps to eliminate the private practice of medicine by full-time physicians in the State employ, the delay being caused by obligations already assumed in rural sections adjacent to State institutions

W H Ross, Secretary

DISPENSARY ADMISSIONS IN MONROE COUNTY

The June News Letter of the Medical Society of the County of Monroe is given over principally to the Report of the Joint Committee on Dispensary Admissions by the Rochester Hospital Council The News Letter prints the full report, and comments on the recommendations as follows—

"This report had previously been approved by the Countia Minora and the membership of the Society is published in full. It constitutes a most important document which should be carefully studied by every physician. Provision is made for the permanent functioning of the plan agreed upon. The report illustrates the determination of all interested to develop a cooperative undertaking, having in mind the best interest of the patient, the medical profession, the hospitals, and the community as a whole. It illustrates also the fact that physicians are the medical advisers to the community as well as to the sick individual. The functions of an out patient department are outlined, new policies agreed upon, and a definite classification of patients made. Good is bound to result."

The full report follows --

REPORT OF JOINT COMMITTEE ON DISPENSARY ADMISSIONS

Functions of an Out-Patient Department:-The Committee conceives that the functions of an out-patient department or dispensary are to provide:

1. Adequate medical care for all persons who cannot afford to pay for the services of a qualified physician.

To cooperate with doctors and to provide teaching facilities for graduate and undergraduate physicians, nurses, and dietitians.

3. To provide investigation into the causes and cure of disease, i. c., rescarch.

New Policies Adopted:—To provide these ideals, the out-patient departments of Rochester hospitals and dispensaries have agreed to adopt the following policies:

1. Admission. All hospitals and dispensaries will adopt and follow the same general plan of determining admissions, which will be recorded on cards similar to the one outlined below.

O.P.D. Financial Data

Classification Family Name Address No. in Family Legal Residence Unit No. Scrvice Occupation Income

Father Mother

Rent

Insurance Savings Dependents

Referred by Address Family Physician Address Other Clinics Attended Organization Aiding

Worker

(Reverse of Admission Card)

I certify that the statements recorded above are correct, that I understand the law relating to the treatment of patient in Out-Patient Departments, and that I cannot afford to pay a private physician for required scrvice.

The Out-Patient Department is to provide medical

care for those who cannot afford to go to a doctor.

The Law provides as follows: (Section 296, Chapter 55 of the Consolidated Laws.) "Any person who obtains medical or surgical treatment on false representations from dispensary licensed under the provisions of this article, shall be guilty of a misdemeanor and on conviction thereof shall be punished by a fine of not less than ten dollars and not more than two hundred and fifty dollars." (Imprisonment until fine be paid may be imposed. Code Criminal Procedure, Section 718.)

Signed.....

All applicants shall be asked whether they have a family doctor and whether they have been recently under the care of a doctor. If either question is answered in the affirmative:

(a) They shall be requested to return to that doctor and bring from him a recommendation for admission to the Out-Patient Department. Latitude must be allowed Admitting Officials in the enforcement of this policy.

(b) If the condition of the applicant demands immediate attention, the Admitting Officer shall try to com-municate with the doctor by telephone and obtain rec-

ommendation for admission.

(c) If the doctor cannot be reached, the patient will be given temporary admission and a letter sent to the doctor reciting the facts and requesting a reply within five days, whether he approves of the admission of the patient to the Out-Patient Department, and if not,

whether he will continue treatment himself.

Financial Eligibility:—The following table shall be used as a guide in determining eligibility as regards

income:

One in family	\$12.00 per week
Two in family	20.00 pcr wcek
Three in family	22.50 per week
Four in family	
Five in family	27.50 per week
Six in family	
Seven in family	32.00 per week
Eight or more in family	4.00 per capita per week

Income should represent the entire amount received from all sources, earnings, rent, board, ctc. It should include entire earnings of employed children, not merely the board paid. Families having incomes above these limits are expected to go to private physicians. Admitting Officers should take into consideration income, size of family, type and probable length of sickness, ability to work after recovery, etc. Exceptions may be made necessary by reason of expensive and lengthy treatment.

The incomes in the guide are generfally sufficient to allow patients to pay all routine Out-Patient Department and Dispensary fees.

No arbitrary point can be fixed at which fees shall

be remitted; circumstances in individual cases must govern these decisions.

The financial status of all patients shall be redeter-

mined at least every six months.

Ineligibility. If an applicant is found to be ineligible by reason of greater income than the regular schedulc allows and has a family physician, he shall be referred to that physician, but if he has no family physician, the Admitting Officer may recommend for consideration the names of at least three members of the hospital staff most competent to attend to the patient's sickness. For those hospitals having salaried staff members, who have no offices outside the liospital, it shall be the understood policy that only the names of staff members having out-side offices shall be given. If the patient comes from outside Monroe County, the names of staff members having offices in the hospital may be included.

Staff members having offices in such hospitals may, however, see patients who come to them, either as regular consultation cases, i.e., sent by another physician, or who come to the hospital asking specifically for a certain

doctor.

Patients sent to the hospital with a written request from a physician that his patient be directed to that member of the staff best suited to attend to his care may also be referred to staff physicians having offices in the building.

2. Out-Patient Departments shall not be expected to furnish consultation service for private patients.

Each Out-Patient Department and Dispensary agrees to adopt a schedule of maximum charges, as follows:

	=
a.	Diagnostic visit (first visit) \$.50
b.	Treatment visits (re-visits) \$.50
c.	Laboratory chargesat cost
đ.	X-ray chargesat eost

An effort will be made to adopt uniform charges for like service.

Applicants who can afford to pay more than the maximum schedule of charges will be referred to private physicians, as stated above.

3. Private medical practitioners shall agree to treat patients who, because of their financial standing, are eligible, and also those who, because of their financial standing, are ineligible for admission to an Out-Patient Department, for fees within the means of the patients referred to them.

4. Patients who are financially able to employ the services of a private practitioner and who refuse to do

so will be denied treatment by the dispensary.

5. Every effort shall be made to prevent "shopping" and patients will be transferred from one dispensary to another only upon request of the transferring dispensary 6 Medical supplies will be dispensed according to the melude drugs, Medical supplies following policies surgical apparatus glasses and false teeth

Classes of Patients to be considered include acute,

sub acute, and chronic cases

A For those patients who are known to private welfare agencies and who are being cared for by private hospitals it shall be considered the duty of the Hospital to provide all medical supplies for acute cases but it shall be understood that the Hospital may expect the Social Agencies to assist in the provision of expensive medicines, drugs for chronic cases and surgical appa-

Those patients who are receiving aid from the В

City Welfare Department

1 Hospitals may rightfully be expected to assume the responsibilty for the provision of drugs for acute Theoretically this might be argued to be a re cases sponsibilty of the City Practically, it is so evidently for the welfare of the Community to have it handled promptly by the Hospital that theory must give may to practicability

2 For chronic cases requiring continued medication it is suggested that a plan be worked out with the Wel fare Department whereby prescriptions may be written in duplicate by the physician stating the amount of mediwhich this medicine may be expected to be re-ordered

3 Cases requiring surgical apparatus glasses etc should be taken up individually between the Hospitals and the City Welfare Department

C Representatives of the Board of Education and the Family Agencies shall work out a plan to secure glasses for children whose families are not receiving relief and cannot provide the needed glasses

7 Public and private welfare organizations are requested to conform with the above regulations and in making direct references to private practitioners shall follow the procedure laid down herein for dispensary financial investigators

8 A permanent joint committee composed of representatives of the Hospitals and the Medical Society shall be established to which all matters of common interest relating to Out-Patient Departments Dispensaries and Hospitals shall be referred

The membership of the permanent Joint Committee is as follows Dr Sol J Appelbann Chairman, Wiltiam T Nolan Secretary Dr Nathaniel W Fason Dr Christopher G Parnall Dr E T Wentworth, Dr A M Johnson, Dr David B Jewett

SARATOGA COUNTY

The regular meeting of the Medical Society of the County of Saratoga was Iteld on May 18, at Saratoga Springs, with over two hundred physicians present, including guests from the surrounding counties of Albany, Rensselaer, Fulton, Schenectady, Montgomery, Warren, Washing ton, and Hamilton The guests also included Dr H Flaherty of Syracuse President of the Medical Society of the State of New York, and Dr Alexander Lambert, past president of the State Society, and of the American Medical As-Morning and afternoon sessions were held, with a limelieon at noon and a supper at the close of the meeting

The morning session was held at the Lincoln Bath House on the State Reservation, and the

program was as follows -

'The Geology and Chemistry of the Mineral Waters", by Mr Herbert Ant, Chemist of the State Reservation

"The Saratoga Waters in Cardiae Disorders", by Dr Carl R Comstock, Saratoga

Springs
3 "The Waters in Gastro intestinal Condi tions", by Dr Edward J Callahan, Saratoga

Springs

"The Waters in Disorders of Metabolism", by Dr. Walter S. McClellan, Saratoga Springs

The physicians were shown through the State buildings given over to Therapy, and methods of the use of the water were demonstrated

The afternoon session was held at Newman's Lake House, Saratoga Lake, at which the follow ing program was given -

"The Nature and Prevention of the Com plications of Diabetes', by Dr Elhott P Joslin, of Boston

"Grave Colitis of Unknown Etiology', by Dr John L Kantor, New York City

HARRY L LOOP, Secretary

Our Re

493

562

528

537

581

466

467

INDEX OF ACTIVITIES

σf

MEDICAL SOCIETIES OF COUNTIES AND STATES RECORDED IN THE NEW YORK STATE JOURNAL OF MEDICINE DURING THE SECOND QUARTER OF 1933

Academy of Medicine Graduate Fortnight - address Chas Gordon Heyd Aid of State to Counties in Tennessec sponsibilities and Our Obligations

address Dean A M Schwitzlla T

Muster in the House of Medicine 670 American Medical Association Meeting 606 Annual Meeting Medical Society of the State of New York April 3 5 1933 Annual Meeting Editorial - address T H Cary, Medical Service Description House of Delegates Minutes
Radio Schedule for the Nation 623 --- address H W Haggard Decline of - Workmen's Compensation Arbi Medicine as an Art 557 tration

4, 4,4

Annual Meeting in Florida	488	Insurance for Hospitals, Care in West Virginia	480
in Illinois	487	Index of Activities, First Quarter	471
in Indiana	716 478	317 / A '1'	484
in Philippine Islands	548		486 487
Asphyxial Death, Society on	771		491
Basic Science Law in Colorado	617	——— Department of Health Reorganization	716
Pudget	770	Legislation	780
Crippled Children in Illinois	484	Indigents	
Chiropractors in Texas	491		550
Christian Science in West Virginia	614 552	Kentucky, Advertising in Journal	550
Colorado, Conference of Secretaries and Presidents Legislation	555 555	1 13 1 0 1 1 0 A 1	718
Basic Science Law	619		617 606
Committees of Medical Society of State of New	u15		617
York	710	———, in Indiana	780
Compulsory Health Insurance	473		614
Contract Practice in Washington	778	Massachusetts, Venereal Clinics	
Control of Medical Activities, Flaherty	497	Maternal Mortality in Philadelphia	
Costs of Medical Care, Report of State Commit-	529	Medical Service of the Nation—Cary	623
tee	349	and obligations—Heyd	493
Albany	541	Merck's Research Laboratory; Dedication of	773
Essex	541	723, 771,	773
Montgomery	541	Michigan, Graduate Education	554
Rensselaer	541		666
Saratoga	541		720
Schenectady	541 541		478 668
County Medical Societies, Reports of Meetings:	371		553
Bronx	713		610
Dutchess-Putnam	743	Necessaries and Luxuries in Medical Care (Ed.)	701
Greene	712	New York Academy of Medicine, Graduate Fort-	
Herkimer	662		711
Kings	771 469	Pennsylvania, Maternal Mortality in Philadelphia.	710 788
Monroe	772		548
Oneida	607		482
Queens	609		666
Rensselaer470,	663		541
Schoharie	712		773
Tioga	712 713	Schwitalla, address at Annual Meeting, "The	562
Washington	489		52
Doctors and Health Department of Temessee	786	become continue, in constituoi i i i i i i i i i i i i i i i i i i	66
Dues in Minnesota	668	, in Minnesota 6	08
—— — Texas	478	South Carolina, Economics of the Doctor	21
Economies in South Carolina	721	, Legislation	
Financing Sickness—Elliott	548 504	Specialists,	J
Florida—House of Delegates	488	State Aid to County Health Departments in Ten-	0
Florida, Graduate Education	722	Students, medical, Lectures to, in Indiana 49	
Graduate Courses in New York	608	Temporary Emergency Relief, administration	~ -
Graduate Education, in Plorida	722	Tennessee—State Department of Health ⁶¹⁴ , /	50 70
in Kentucky	718	State Aid to Counties	78
in Michiganin Virginia	554 481	Texas, Dues and Membership	91
Graduate Fortnight, N. Y. Academy of Medicine.	711	CHIPODESCIOES	83
Haggard, H. W., Address at Annual Meeting, "De-	• • •	Tuberculosis Sanatorium in Minnesota 5	53
eline of Medicine As An Art"	557	Venereal Clinics in Massachusetts	85
Health Department, in Indiana	716	Virginia Graduate Courses	81
House of Delegate in Henride	785	Vital Statistics in Texas	83
House of Delegates, in Horidain Indiana	488 716	Washington, Contract Practice	78 80
House of Delegates of New York, Minutes	581	West Virginia, Insurance for hospital care	S2
House of Delegates, Index of Minutes	605		14
Indigent, Care of, in Delaware	489		48
——————————————————————————————————————	789	Wisconsin, Economics	86
——————————————————————————————————————	720	Woman's Auxiliary in Illinois	609
Individualism in Medicine	669 473	337-alicenta Composition Arbitration Deniella 4	
Insurance, Health, Compulsory.	473 473	tion	67



THE DAILY PRESS



LOWERING BIRTH RATES

One hundred and fifty years ago Matthews was deeply concerned about over-propulation, and pointed the value of war in keeping the number of a people down to the capacity of the land to support them. The New York Herald-Tribune of June 14 has the following editorial argument in favor of fewer births, with a better quality of children.—

"A whole new field for sociological speculation is opened by the figures on this country's declining birth rate that have just been given out by the government's statisticians in Washington. They say that the average last year for all parts of the country was the lowest in nur history and that it will be lower this year. From this they deduce that we are not far from the point where our population will stand still and that, since we now live much longer on the average, we shall shortly be a nation of elders with sedate tastes, about which industry and the commercial arts had better be foresighted.

"Because of ancient tradition, and particularly because of the Anteriean liabit that dates from pioneer days of applauding every form of expansion, our people are likely to look upon a slowing up in the growth of our population as an evilomen. It always has been so. In ancient times, when nations were constantly at war, patriotism was gauged by the size of families, and a decline in the birth rate was a sure sign of national decadence. This tradition was very strong in Rome and was passed into all the Occidental peoples

as a political axion. The conditions under which the idea was sound are gone, but the tradition persists

"In this country we were once in great haste to develop a population that could occupy, open and defend a huge virgin territory. Then we wanted communications over it all and an independent industrial system, at a time when there were few auxiliaries to min power. All these linge jobs are now virtually done. The continent is conquered and its defense is assured. Our problem is, therefore, no longer that of enlisting sufficient man power, from any source and of any quality, for a campaign of conquest, but that of keeping our man power occupied in useful, self-supporting and self-respecting enterprises."

"Under these changed conditions there would be no more promise of future wealth, health and happmess for the American people in a high birth rate, indicative of nothing but the nonselective multiplication of our numbers, than in unrestricted, non-scleetive immigration In a lower birth rate, on the other hand, we can see some hope that a sense of responsibility for the health, education and opportunities of the next generation is coming to govern the social thought of the present one. We can see some promise of selective rather than quantitative growth Viewed in this light, the lowering of the birth rate is surely a form of natural selection to meet a demand for intelligence, which becomes more insistent yearly, instead of a demand for numbers

COST OF EMERGENCY CASES IN HOSPITALS

The people expect a general hospital to take emergeney cases, but they do not realize that the care of these cases costs money, and that the financial burden on the subscribers to the hospital deficit is like that on the physicians when they give free eare to the poor. The New York Times of Jime 23, commenting on this burden uses the Flower Hospital of New York City as an example and says.

"Eighty per cent of its patients last year were treated free or at far less than cost. Its ambulances respond to nearly 1,000 emergency calls each month. One thousand patients each week are being treated in its emergency rooms and clinics, and several thousand "imemploved sick" were brought back to health within its walls. But with over 12,000 individuals on its lionor.

roll of contributors in other years, less than 3,000 gifts were received during the past twelve months most of them for reduced amounts

New York City paid \$57,357 to Flower Hospital last year for the eare of the destritute sick but this service cost the hospital \$115,000. In addition thousands of dollars were spent in its clinics and wards for those who could pay but a part of the cost. Last year's deficits were met by several large gifts to general funds which can not be expected again this year. This is an emergency case for which immediate treatment is sought."

Practically every general hospital in New York State is in a similar financial condition. Is support by taxation the only practical solution of the problem of hospital finances?

ECONOMICS

The following letter printed in the New York Times illustrates the confusio nof the average citizen, including the doctor, when he tries to reason out the economic state of our country:—

"John Doe owes a mortgage and has an equity in an insurance policy. He is a debtor and a creditor.

"If he deflates he increases the value of his invested money but loses his home. If he inflates he pays off his mortgage but loses his savings. He can preserve the value of his insurance equity and lose his equity in his home, or he can repudiate his mortgage debt and lose his investments.

"Had he not gone in debt there would have

been no opportunity for the investment of his savings, and had he not saved he could not have borrowed money to build his home.

"The more money he saves, the bigger becomes his debts, and if he pays off his debts the only use he can have for money is to spend it. To avoid being a spendthrift he must borrow money, and to be financially sound he must only borrow money to expand, and what is the use of expanding if he does not spend more. His investments are his own debts. He has got to go in debt to be thrifty. He is the richest guy in the world with \$200,000,000,000 invested at interest, and the poorest guy in the world trying to pay interest on that amount of debts."

A MILLION DIPHTHERIA IMMUNIZATIONS

The Department of Health of New York City takes advantage of a possible news item in order to educate the people regarding preventive medicine. The New York Herald Tribune of May 17 contains the following editorial comment on the act of immunizing the millionth child against diphtheria:—

"Long life to Mary McDermott, nine months old on May 3! She can tell her grandchildren that she was the millionth New York child to be immunized against diphtheria and that the pioneers of the preventive treatment, Dr. William H. Park and Dr. Bela Schick, took part in the proceedings.

"The inoculation of the millionth child, how-

ever, should not lead the public to an undue feeling of security. There still are nearly 500,000 children under six years old in the city unprotected against the disease; and the greatest danger from diphtheria is in the first five years of life. In a number of smaller cities where all parents can readily be informed, so that they will take the precautionary measures, diphtheria has been virtually wiped out. The task of education in New York is great, but not overwhelming, as the results thus far prove. 'With a little more effort,' said Dr. Park on Monday, 'there will be as little diphtheria in the city as smallpox. The goal is in plain sight of mothers and fathers in New York.'"

WRITTEN RELEASE FROM LIABILITY

The New York Sun of June 7 comments editorially on a general release after an accident and its effect on a malpractice suit against the attend-

ing physician:-

"When a person is found liable for damages for personal injury he may be liable also for medical negligence, mistake or lack of skill in the treatment of the injured, on the theory that the original injury was the proximate cause of the subsequent damages. This doctrine is sustained by a number of authorities in New York State. An extension of the principle was declared recently by Justice Heffernan of the Supreme Court, sitting in Schoharie county, who said that he had been unable to find precedents covering the question before him.

"A seven-year-old girl was struck by an automobile truck, her leg being severely injured. When she left the hospital the owners of the truck settled the claims of her father and herself for \$7,884 and received a general release. Immediately thereafter the father brought suit seeking \$110,000 in damages on behalf of himself and

the girl against the hospital and the surgeon who attended the child. There was no allegation that the surgeon did not treat the injury according to his skill and ability, but, conceding malpractice, Justice Heffernan said that recovery was precluded.

"The owners of the motor truck were liable not only for the injuries the girl sustained but also for the alleged malpractice of the attending surgeon and for the expenses of medical attendance. Having that liability in view they settled with the claimants. The child had already suffered the effects of any malpractice that had been committed, and this cause of action could have been enforced against the original wrong-The release having been made in settlement of all existing claims, the plaintiffs could not bring a second action for malpractice against the surgeon who occupied something of the position of a joint tort feasor. While the court found no rule on this exact question in New York State, he cited many decisions in other jurisdictions where he said the rule seems to be well settled."

BOOK REVIEWS



DISEASES OF THE NISE, THROAT AND EAR FOR PRAC-TITIONERS AND STUDENTS. Edited by A. LOGAN TURNER, M.D. Third Edition. Octavo of 465 pages, illustrated. Baltimore, Williams & Wilkins Company, (William Wood & Company), 1932. Cloth, \$600.

The different branches or specialties of medicine are so interdependent that one who is practicing any one of them must have a fair knowledge of several others The general practitioner or specialist who wants to know how and where the discases of the ear, nose and throat are related to his field of medicine, and wishes to learn of the recent advances made in pathology, symptoms and methods of treatment of these diseases, will find this book a valuable one. It was written primarily for the practitioner and the senior medical student. However, those confining their work solely to diseases of the ear, nose and throat, will find much in it of value. The author, Dr. A. Logan Turner, and those associated with him in producing the volume, are connected with the Hospitals and the University of Edinburgh.

This, the third edition, has been thoroughly revised and brought up to date. The chapters on Pernral Endo scopy and Meniere's Symptom Complex have been entirely rewritten.

Each chapter is very complete and, although con densed, makes the subject very clear. The illustrations and plates cannot be praised too highly. They are very distinct and they explain the text unusually well.

The index, a valuable part of any reference or text hook, is very complete.

There is an appendix with ten pages of formulæ which adds much to the value of the book.

In every respect it is a work that can be highly reeommended. JOHN W. DURKER.

PICTORIAL MIDWIFERY. By COMYNS BERKELEY, M.D. Sceond Edition. Octavo of 172 pages, illustrated Baltimore, Williams & Wilkins Cumpany (William Wood & Company), 1932. Cloth, \$3.00.

Intended as a manual for midwives, this is a picturebook with only just enough reading matter to explain book with only just enough reading matter to explain the illustrations. A beautiful colored plate shows peraphigus neonatorum. Positions of the fetus are shown as first, second, third and fourth, in the English manner, but should not the third be second? The midwife should be increased with the second? The midwife should be impressed with the great frequency of right posterior positions; it would improve her obstetrics. The fetal circulation is explained in great detail because "Pupil midwives find it very difficult to understand"; but to what useful purpose this knowledge may be put is not apparent. A good bnok which meets the indi-CHARLES A. GORDON.

RADIOLOGIC MAXIMS. ADIOLOGIC MAXIMS. By HAROLD SWANDERG, M.D. 12mo of 127 pages. Quincy, Ill., Radiological Review Publishing Company, 1932. Cloth, \$1.50.

This little book tells more truths, concisely stated, relative to X-ray and Radium in diagnosis and disease than any text book we have read. It includes the statements that have appeared from time to time in the litera-ture of such authorities as Bloodgood, Ewing, Kelly, Wm. Mayo, Yung, Moynihan, Burnam, Morris, and others concerning the advantages of radiation therapy for various pathological states. various pathologic states.

Specially does it stress the radiotherapy treatment of epitheliomata, cavernous angiomata, menorrhagia of puberty and the climacteric, fibroids, carcinoma of the cervix, hyperthyroidism, and palliation in metastatic as well as inoperable malignant states.

The maxims are so numerous, truthful and full of knowledge, we feel this small book should be read by all; as a review for the informed radiotherapist and to open a vista for the uninformed practitioner it is worth its weight in gold.

There are but one lundred and twenty-two pages, the reading is light and the dividends in knowledge heavy MILTON G. WASCH.

PRACTICAL OBSTETRICS FOR STUDENTS AND PRACTITION-ERS. By P. BROOKE BLAND, M.D. Octavo of 730 pages, illustrated. Philadelphia, F. A. Davis Company, 1932. Cloth, \$8 00.

This is a text book intended to be not too small and not too large. It is like other text books in the arrangement of material, but contains a particularly valuable chapter in obstetrical jurisprudence. Another section containing good references for additional reading should he an excellent guide for the student who is auxious to go a little further into obstetrics. Colored plates are excellent, and our new knowledge of menstruation and hormones is very well presented. It is too bad that pictures of the old infant-swinging method of resuseitation are included, the new and better methods of inducing respiration in the new born are not mentioned. A good text book, CHARLES A. GORDON.

THE HISTORY OF DERMATOLOGY. By WM. ALLEN PUSER, M.D. Octavn of 223 pages, illustrated. Springfield, Ill., Charles C. Thomas, 1933. Cloth, \$3.00.

This well-printed book covers the history of Dermatology from ancient Egypt to the beginning of the twentieth century. It is the first history of Dermatology and Syphilology in English. The specialty is covered thuroughly; as is its background in medicine in general. The various workers are given eredit for their principal enntributions and the presentation is made in such a manner as to be very readable and enjoyable. Dr. Pusey has covered a long overlooked field in the literature of Dermatology and is to be commended for the manner in which he has done it. JOHN C. GRAHAM.

THE FAILING HEART OF MIDDLE LIFE, BY ALBERT S. HYMAN, M.D., and AARON E. PARSINNET, M.D. Octavo of 538 pages, illustrated. Philadelphia, F. A. Davis Company, 1932. Cloth, \$5.00.

This is a carefully prepared, well-written volume on the heart of middle life. The subject is presented in six parts containing fifty-five chapters. A clear presennation of the cornnary circulation in health and disease, including coronary sclerosis and thrombosis is given in Part 1. A discussion of the various conditions of cardiac muscle dysfunction is presented in Part 2. authors prefer the term of myocardosis to the term myocarditis. Further discussion of coronary thrombosis and occlusion, together with the symptoms, prognosis and treatment is found in Part 3. The electrocardiographic findings in degenerative heart disease are shown clearly in Part 4 Chest pain, or angina pectoris, is discussed in Part 5, with the latest methods of treatment both medically and surgically. The medico-legal aspects of sudden death from heart disease are presented in Part 6. This is an excellent and thorough exposition of the subiect, and will be useful to all who study this volume. A bibliography of 1,250 articles on the subject is added.

HENRY M. MOSES.



OUR NEIGHBORS



ANNUAL MEETING IN LOUISIANA

The New Orleans Medical and Surgical Journal for April records the cancellation of the annual meeting which was to have been held April 25-27, in the following editorial:

"It is deeply to be regretted that it has been found necessary on account of the present unsettled economic condition throughout the State and the country to postpone indefinitely the Annual Meeting of the State Society, which was to be held this year at Lake Charles. The unfortunate series of circumstances which have arisen in the financial world make this a necessary step. This was decided upon by a written vote of the members of the House of Delegates. The vote was practically unanimous. The delegates felt that the meeting would be so slimly attended and would be confined almost entirely to the physicians living around Lake Charles, and hence it would be unwise to go to the expense of putting on the annual State convention.

"The House of Delegates of the State Medical Society has done a wise thing, but nevertheless

one can not help but feeling that this unfortunate but necessary postponement will leave void in the year's activities of the profession throughout the State an empty space which will be hard to fill. The Annual Meeting presents a series of excellent scientific presentations which is good for all of us to hear. The social aspect of the meeting is as important; it brings the doctors together; it makes them acquainted with one another; and it encourages the proper fraternal spirit which is often difficult to cultivate and more difficult to achieve. Most of the physicians who are regular attendants at the Society's State meeting derive a great deal from it, and to them, at least, its absence this year will be a real sorrow, mitigated in large part by the fact that it would be a very serious drain on their resources were they to attend the meeting.

"We know that the Lake Charles physicians will be disappointed, but we know furthermore, that they will approve of the action taken by President Harrison and the House of Delegates."

EDUCATIONAL COMMITTEE IN ILLINOIS

The Illinois Medical Journal for March contains the February monthly report of the Educational Committee of the State Society. The following abstract will show the scope of the work of the Committee:

Radio: Forty-seven radio talks were given from WGN, WJJD, WAAF, including twentyfour talks during the Young Mother's Hour given every morning.

The topics of the talks included the following: Reducing Children's Nuisance Values.

My Child Won't Eat.

Kidney Stone.

Functions of the Nose.

Unconsciousness.

Nervousness. Speaker's Bureau: Forty health programs were arranged for lay groups as follows:

Parent Teacher Associations.

Women's Clubs.

Business and Professional Groups.

Men's Club.

Public Community meetings.

Farmers Institute.

Scientific Programs for County Societies: The programs for county societies were arranged. Some of the subjects were as follows:

Nephritis of Pregnancy.

Pelvic Infections with Movies of Operations.

Endocrinology.

Pediatrics.

Pernicious Anemia.

Press Scrvice: The releases for the month numbered 727 as follows:

Regular press service.

Monthly service.

Home Bureau Advisors, Material on Colds. Newspapers, re meeting DeWitt County Medical Society.

Newspapers, re meeting LaSalle County

Medical Society.

Newspapers, re meeting of Livingston County Medical Society.

Newspapers, re meeting Perry County Medical Society.

Community papers, re meetings Branches of Chicago Medical Society.

Chicago Association of Commerce, re meet-

ings Chicago Medical Society. Educational Articles: Twelve educational articles were written and approved by the Committee, some of the subjects being:

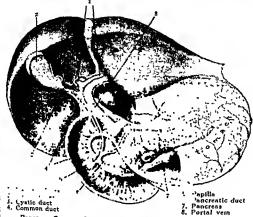
Personal Hygiene. Care of the Skin.

Food Poisoning.

The Common Cold in Children. Package Library Service: Twenty-five pack-

(Continued on page 848-adv. xii)

WYALIN



A Biliary Stimulant

Contains No Phenolphthalein

Pancreas, Common Duct, Portal Veln and Duodenum are shown through the Phantom (transparent) Stomach

BILE SALTS—Natural cholagogue. The only true cholagogue which stimulates the liver to secrete bile. The bile thus formed is Nature's Laxative—very mild and harmless in its action. Assists in the absorption of fats and regulates the intestinal flora.

EXTRACT NUX VOMICA—Stimulates gastric secretion and bowel action.

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Wyalin is especially useful in biliary disturbances and is also of value in intestinal stasis and other bowel disturbances where a digestant and gentle laxative is required.

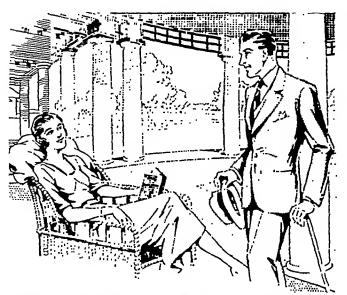
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This Spa is made possible by Saratoga's marvelous, naturally carbonated mineral waters. The values of these waters have been attested by such eminent scientists as Dr. Franz M. Groedel, the distinguished heart specialist of Bad Nauheim, Dr. Gustav Toepfer of Carlsbad, Dr. Paul Haertl, head of the Staatslaboratorium at Bad Kissingen, and Dr. Oskar Baudisch of Yale, formerly of the Rockefeller Institute. Characterized as the peers of any waters to be found in Europe, they are the only naturally carbonated mineral waters to be found in the United States east of the Rocky Mountains.

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Members of the profession are eordiolly invited to be guests of the Stote at the baths while in Sorotoga. For complete information on the Sorotoga Baths and battled Mineral Waters, address: Medical Director, Saratoga Springs Commission, Sorotoga Springs, New York.



(Continued from page 846)

ages were sent to physicians on subjects such as the following:

Diphtheria.

Mental Hygiene.

Venereal Diseases.

Growing Old Gracefully.

The Nervous Child.

Health and the Depression.

The following miscellaneous services were rendered:

Help given to Johnson County in outlining plans for a Crippled Children's Clinic.

Material on clinics for the handicapped secured

for physicians of Livingston County.

Outlines mimeographed for Public Health Chairman of the Illinois Federation of Women's Clubs.

Report of Chicago activities of the Educational Committee prepared for Health Department to submit to Inter-City Chamber of Commerce contest.

Requests for copies of radio talks received from listeners in Wisconsin, Iowa, Michigan, Indiana Illinois and Kontucky

Indiana, Illinois and Kentucky.

Interview with Child Hygiene Chairman of the Illinois Congress of Parents and Teachers concerning cooperation with health program at the Annual Meeting of the Congress.

List of officers of County medical societies fur-

nished Nurses Association.

Suggestions given to nurse promoting public

health meeting at Mendota.

Contact made with the Boy Scouts—hope to develop some health work with this organization before summer.

RESTRAINT OF UNLICENSED PRACTITIONERS IN WEST VIRGINIA

The May number of the West Virginia Medical Journal describes a unique method of proceeding against an unlicensed practitioner of medicine named Mitchell, whom the Court had failed to convict for violating the medical practice act. Dr. Raymond Sloan, of Huntington acting for the Cabell County Medical Society brought action against Mitchell on the ground that a license to practice medicine is a property right earned by each individual doctor. The article says:

"On this theory, Dr. Sloan petitioned the circuit court for an injunction against Mitchell to stop his medical practice. The petition set forth that Mitchell was infringing upon the right of Dr. Sloan and all other licensed physicians and surgeons in West Virginia, and should therefore be enjoined from further practice.

"The state supreme court upheld Dr. Sloan,

the syllabi reading as follows:
(Continued on page 849—adv. xiii)

(Continued from page 848-adv. xii)

'The right of a licensed physician and surnt to practice his profession is a valuable achiese in the nature of a property right to teet which he may sue in equity in the rest of himself and other physicians simply situated, to enjoin a person from enaching upon said right by engaging in the ctice of medicine and surgery without a te license.

'A court is not powerless to prevent the ng of an act involving encroachment upon uable franchise rights of others merely bese such conduct is denounced as a public

nse.'

The importance of this decision is farching, because it simplifies the legal steps necessary in the prosecution of quackery. Any licensed physician in West Virginia, under this ruling, may sue in equity for an injunction against any person practicing medicine without a state license. Heretofore it has been necessary to secure a grand jury indictment against an unlicensed practitioner and then go through a trial in criminal court.

"It is hoped that this new ruling will create an incentive to each county medical society in the state to rid its particular section of unlicensed quacks. The officers of the various component societies should see to it that this is done. The supreme court ruling is a matter of state-wide interest, but the application of the ruling is an individual matter for each individual county society to handle for itself."

LEGISLATION IN WYOMING

The Wyoming section of the April issue of larada Medicine contains the following commits on medical legislation in Wyoming:

Senate File Number Six corrected an error our medical practice act. This law had been the statute books for over thirty years—yet

in no place did it say "a doctor must have a license to practice medicine in the State of Wyoming." It only required that any one wishing to practice medicine in Wyoming. "should apply for a license." Senate File Number Six corrects this

(Continued on page 850-adv viv)

Now

Support for the Difficult Figure

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BROOKLYN NEWARK SPRINGFIELD WILKES-BARRE DETROIT BOSTON (Continued from page 849-adv. xiii)

error and puts teeth in the old law. It was passed and signed by Governor Miller. The passage of this law will now enable the State Board of Medical Examiners to see that the law is enforced, and it marks the completion of a program to correct the weak part of our medical law.

"A law was also passed making it a legal requirement that the state Board of Medical Examiners shall have one osteopath as a member. For years there has been a gentlemen's agreement to this effect and one member has been an osteopath. This law was supported by the doctors to show good faith, and the Governor has appointed an osteopath, Dr. Tarrant of Laramie, as a member.

"A bill was introduced to amend the present law on marriage to require the female also to be examined and have a doctor's certificate of freedom from venereal disease, as is now required of the male before a license to marry could be issued. The Committee on Public Policy and Legislation recommend that such a law be passed or the old law repealed. The legislature killed the new bill, so we are still operating under the clean male and unclean female law as of old. We fail to see the justice of such a one-sided law. The fine sentiment of chivalry must have been the real reason why this law was killed. However, had the lawmakers all been doctors the law would have been passed, because doctors have seen some unclean things in life.

"Next month we hope to continue the review of the acts of the past legislature and refer to some other bills that were introduced and killed. Taken as a whole the past session was one of the best sessions we have seen for several years so far as good honest work and honest effort to cut down the expenses of State Government."

TICK VACCINE IN WYOMING

The Wyoming Section of the May number of Colorado Medicine describes a meeting of the State Board of Health and the appointment of County health officers, and then described the following action in regard to tick fever:

"The Board requested all doctors who have been furnished the Government Tick Vaccine free not to charge more than one dollar per person for their services. This action was taken because of the limited supply of vaccine and because as a rule most of those exposed are the ones who have been out of employment a great deal and are unable to pay a normal fee. If any doctor has vaccine he is not using, the Board requests that he return it to his County Health Officer so that every drop can be used this year, as it is evident that there will be a demand for vaccine beyond the government's capacity to supply it."

THE ANALYSIS SHOWS

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In stomach and liver affections and digestive disorders in general; in gout, arthritis associated with time acidemia, unicemia, and nephrolithiasis of uric acid origin.

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SUPERVISION
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GOVERNMENT

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Ferrous bicar
bonate 0 0012
Sodium elloride 0 3830
Sodium sulphate 0 2430
Silica 0 0300 Sodum areni pres-ate phosphate ent

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PROPERTY RIGHTS OF MEDICAL PRACTICE IN WEST VIRGINIA

The West Virginia Medical Journal of June contains an editorial comment on a court order restraining an illegal healer from practicing medicine on the ground that he was intringing on the property rights of the licensed physicians. The editorial says:—

physicians. The editorial says:—
"Mitchell, a Chiropractor turned Naturopath, located in Huntington about one year ago and began a series of extravagant and misleading advertisements in the Huntington newspapers. His advertising material was so flagrant that the Cabell County Medical Society, in an effort to protect the public, brought Mitchell to trial for practicing Medicine without a state license.

This effort failed. The Society then applied to the circuit court of Cabell County for an injunction against Mitchell. This new move went to the state supreme court and, late in March, the supreme court held that a license to practice medicine was a property right, to protect which any physician could sue in equity on behalf of himself and his fellow practitioners.

"In the final decree of the Cabell County circuit court, we quote the following articles restraining Mitchell from:

"(a) Diagnosing . . . any human ailment, in-

firmity or affliction by any method or mar

"(b) Treating or prescribing treatment for any human bodily or mental ailment or sick ness by any manner or means whatsoever whether or not such treatment involves the administering or prescribing of drugs of similar agency, or the performance of any surgical operation.

"(e) Giving advice to any person suffering from any ailment or sickness upon any cours of conduct or any rule or manner of living to be followed by any such person for the benefi of improvement or preservation of such per son's mental or physical health.

"(d) Opening or maintaining an office for the purpose of doing at such office any of the acts herein prohibited and enjoined.

"(public in any way
his ability or right to
treat any sick or attricted person in any manner whatsoever, or his readiness, willingness
ability or right to do any of the acts herein
prohibited and enjoined

"(f) Charging or receiving in any manner whatsoever, any fee, compensation or reward of any kind for doing or purporting to do any of the acts herein prohibited and enjoined."



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The "Special"—Hand-made
"Correct for comfort
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SPRINGFIELD WILKES-BARRE DETROI1 BOSTON (Continued from page 849—adv. 11ii) error and puts teeth in the old law. It was passed and signed by Governor Miller. The passage of this law will now enable the State Board of Medical Examiners to see that the law is enforced, and it marks the completion of a program to correct the weak part of our medical law.

"A law was also passed making it a legal re quirement that the state Board of Medical Examiners shall have one osteopath as a member. For years there has been a gentlemen's agreement to this effect and one member has been an osteopath This law was supported by the doctors to show good faith, and the Governor has appointed an osteopath, Dr. Tarrant of Laramie, as a member

"A bill was introduced to amend the present law on marriage to require the female also tok examined and have a doctor's certificate of fix dom from venereal disease, as is now required of the male before a license to marry could be issued The Committee on Public Policy and Legislation recommend that such a law be passed or the old law repealed. The legislature killed the new bill so we are still operating under the clean male and unclean female law as of old. We fail to see the justice of such a one-sided law. The fine senti ment of chivalry must have been the real reason why this law was killed. However, had the law makers all been doctors the law would have been passed, because doctors have seen some unclean things in life.

"Next month we hope to continue the review of the acts of the past legislature and refer to some other bills that were introduced and killed Taken as a whole the past session was one of the best sessions we have seen for several years so far as good honest work and honest effort to cut down the expenses of State Government"

TICK VACCINE IN WYOMING

The Wyoming Section of the May number of Colorado Medicine describes a meeting of the State Board of Health and the appointment of County health officers, and then described the following action in regard to tick fever:

"The Board requested all doctors who have been furnished the Government Tick Vaccine free not to charge more than one dollar per person for their services. This action was taken because of the limited supply of vaccine and because as a rule most of those exposed are the ones who have been out of employment a great deal and are unable to pay a nor mal fee. If any doctor has vaccine he is not using, the Board requests that he return it to his County Health Officer so that every drop can be used this year, as it is evident that there will be a demand for vaccine beyond the government's capacity to supply it."

This law requires every doctor of medicine who is licensed, shall annually renew his certificate by registration with the secretary of the Board of Medical Registration and Examination and the payment of a fee of one dollar, on or before October 1, but not earlier than July 1. In the event the fee is not paid by October 1, the secretary is required to strike the name of the holder from the register, but the certificate may be restored by payment of a fee of five dollars, if satisfactory proof is submitted at the time of the physician's moral

(Continued from page 852-adv. xvi)

as possible in proportion to their numerical OSTEOPATHS IN MAINE HOSPITALS

strength in this state."

fitness. This law also removes the provision that no school of practice is to have a majority on the board as representation is 'to be given to the different schools of practice as nearly

The Maine Medical Journal of March carries he following editorial on the admittance of osteolaths to practice in the hospitals of Maine:-

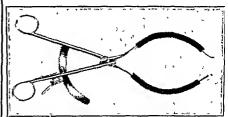
"With the amendment of the new draft of B. P. 109, L. D. 208, regulating the distribution of public funds to hospitals, it would seem that The right of the governing boards of our Maine # hospitals to determine the qualifications of the practitioners of the healing art necessary for Ithose who may practice within the several insti-Itutions under their control has been finally estabfilished and with no penalties attached. Amendment A reads:

"'All hospitals in this state which receive any public funds appropriated to assist in the care of residents of the state shall, subject to the approval of the boards of trustees of the respective hosht pitals, admit osteopathic physicians who are in at good standing and licensed to practice obstetrics and surgery according to the laws of the state to treat therein their own paying patients in private rooms, provided, however, that any such hospital may, at its option, set aside certain rooms therein for the use of such patients as an osteopathic unit,'

"This might well be called a bit of 'Joke Legislation.' It leaves the osteopath, or any other cultist, in the same position in relation to our hospitals as he has always stood. It emphasizes and recognizes the right of the governing boards to discriminate against any practitioner of the healing art whom they may consider unfit to admit to the privileges of their institutions. The osteopath, the chiropractor, the regular, the homeopath may one and all be debarred, if, in the opinion of the boards of trustees, they are unfit. are confident that the directors of our hospitals will not lightly sacrifice their ratings with the National Hospital Association, the American Medical Association, and such bodies as the Col-

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(Davised By Harry Cohen, MD, FACS)



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lege of Surgeons, by admitting any practitioners, however they may style themselves, who cannot comply with the standards which, in their capacity as directors, they have agreed to maintain.

"The bill, as first drawn, and which we are ashamed to have to state was supported in committee by four Senators, was a particularly vicious one-an outstanding example of the type of legislation continually urged by selfish and unthinking minorities. It served no public good and actually menaced the integrity of our hospitals. The amended bill, as passed, has its dangers, but if our hospital boards are true to the duty im-

(Continued on page 854-adv. xviii) Please mention the IOURNAL when writing to advertisers

(Continued from page 853—adv. xvii)
posed upon them as guardians of the welfare of
their institutions and the patients treated therein,
there need be no fear that individuals or groups
will 'crash the gates.' It is to be remembered
that a physician of any sort has no constitutional
or statutory right to practice his profession in
our hospitals. Such being the case, we congratulate the proponents of this bill on a somewhat
sterile victory."

MEDICAL RELIEF IN OHIO

The June issue of the Ohio State Medical Journal has an editorial on the medical relief situation and praises the plan of the County

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Societies of New York State as a model for Ohio.

"In a recent issue of *The Survey*, Dr. H. Jackson Davis, medical director of the New York State Temporary Emergency Relief Administration, described the workings of the emergency relief law of New York, with special emphasis on the provisions relating to the furnishing of medical care to the needy.

"The method used in New York to provide relief for the needy and unemployed differ as to detail from those in effect in Ohio. However, in the final analysis, the programs are similar in that the primary responsibility rests with local communities for carrying out the objectives.

"Because of this, Dr. Davis points out, many of the county medical societies of New York State have formed special committees to confer with local commissioners of relief for the purpose of discussing questions of local and mutual interest.

"If such a plan has been found beneficial in New York State—and it has—from the stand-point of all concerned, patients, doctors and tax-payers—it may well be copies by the component groups of medical organization of Ohio.

"Obviously, most of the problems of medical relief to the poor of this state are essentially local. They differ according to the needs and resources of the various communities. A plan which meets the requirements of one city or county may not be adequate for those of an adjoining county. Local initiative and local responsibility must prevail to a large degree.

"Affected as it is by the emergency conditions which have arisen, the medical profession of Ohio has the right to a voice in how medical relief shall be administered to the needy. However, the question is one which must be met by the various county medical societies in cooperation with the welfare officials and agencies of their respective com-Frequent conferences between remunities. lief officials and representatives of the medicau profession in all counties undoubtedly would clear up misunderstandings, give both groups a better insight of the problems of each, and work to the advantage of all mutually interested in seeing that the necessary relief work is administered on a basis which is fair and equitable to all concerned."

MALPRACTICE SUITS IN OKLAHOMA

The Journal of the Oklahoma State Medical Association discusses malpractice suits in the following editorial:

(Continued on page 855-adv. xix)

(Continued from page 854-adv. xviii)

"Recently Oklahoma physicians, and probbly the same advice went to those in other tates, were advised that there would be an ncrease in premiums on policies protective igainst alleged malpractice, the rate now beng \$45.00, for a ten thousand dollar policy. t is said that the agents advised those conterned that the raise was due to increase in he number of suits brought in the state. It is significant to note that only a few years ago the rate was \$15.00 to \$18.00, then it was raised to \$25.00, now, due to the depression, no doubt, it has reached the present rather

high charge. Reading the petitions filed in these suits brings one to the positive conclusion that often the suit was a useless and unnecessary one to begin with. You cannot get blood out of a turnip, and especially, at this time of de-pression physicians should be unusually wary of bringing suits to collect fees, where, in many instances, a moment's reflection would show that all the physician would have, if he won his suit, would be a worthless, uncollectable judgment. Thousands of people, good yesterday, are 'bomb-proof,' today against any

sort of judgment, so, the physician should use a great deal of discretion, and know his judgment would be worth something, if he secured it. In some of these suits the defendant promptly counterclaims with allegations of malpractice. Whether such allegations are groundless or not the attorneys promptly take the view that he has a harder case to combat, and at once demands a larger fee, rather than his usual commission, from the physician who has placed himself in an embarrassing position. As a matter of fact it is well known that if the attorney goes ahead with his original intention to sue and get judgment upon a physician's bill, all allegations of malpractice are nullified, if the attorney gets judgment for the physician, despite the lugged in, twelfth hour allegation that the physician was guilty of malpractice.

"We would advise that suits only be brought when the claim is clearly just and the defendant vulnerable. Finally, in such cases friends are retained, not lost, if the case can be amicably settled between the parties most at interest-the patient and the physicianrather than have the matter go to a court of adjudication."

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DIE MEDIZINISCHE WELT

Dr. Georg Zachariae,

"Therapie der rheumatischen Erkrankungen," (Therapy of the rheumatic diseases).

The author gives the following classification of the rheumatic conditions: (1) Inflammatory conditions of muscles, including Myalgia. (2) Rheumatic affection of nerves, especially the neuralgias, and sciatica. (3) Acute rheumatic joint lesions. (4) Chronic diseases of joints.—For all these conditions he contends that the primary and essential feature of the treatment should be hot brine baths, preferably sulphurous, at a temperature of 103° F. The chemical dissociation of the salts which occurs allows the free ions to penetrate the skin. After the baths it is essential that the affected parts should be covered with Antiphlogistine. -There is a definitive lowering of blood sugar after the baths, and the blood pressure also falls in consequence of an exertion of histamine bodies by the skin. Precautions must therefore be taken against collapse. As accessory measure mineral water of the Kaiser-Friedrich-Quelle are given the patient to drink daily.—Besides other cases, 79% of 124 cases of chronic infective poly-arthritis were cured.-Adv.

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2. Then release spring handle with another finger.

3. To use ratchet for fine adjustment it is advisable to first gently compress the clamp with one hand to release tension on ratchet and then wind or unwind adjustment screw with the other

4. To release Clamp when through do not spring release too suddenly but again compress clamp first and then release. Sec page xvii—Adv.

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ACUTE HYPERTHYROIDISM

(Thyroid Crises)

By FRANK H. LAHEY, M.D., BOSTON, MASSACHUSETTS

PATIENTS with hyperthyroidism are able to be up and about in such a large percentage of the cases, even though they be considerably handicapped, that physicians readily come to believe that the disease possesses no real emergency dangers. Furthermore, family physicians seeing as they do a relatively limited number of cases of hyperthyroidism, may well go throughout their entire practice without ever having seen a case of acute hyperthyroidism, or at the most having seen but a limited number of such thyroid

This situation tends to make physicians feel that there is no real emergency as relates to

hyperthyroidism.

Dealing, as we do in this Clinic, with patients in large numbers who have hyperthyroidism, we are almost never without from one to several patients in the Clinic in varying degrees of acute hyperthyroidism. We are compelled to realize that when patients are permitted to progress into such degrees of intense thyroid intoxication that they are in thyroid crises, the danger of an imminent fatality is very materially increased, to say nothing of the added dangers of the operative treatment of such cases. It has seemed to the writer worth while to present some of the early indications of the possible occurrence of this state together with some of the measures which we have employed to overcome it when the condition

Typical cases are cited to present actual exam-

ples of this situation.

Case I. Mr. S. M. No. 30666. Mr. M. was seen by us on November 9, 1932. He was sixtyone years of age at that time and had had symptoms of thyroid toxicity over a period of three years, during which time he had lost fifty pounds. He had been nervous, very easily fatigued, and during most of this time had had a very good appetite. He had had several periods during which he had uncontrollable diarrhoea, and for two weeks before he was admitted to the New England Deaconness Hospital had had severe diarrhoea and had been delirious and disoriented.

During the first few days in the hospital he had auricular fibrillation and was continuously activated and confused. During the first week he was given continuous venoclysis by means of the continuous indwelling Hendon needle, and received on the average of five thousand cubic centimeters of fluids per twenty-four hours. This included one hundred and fifty grams of glucose by vein in a five per cent solution. He improved

During his second week in the hospital, he was out of bed for a short period each day and his treatment-Lugol's solution, high fluid, and high carbohydrate intake-was continued. His first basal rate was determined fifteen days after admission and was plus twenty-nine (note that one cannot depend upon either the basal metabolism rate or the pulse rate as dependable indications of the seriousness of the disease), his pulse was one hundred sixteen, his weight one hundred fifty-eight pounds. His diarrhoea was controlled by tineture of opium and intravenous fluids and glucose and gradually subsided until, at the end of two weeks, he had only two or three stools each day. He was given sedatives for his restlessness. After his diarrhoea had been controlled, his appetite improved and he was able to take large amounts of nourishment and fluids by

His thyroid was greatly enlarged and partially intrathoracic on both sides, the right side being the larger. His trachea was deviated to the left

and flattened on the right side.

In spite of his recent crisis, a left subtotal hemithyroidectomy was done as a first-stage operation three weeks after admission. He was placed on constant venoclysis for three days after this and his condition was good at all times. His basal rate six days after the first-stage operation was plus fourteen, his pulse ninety-six, his body weight one hundred forty-nine and a half pounds.

He returned to the hospital six weeks later, having gained thirty pounds in weight. metabolic rate was plus twenty-five, his pulse one hundred, his weight one hundred and seventy

pounds. He had taken ten drops of Lugol's solution each day in the interim and his second operation (right subtotal hemithyroidectomy) was performed immediately. His convalescence following this was normal and his basal metabolic rate six days after operation was plus fifteen, his pulse eighty-three, his weight one hundred and sixty-nine pounds. He has continued to gain and leaves this week, February 22, 1933, for a vacation in Europe. This patient illustrates a case rescued from a thyroid crisis, submitted to a two-stage thyroidectomy within three weeks of entrance, delirious and in a thyroid crisis, and relieved of his hyperthyroidism.

Case II. Mr. C. C. B. No. 24268. Mr. B. was fifty-six years of age at the time he consulted us on September 17, 1931. He was extremely weak and had had palpitation and loss of weight for four months. Emaciation, activation, weakness, and tremor were all present in a marked degree. His speech was slurring and at times he was delirious. The thyroid was about twice normal size, hyperplastic, and very firm.

He was admitted to the hospital and for several days was delirious and disoriented. He vomited for several days and could not take fluids by mouth. His basal metabolic rate was plus fortysix, his pulse one hundred twenty, his body weight ninety pounds.

He was placed upon continuous intravenous glucose and salt solution and subpectoral fluid and Lugol's solution. Ten days after admission his basal metabolism rate was plus sixteen, his pulse one hundred sixteen, his weight eighty-nine pounds. A few days later, he had a bilateral pole ligation and his basal rate was determined one week later. At this time the rate was plus thirty, his pulse one hundred and twenty-eight, his body weight eighty-seven pounds. His recovery after operation was very favorable.

He returned six weeks later with a metabolic rate of plus thirty-one, pulse one hundred twenty, weight ninety-one pounds, a gain of three and a half pounds in six weeks. A right subtotal hemithyroidectomy was done at this time and he was discharged with a basal metabolic rate of plus thirty-four, pulse one hundred twenty, weight eighty-six and a half pounds. He had a moderate reaction after the hemithyroidectomy with but slight temperature elevation and intermittent periods of auricular fibrillation.

Six weeks later he returned with a gain in weight of ten pounds, his body weight being ninety-six and a half pounds. His metabolism at this time was plus fourteen and his pulse eighty-eight. He withstood the left subtotal hemithy-roidectomy well and enjoyed an uneventful convalescence.

His last report shows that he has gained thirtythree pounds since his first operation. This patient likewise is a typical representative of this group of cases rescued from crisis, operated in stages, and relieved of hyperthyroidism.

Case III. Mr. C. O. No. 15344. This patient considered himself well up to a few months before we saw him, at which time he had begun to lose weight and feel a little run down. He still kept at work but with some difficulty. His friends began to comment later on the prominence of his eyes, which was a new development to him. He did not have any further symptoms of hyperthyroidism but six weeks before entering the Clinic the patient was taken with an attack of vomiting and indefinite abdominal pain. He was taken to a hospital in another part of the state where an appendectomy was done with a good recovery for one week. At the end of this time, swelling appeared bilaterally about the ears which, we presume, was a bilateral parotitis. Small incisions were made and pus drained from these, he stated, for two or three weeks more, at which time he was studied further to determine his thyroid function, since it had been noted for the first time then that a goitre was appearing on his neck. A basal metabolism was done, found to be elevated, and he was referred to this Clinic for operative treatment. His weight, during this time, had dropped from one hundred forty pounds to one hundred ten pounds.

Although this patient intended to be cooperative, his mental condition was vague, he was confused in answering questions, and it was felt that he could not be relied upon too closely as to the details of his statements. His basal metabolism on admission was but plus fourteen and I wish to call attention to the fact that patients in thyroid crises or on the verge of thyroid crises do not necessarily have to have marked elevation in basal rates. Note the first picture of this patient, Illustration I, with his marked emaciation, extreme exoplithalmos, and typical picture of acute hyperthyroidism, but with a relatively low basal rate. There appears with fair consistency a low basal rate during the time of impending crisis which later is elevated when the patients are gotten out of the crisis or following first-stage hemithyroidectomy and improvement in their general condition.

In spite of a low metabolism, it was obvious that, as one can see from the first picture, Illustration I, of this patient, no complete subtotal thyroidectomy could be considered. On April seventeenth, 1930, therefore, a right first-stage subtotal hemithyroidectomy was done with an excellent recovery. Two months after the right subtotal hemithyroidectomy, this patient returned for his second operation, at which time his basal metabolism had increased to plus fifty, he had gained twenty-eight pounds in weight, and was, as shown in Illustration II, markedly improved.

The left second-stage subtotal hemithyroidectomy was now done, resulting in a drop in metabolism immediately to plus thirteen. The last report on this patient, one year later, showed his metabolism to be plus two. His last picture is shown in Illustration III. His pulse rate was eighty to eighty-four and he had gained fifty-four pounds since the day of his entrance to the Clinic.

This patient, following his first admission to the hospital, was placed upon intravenous fluids and glucose and a high carbohydrate diet, and following each operation the same procedure was employed



ILLUSTRATION I

A patient with acute hyperthyroidism on the verge of thyraid crisis

This case likewise illustrates a patient on the verge of a thyroid crisis, kept out of it by active measures, operated upon within a short time, and relieved of hyperthyroidism. One has only to observe the first picture of this patient to realize the extreme degree of emaciation and intoxication which can occur in patients with acute hyperthyroidism.

These three typical cases were selected out of a large scries of patients either with crises or on the verge of crises to illustrate the seriousness of this state

Factors Bringing About Thyroid Crisis

The factors which precipitate a thyroid crisis are doubtless many and varied but since we have no accurate knowledge of what actually incites thyroid overactivity, we cannot construct any provable theory as to the real causes of thyroid crises

Once hyperthyroidism is established, however it is not difficult to comprehend how it may be so intensified that an acute hyperthyroidism or thyroid crisis results. Exophthalmic goitre or hyperthyroidism is a disease of excessive combustion. Patients with hyperthyroidism as a rule endeavor spontaneously to offset this excessive combustion by an in-



ILLUSTRATION II,

The same patient after being delivered from his critical thyroid state and submitted to right first-stage subtotal thyroidectomy.

creased intake of fuel. As long as there is a relative balance between increased food and fluid intake and increased combustion, the symptoms of hyperthyroidism, while striking, provided there are no cardiae complications, are not alarming



ILLUSTRATION III

The same patient one year after the final left subtotal second:

the has only to compare.

III to realize the sink and the degree of recovery which they can make following praper preparation and operative treatment.

and patients are able to be up and about accomplishing a considerable amount of activity, even though it produces a marked degree of exhaustion

If, however, fuel and fluid intake are not maintained in proportion to the excessive combustion and marked degrees of weight loss occur, the symptoms of the disease are strikingly intensified and the reaction to stimulation, particularly in the way of operative procedures, emotional burdens, and acute infections, is very much exaggerated. Dr. H. M. Clute has demonstrated, in a study of a group of cases in this Clinic, that marked weight loss, fifty pounds or over, in patients with hyperthyroidism, is an indication that they are serious operative problems as relates to possible mortalities and that operative procedures on such individuals must be done cautiously. These patients with extreme degrees of weight loss, represent a group in which hyperthyroidism is of an intense and serious character.

When hyperthyroidism becomes progressively intensified and fluid and food intake lags consistently behind, one then begins to observe the dangerous effects of excessive hyperthyroidism in a patient unprotected by adequate fluid and fuel intake. With excessive hyperthyroidism goes excessive combustion and when fluid and fuel intake is adequate to meet this excessive degree of combustion, progressive autocombustion occurs with exhaustion of available glycogen and diminution of the glycogen reserve in the liver. This state is associated with vomiting, diarrhoea, and delirium. What the vomiting and diarrhoea are due to, is not proven. Whatever their cause, they produce conditions well calculated to intensify the seriousness of the situation and to definitely increase the dangers of a mortality.

When vomiting or diarrhoea occurs in hyperthyroidism, a most undesirable situation has arisen because it is impossible for the individual in this state to take in the two necessary elements, fluids and fuel, to offset hypercombustion. When a patient vomits, this occurs. When he is able to take in food but has numerous liquid movements, loss of fluid and fuel likewise occurs and serious intensification of the symptoms results.

Hyperthyroidism in patients already suffering from this disease may be very dangerously intensified by emotional disturbances. We have seen two patients with hyperthyroidism die within four days as the result of serious emotional shocks. Both of these cases occurred some time ago, before we were as familiar with the management of this thyroid emergency as we now are, and were they to occur now, after an extensive experience with patients in thyroid crises. I doubt if fatalities would occur. Both cases occurred some years ago in patients while at home, after preliminary ligation of both thyroid poles, between the first and second stages of their operation. Both were subjected to extremely trying emotional strains, both immediately became nauseated, delirious, and went into crises and died with high temperatures and uncountable pulses.

We know that when acute infections are superimposed upon hyperthyroidism, the severity of the hyperthyroidism is often markedly and dangerously intensified and a thyroid crisis brought about. We have seen a man with but moderate hyperthyroidism become delirious and immediately progress into a thyroid crisis following the development of a tooth infection with alveolar abscess and high temperature. We have seen patients with moderate degrees of hyperthyroidism converted into serious and fatal cases by the complication of acute appendicitis or acute cholecystitis.

We know that anything which incites prolonged vomiting in patients with hyperthyroidism, diminishing thus their fuel and fluid intake, intensifies the disease and makes them candidates for an acute hyperthyroidism or thyroid crisis.

In an experience dealing now with approximately eleven thousand thyroid operations, we know that thyroid crises are not of common occurrence. During the year nineteen thirty-two, for example, one thousand and twenty-one thyroid operations were done on nine hundred and twelve patients and eight cases of thyroid crises occurred, two of which died. But one patient died following the one thousand and twenty-one operative procedures during the year.

That thyroid crises are not without a serious side is evidenced by the fact that in practically every year of our experience with thyroid disease a number of patients have come to the clinic in thyroid crises and have died unoperated in spite of all measures to get them out of crises.

When iodine first became popular in the treatment of toxic goitre, we were extremely optimistic that its employment in patients in thyroid crises would lessen the intensity of the disease, control its activity, and permit us to get these patients out of these dangerous states characterized by delirium, vomiting, and diarrhoea.

Iodine has usually not made it possible for us to accomplish this desired result when the patients are in advanced states of thyroid crises. We have learned, as the result of our experience with these cases, that if they are permitted to progress unopposed into these advanced states of thyroid crises, a majority will die in spite of all active measures to control the disease. We have also learned in our experience with these serious cases that if active measures can be undertaken before crises have progressed into advanced stages of intoxication, most of these patients can be kept out of serious thyroid crises and their vomiting, diarrhoea, mental confusion, and delirium can be cleared up as in the cases here They can be so prepared and improved with adequate measures, that surgery can be undertaken within two to three weeks of the time of the onset of the crisis.

It used to be thought when patients were seen

in thyroid crises, no surgery should be contemplated at this time, that they should be rejected as operative possibilities and sent home. It was thought that the mortality of operative procedures on patients in whom thyroid erises has been recent was so prohibitive that it should not be

undertaken As a result of a considerable experience with this condition now, we believe that this is not the proper attitude to take If these patients are in such severe degrees of hyperthyroidism that a crisis eventuates, even though one gets such a patient out of a crisis and sends him home the intensity of the hyperthyroidism has not been cheeked, the erisis can and frequently does re From this recurrent crisis it may not be as easy to extricate the patient the second time as it was the first We have, therefore taken the position that what one should do with patients who have been gotten out of thyroid erises is to then prepare them for operation and to apply some ae tive procedure such as hemithyroidectomy which will lessen or check the progress of the disease and so prevent them from progressing again into these serious states from which it is so difficult We feel, therefore, that when to rescue them patients have been delivered from states of acute hyperthyroidism or thyroid crises, they should be prepared for surgery over a period of two or three weeks, by large amounts of fluids and glueose (five per cent) intravenously, by the oral administration of large amounts of earbohydrates and by the employment of Lugol's solution, ten drops three times a day, and an active surgical attack upon the disease made in order that its progress may be cheeked and the danger of fur ther erises averted

Since the most serious eases of thyroid crises are those which have progressed into advanced states of acute hyperthyroidsm it is obvious that warning signals of the onset of these stages of hyperthyroidsm should be recognized early in order that active measures may be undertaken to keep them out of crises and overcome the dangers of the situation

One of the earliest signs of an impending acute hyperthyroidism is an unexplained increase in pulse rate. When a patient with definite exoph thalmic gottre has been running an average up and about pulse rate of one hundred and thirty to one hundred and forty and for no apparent cause shows a persistently increasing rate this is a definite indication of the danger of a threatening thy roid crisis.

When a patient who has been entirely rational begins to show vague transient but definite periods of irrationality this is also an indication of an impending thyroid crisis

When a patient develops comiting one may anticipate at any time the onset of a thyroid crisis due to the mability of such an individual to take

in fluids and food and so combat the effects of the increased combustion associated with the disease

When a patient has a definite diarrhoea, such a patient likewise becomes immediately a candidate for a thyroid crisis because of the fact that even though fluid and fuel be taken, they are rapidly lost as the result of the diarrhoea, the metabolic bilince is not maintained, hyperthyroidism becomes intensified, and the danger of a crisis imminent.

When a patient with a severe or even moderate hyperthyroidism develops any degree of infection, the hyperthyroidism may immediately become so intensified that he or she likewise becomes a cindidate for a thyroid crisis

It is obvious, then, that the salvition of patients with acute hyperthyroidism or thyroid crises is in the cirly discovery of the onset of this condition and the prompt employment of adequate measures to combit it

With no purpose of being critical toward nonsurgical methods of handling patients with hyperthyroidism, one should not undertake such methods without appreciating that during the period of such management an acute intensification of the hyperthyroidism can develop at any time must be interpated in certain of the cases and dealt with promptly

As has already been stated when the evidences of an impending thyroid crises as mentioned above are present, energetic measures are neces-

An intravenous needle of the type (Illustration IVc) described by Dr George A Hendon of Louisville, Kentucky, should be tied into a vein just above the ankle Illustration IVe The tub ing leading from the needle should be strapped down to the instep as shown in Illustration IVe The tubing running from the needle to the con tainer holding the salt solution and glucose should be sufficiently long so that the patient can roll about in bed without pulling on the needle. It is preferable to tie the needle into a voin in the ankle rather than in the arm or hand because those delirious patients move their feet less violently than they do their arms The long length of tubing attached to a high container permits quite free movement of the ankle even to rolling over without disturbing the needle. A hot water bug hung against the container and both wrapped with a towel provides sufficient heat for the solution. A drop bulh and thumb serew, as shown in Illustration IV1 and b, are interposed in the tubing, the former in order that the nurse may count the number of drops per minute entering the circulation, and the thumb screw so that the number of drops per minute mny be regulated *

^{*}Many authors have described the administration of constant intravenous fluids and no suggestion of any claim of originality is interval as to this method. It is illustrated and ildsecribed for the benefit of those unfamiliar with its employment.

The surgical fellows of the Clinic have had a large experience with the management of continuous intravenous administration of saline and glucose since it is employed so frequently in patients with thyroid disease, in patients with jaundice, and following gastric, colon, and rectum resections. They are responsible for the maintenance of the continuous intravenous drip of salt solution and glucose. Four days represents the minimum period of time over which continuous twenty-four hour intravenous drip is maintained

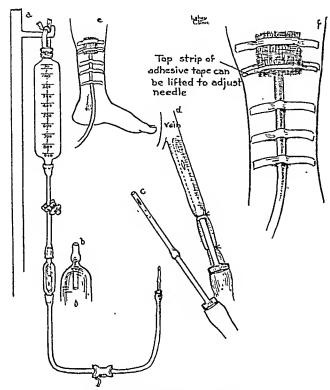


ILLUSTRATION IV. a,b,c,d,e,f.

The various parts of the intravenous apparatus for constant intravenous drip with the Hendon needle are shown together with the method of tying the needle in the vein, its insertion in the vein above the ankle, and the method of strapping the tubing along the leg to prevent pulling on the needle.

The container, thumb screw, drop bulb, and Hendon needle are shown in a, drop bulb in b, Hendon needle in e, needle tied into vein in d, the needle inserted in vein in leg above ankle and strapped down leg in e; f is a larger scale drawing showing how the adhesive can be raised to adjust needle.

None of this apparatus is new or original. It is illustrated for the benefit of those unfamiliar with this plan of constant intravenous drip.

oj constant intravenous artp.

without changing the needle and in a recent extensive gastric resection done by the writer the same needle ran continuously the twenty-four hours around supplying intravenous salt solution and glucose without clotting for eleven days.

They have learned that five per cent glucose is the highest percentage which can be employed without causing thrombosis of the vein into which the needle is tied.

Patients are able to take up from forty to sixty drops of the solution per minute. Some patients are able to take up more than others.

In the beginning of our experience with this method of constant administration of glucose and fluids intravenously, a small bulb with the drip pipette was inserted in the tubing with the result that the air in the bulb was quickly exhausted, resulting in stoppage of the flow and then thrombosis of the vein. Larger drip bulbs are now supplied by the manufacturers (Illustration IVa and b) so that there is a much larger air space in them with the result that they function much longer and more satisfactorily.

Intravenous fluids and glucose are administered to patients in thyroid crises just as long as any of the signs of thyroid crisis (vomiting, diarrhoea, mental changes, high pulse rates, and high

temperature) are present.

If patients are not vomiting, Lugol's solution, ten minims three times a day, is administered by mouth. If they are vomiting, we have learned that fifty minims of Lugol's solution may be put in one thousand c.c. of salt solution and this is administered either by hypodermoclysis or intravenously without danger. Restlessness is controlled by sodium amytal, grains three or nembutol grains one and one-half.

Diarrhoea is improved by the intravenous salt solution and glucose and tincture of opium is also employed in controlling this complication. As soon as patients are cleared of the evidences of acute hyperthyroidism such as vomiting, diarrhoea, and delirium, they are encouraged to eat, taking a diet rich in carbohydrates. They remain in bed most of the day but are encouraged to be up for an hour in the morning and an hour in the evening.

When these patients have been free from crisis symptoms for a period of two or three weeks, surgery is undertaken, care being taken that at the most no more than a subtotal hemithyroidectomy is done.

As has already been said, it has usually been maintained that subtotal thyroidectomy in patients in whom hyperthyroidism has recently been acute (crisis) is an extremely serious operation. Such has not been our experience. If these patients are properly prepared and properly treated postoperatively and if too much surgery is not done at one sitting, the mortality in them will be extremely low. As evidence of the truth of this is the fact that in the last five years three thousand six hundred and fifty-nine operations have been done upon two thousand seven hundred and sixty-two patients with toxic goitre. group there were twenty-one deaths, none of which were in patients who were operated upon after rescuing them from critical states of hyperthyroidism and preparing them for operation by appropriate measures. It is not possible to state

accurately the exact number of cases of thyroid crisis that occurred in these years as the borderline between what is merely a severe hyperthyroidism and what is a thyroid crisis is somewhat indefinite. It is evident, however, in a Clinic such as this, dealing with a good many patients with hyperthyroidism, that a definite number of these cases must be dealt with each year particularly when it is realized that our operative figures do not represent a selected group since no patients, no matter how sick or how toxic, are rejected (after proper preparation), all are operated

SUMMARY

Patients with hyperthyroidism should not be permitted to advance into states of acute hyperthyroidism (thyroid crises)

There are warning signs of an impending thyroid crisis—increasing pulse rate, irrationality and delirium, vomiting and diarrhoea, and a superimposed infection

Thyroid crises demand immediate emergency

measures—constant intravenous drip of salt solution and five per cent glucose solution the twenty-four hours around, the rate of introduction averaging from forty to sixty drops per minute, the administration of Lugol's solution by mouth, in the hypodermoclysis or intravenous administration of the salt solution, the control of diarrhoea and the control of activation

When patients have been rescried from the immediate thyroid crises, they can be so prepared for surgery that either pole ligation or the first stage of a two stage subtotal thyroidectonic can be done with safety. This checks the progress of the hyperthyroidism, crises are prevented from recurring, and in six weeks after the first-stage operation, the second-stage final subtotal thyroidectomy can be done with complete and, in at least unity per cent of the cases,* lasting relief from hyperthyroidism accomplished.

Clute, Dr H M, and Veal Dr J Ross 'The End Results of Surgery in Exophthalmic Goitre Journal of the American Medical Association Volume 99, pp 642 645 August 20, 1932

SOME ADDITIONS TO OUR RADIOLOGIC ARMAMENTARIUM IN THE TREAT-MENT OF ESOPHAGEAL AND LARYNGEAL CANCER

By WALTER L MATTICK, M D, BUFFALO, N Y

From the State Institute for the Study of Malignant Diseases Buffalo New York Burton T Simpson M D Director,

THE primary purpose of this paper is not to call attention to any radically new methods but to show two forms of applicators in addition to the usual metallic radion seeds, tubes and external radiation by teleradium therapy, and ligh voltage x-ray. Such additional methods place at the disposal of the radiologist more diversified procedures to suit the individual cases under consideration.

It is well known that many radiologists hesttate to implant radon seeds into the esophiagus in the region of the aorta, also that further down in the same organ the accurate placement of such seeds becomes increasingly difficult. Our experience has further taught us that we have gained little by surface application of radium tubes of light filtration as previously used, yet surface application seems logical in these squamous cell epitheliomas of slow growth and slight metastatic propensity, provided we use ample filtration so as to destroy the cancer cell and leave the normal cell relatively intact

Such end is best accomplished by making use of heavy filtration low intensity radiation continued over a long interval as advocated by Regaud. To meet this requirement, Guisez has devised and used a modification of the Dominic tubes which are put in place in the esophagus apparently in a bougie and left in place for 4 to 6 hours daily. This bougie method seemed objectionable from the standpoint of discomfort to

the patient in having to hold the bougie in place for so long a time so with the aid of our instrument maker, I devised a series of tandem tubes to accommodate 5 mgm cells of radium element These tubes can be lengthened or shortened at will and are interconnected at intervals by a ball and socket joint. The filtration of these tubes is the equivalent of 15 mm. Pt. Such tubes are put in place by the aid of the esophagoscope and left in situ with a cord attached to an eye in the This cord protrudes from the month upper end and is fastened on the patient's check by means of adhesive plaster The patient is placed in bed and kept quiet by hypoderinics of codein

Thus after preliminary study of the lesion by csophagoscopy and asce-taining its length by roentgenograms and bougierage, these tubes can be made up to any convenient length sufficient to cover the ordinarily encountered lesion and still extend a safe margin beyond, on to the normal tissue

Filtration was arbitrarily placed at 15 mm Pt equivalent because heavier filtration while very desirable seemed impossible on account of making a tube that could be introduced under direct vision into narrow stricturous lesions such as we often encounter in our patients

With this radium applicator it is possible to radiate lesions ranging from 1 to 2 cms up to 6 or 7 cms in length and I have considered a dose of 75 mgms hrs per 1 cm length as an

approximate surface dose. It will at once be apparent that such radiation is an advantage over seeding where generally only the upper end of the lesion can be attacked. This approximate dosage was determined by finding the time necessary to produce a skin erythema on surface application of such tubes to the lower right abdominal quadrant of a patient so treated. Here it was found that 20 mgms. over 4 cm. length, left in contact with the skin for 15 hours, produced in 16 days a mild reddening and in a month a desquamating epidermitis extending over an area of 2 to 3 cms. about the periphery of the tube.

When such a radium applicator is filled with element or emanation and put in place two or three times weekly by means of the esophagoscope and left in place over the lesion for from

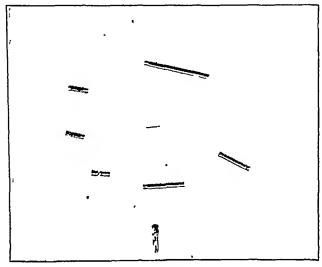


FIGURE 1

Showing unassembled csophageal tube. This tube can be made up to any suitable length to suit lesions of various lengths. The filtration is 1.5 m.m. Pt. equivalent and it can be conveniently loaded with radium cells (5 mgm.) or emanation in gold tubes.

20 to 24 hours each time, it is readily appreciated how we can achieve the ideal of prolonged low intensity radiation over long intervals of time.

Such treatment is not easy on the patients; in fact, is quite heroic. Guisez has reported some 5-year arrests after the use of Dominici tubes. It is just these optimistic reports that caused me to try similar tubes. The cases so treated seem to merit some consideration but it is too early as yet to report on them.

The accurate placement of these tubes in the esophagus can be further assured by fluoroscopy or roentgenograms of the chest taken with these tubes in position. Their removal is easily accomplished by gentle traction on the silk cord at the designated time.

I might add that treatment with this type of applicator is only applicable to lesions other than

those of the proximal end where some other type of radium therapy or seeding with gold seeds is more readily accomplished.

Next I wish to call attention to a gold appli-

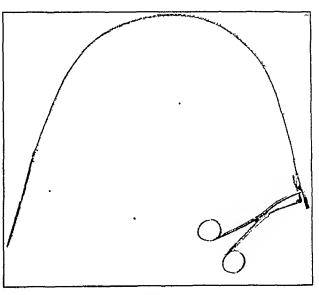


FIGURE 2

The assembled esophageal tube with the flexible introducing forceps and silk cord attached ready for introduction through the esophagoscope. For convenience of the photographer the introducing forceps is shown bent on itself rather than straight.

cator for the radium treatment of intrinsic lesions of the larynx.

This applicator is nothing more than a large laryngeal intubation tube with the airway con-

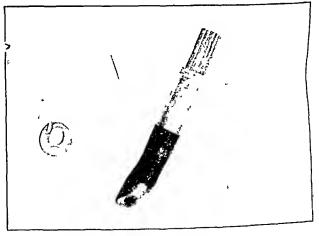


FIGURE 3

The unassembled gold intralaryngeal tube ready for loading with radon cells (5 mgm.) or emanation in gold. The filtration equivalent is 2 mm. Pt. Note the lower end of the tube is of hard rubber construction so as to reduce cost and weight.

centrically surrounded by a series of holes in which are placed radium element cells. The tube in shape is much similar to the usual O'Dwyer intubation tube and the idea is not original, the

writer having seen a silver tube of this type at the Veterans Hospital in Chicago. From these specifications I had a tube of 14 carat gold constructed for my use. This tube is moulded more to the shape of a laryngeal intubation tube as

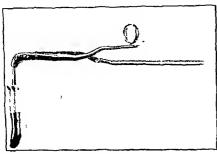


FIGURE 4

The assembled gold intralaryngeal tube with silken cord attached, ready for introduction into the larynx by means of the O'Dwyer introducer shown in place in the tube.

used for larvngeal intubation by O'Dwyer. The upper end of the tube unserews and presents in the lower piece twelve 1 m.m. concentric cylindrical holes equally spaced around the central airway so as to give a filtration of at least 2 m.m. gold. The cap, with a large airway hole in the center to match that of the lower piece, when screwed in place on this lower part, forms the upper expanded end of the intubation tube which prevents it slipping through the glottis. There is a small eye in the side of this screw cap through which can be threaded a braided silk cord which protrudes from the patient's mouth and is attached to the cheek or ear to facilitate easy removal as in the case of the esophageal tube. This tube is put in place in cases of intrinsic epithelioma of the larynx by the aid of the usual O'Dwyer intubation introducer along the left index finger hooked over the base of the tongue as in the usual technic for introducing a laryngeal intubation tube. After its introduction it is an easy matter to inspect the tube by mirror laryngoscopy to assure that the tube is in good position in the larynx.

Such applicators can be loaded with 120 mgms. of radium element consisting of 5 mgm. cells in each of the 12 cylindrical compartments. Emanation seeds could also be placed in these compartments if desired. This tube left in place for 4 hours yields 480 mgm. hrs. of exposure. Three or four such exposures will generally produce a pronounced epithelitis.

Only a few cases of intrinsic laryngeal epithelioma have been so treated to date. In each case a preliminary tracheotomy was done but it is possible that such cases could be treated without this preliminary operation in which case an emergency tracheotomy might be necessitated during the height of the reaction some 10 to 14 or more days later.

With the use of such an applicator one can be assured of an intensive radiation of heavily fittered gamma rays (2 m.m. gold filtration) delivered to the interior of the larynx over a fairly long time by a protracted dosage technic.

In using both the esophageal and laryngeal radium applicators as described here it has been the writer's custom to supplement such treatment by protracted heavily filtered (3 m.m. Cu.) x-ray or gamma ray telaradium therapy. This supplemental radiation therapy should preferably precede the internal application by a period of approximately one month, a dosage of the equivalent of 3000 to 4000 r's over 15 days can be given when using such heavy filters as above. After another month or two the usual high voltage x-ray through .5 m.m. Cu. filter can be given. At all times it is advisable to withhold or discontinue treatment by such protracted technic if a demonstrable reaction of the tissues as evidenced by epithelitis of the mucosa or epidermitis of the skin is present.

The only excuses for having the temerity to demonstrate such applicators must be the usual poor results generally reported to date in this country in the treatment of such types of lesious, especially in the esophagus under radiation treatment in contra-distinction to the more optimistic reports from abroad. It is hoped that these applicators may benefit these patients

CARDIOSPASM AND OTHER OBSTRUCTIONS OF THE UPPER GASTRO-INTES-TINAL TRACT IN THE NEW BORN

By JOHN AIKMAN, M.D., ROCHESTER, N. Y.

Read at the Annual Meeting of the Medical Society of the State of New York, at New York City, on April 5, 1933

VOMITING in infants has always been an annoying problem to the physician and it is only in recent years that we have learned more of the causes and how to treat them. It is my plan to consider vomiting as it occurs in the newly born and in very young memory.

fants. In the majority of these cases an early diagnosis leads to successful treatment, while needless delay and leaving improvement to nature may cause disastrons results.

The small infant stands continuous vomituig poorly and soon shows loss of weight and marked signs of dehydration. Every effort should promptly be made to determine the cause of vomiting in these cases while the infants are still good operative risks.

The causes that are most often found in these small infants are shown on the following chart. We shall consider some of the more

important of these.

Causes of Vomiting in the New Born

Overfilled stomach
Aerophagy, air swallowing (Gas)
Indigestion, improper feeding
Low tone of Cardia
Hunger—Too fretful
Toxemia of mother or infant
Cerebral hemorrhage
Reflex from pharynx
(From over large or long nipples)
(From fingers in mouth)
Congenital Pyloric Stenosis Pylorospasm

Congenital Tyloric Stenosis Tylorospass Congenital Stenosis of the Esophagus Congenital Intestinal Obstruction Swallowed anniotic fluid Acute infections

Acute infections
Hemorrhagic disease
Congenital Syphilis
Peritonitis
Obstructed hernia

(Especially diaphragmatic)

Fortunately most of the vomiting of the new born is of little consequence, frequently being no more than simple regurgitation. As vonReuss las stated the cardiac orifice of some children may show little tone, permitting the easy return of food from the stomach to the esophagus. Regurgitation is also aided by the fact that the cardia is not valve like as is the pylorus. This easy return from no particular cause can be seen when these children are fed under the fluoroscope, the amount lost in this way is usually of little importance. Such children should be handled as little as possible as the handling increases vomiting.

Over-filling of the stomach when the food supply is abundant is a very common cause of mild vomiting. The overflow need give no worry, if the child is making normal gains in weight. Over-filling will be cared for because as time goes on the breast supply is apt to become reduced and the stomach also to in-

crease in capacity.

The English attach great importance to air swallowing as an etiological factor. Certainly infants do swallow air, especially if the child's mouth does not fit well about the nipple or if there is interference with nasal breathing. This latter may be due to any retro pharyngeal, pharyngeal, or nasal obstructions. It also oc-

curs in nervous, restless, hypertonic infants. The child swallows as much air as he does milk, the stomach becomes distended and with the eructation of the air a large portion of the milk is expelled. Children that are too hungry may vomit from this cause.

If the nose is obstructed a drop of adrenalin in each nostril makes nursing easier. If bottle fed, the nipple may be changed, a larger nipple sometimes helps. Holding the child up-right against the nurse's shoulder several times during nursing will help to expel the air with less loss of milk.

The fact that the English treat this condition successfully with both atropine and with thick cereal feedings leads one to the conclusion that many of the cases classified under air swallowing are the type that we call pylorospasm. Gas or air as a cause of vomiting does not hold as prominent a place in the American school.

Indigestion due to improper feeding may occur in maternity nurseries, but not as frequently as formerly. The usual cause was too high fat in the formula. The widespread use of milk from Holstein cows has lessened this danger. Too high sugar may cause vomiting, but not usually.

Cases in which the mother's milk is said not to agree with the child are more apt to be due to other causes that we have under discussion. We have rarely found human milk to be the cause of vomiting. The use of certain synthetic substitutes for human milk may, however, occasionally upset the child.

It seems to us that the best formulas in nurseries are the simple dilutions of milk with a reasonable addition of Karo corn syrup or of

some sugar like Dextri Maltose.

Of course all the cows' milk given to these infants should be boiled. The makers of every substitute for mother's milk are constantly on the alert and are working to have their various foods introduced into maternity nurseries. The business reason is obvious. Many of these foods are of value but they are rarely necessary. The value of lactic acid milk, freshly prepared daily, should not be overlooked because many American pediatricians hold that it is the best artificial feeding.

Some children will vomit more on the four hour than on the three hour schedule because of the required larger amount at each feeding.

Vomiting may occur as a result of acute infections, peritonitis and any septic conditions. Frequent vomiting may accompany cerebral haemorrhage of the new born or hemorrhagic disease of the new born. Coughs due to upper respitatory or lung infections may produce vomiting and we must not forget the pharyngeal reflex due to the child placing his fingers too far

back in the month. Vointing of the newly born may be due to large amounts of anontotic fluid

that have been swallowed

The other causes of vomiting on the outline are of a congenital nature While some of them are given but little attention in text books of pediatrics I hope to show that these causes are not as rare as we might think and that they present fairly distinct and definite symptoms, permitting accurate diagnosis

Fortunately most of these conditions yield to proper treatment if recognition is not too much delayed Early diagnosis and prompt treatment are the keys to success. As said before, constant vomiting soon causes serious fluid loss making the prognosis less favorable as

hours and days pass without relief

One is always impressed with the wide range of malformations that may occur in the liu-Almost any departure from the man body normal that we can imagine may be found This is true in the gastro intestinal tract However, certain deformities occur far more frequently than others and each has a tendency to give a fairly clear pathological and clinical pieture

The following cases illustrate the pathologic cal and clinical pictures presented by some of the rarer cases of comiting that we have

studied

ATRESIA OF THE ESOPHAGUS

The most common gross deformity of the esophagus is the one here presented. The upper portion of the esophagus ends in a blind pouch or cul de sac at about the level of the bifurcation of the trachea. The lower portion of the esophagus extends from the stomach to the trachea A cord like central portion with no opening may connect the two parts of the esophagus Many of these cases have been reported in the literature and four have been described in the last few months in this coun Any departures from this anatomical picture may occur but most of them present much the same features

It is usually found in children who are otherwise well developed Nothing abnormal is noticed until the child is first fed Then the baby acts as if it had "swallowed the wrong way' and as the fluid in cul-de sac gets into the trachea severe choking, strangling and vomiting occur Much air is mixed with the mucus as it bubbles, frothlike, from the mouth and This occurs whenever food is taken The food regurgitated is unchanged and alkaline Cleft palate will sometimes give a similar picture but can easily be ruled out. The stom ach becomes very much distended. As soon as the meconium is evacuated complete constipation occurs

A catheter passed into the esophagus will show at what level the obstruction has occur red. Cases are reported in which an attempt has been made to feed these children through Food and barium then pass a gastrostomy into the trachea produce pneumonia and hasten the child's death. This inistake can be avoided by a careful a-ray study of the esophagus using lipiodol or similar preparations in the place of barrum. If the x ray shows a clear chest no communication with the traclica may be pres It has been suggested that hipsodol be placed in the stomach through the gastrostomy to see if such a communication is present and then possibly shutting off this lower portion of the esophagus in some way by surgery have found no record of a favorable outcom but surgeons feel that partial cure may be pos Foreign matter getting into the lung from either the cul de sac or the stomach pro duces pulmonary involvement or the child

gradually dies of starvation J M, male child, born August 9, 1928, full term, labor spontaneous Tamily history neg ative, one other child living and well Adm t ted to the Strong Memorial Hospital on the 5th day because of mability to take food Was cyanotie at birth, given oxygen several times was choked with mucus Became choked and cyanotic when nursed Regurgitated following

feeding

A tube passed into the esophagus met com plete obstruction Barium apparently did not go below the upper third

Physical examination, weight 3350 gms somewhat delightated, milk present in the nose and mouth, breathing noisy Breath sounds loud and harsh Otherwise negative

A gastrostomy was performed by Dr Merle Scott on August 15, 1928 Food fed through the gastrostomy was regurgitated through the mouth Two days later a transec tion of the stomach was done. The patient had a gradual but steady loss of weight oped broucho pneumonia September 8, 1928, and died on September 12, 1928

At autopsy it was found that the upper portion of the esophagus ended in a blind pouch while the lower portion connected the stomach and trachea

STENOSIS OF THE ESOPHAGUS

Stenosis of the esophagus is less common than the atressa mentioned and produces vom-iting from an early date. This becomes worse as the child is given semisolid and solid food The following case illustrates the symptoms as well as the diagnosis and treatment

I G, girl seen first by me on November 21, 1927, when 8 years of age Began to vomit breast milk at 2 months of age and has vomited a por

tion of her food ever since. Vomiting not projectile. Weaned and put on all sorts of food without improvement. Bottle fed until 3 years of age and had never taken solid food well. Milk when vomited came up sweet, not curdled. No nausea. Hungry and wanted immediate refeeding. Constipated. Had been seen by ten different doctors during her life and at 3 years of age had an x-ray examination. The bowel was then said to have been enlarged but no obstruction was found. The patient was admitted to the Strong Memorial Hospital.

She was a thin, tall, starved looking girl. Showed scoliosis. The chest gave evidence of old rickets. Teeth showed decay. Fluoroscopic examination showed that food stopped at the hilus region and that a conical pouch developed. During ten minutes observation no food entered the stomach. No reverse peristalsis was noted. Atropine administration followed x-ray, examination showed the spasm played some part in the obstruction. Direct esophagoscopy by Dr. Heatley gave no evidence of scarring. Diagnosis congenital stricture.

The stricture was gradually dilated by bougies In 2 weeks barium passed readily but the point of obstruction could still be identified. Child could eat with the family and did not act starved

all the time.

After all her years of illness this child was a great management problem. Her vomiting attacks have shown recurrence both for psychological and obstructive reasons. She has been readmitted a number of times for dilation of the stricture. While she gained in weight and has been very much better in health she is still below normal for her age.

Earlier recognition of the stricture with prompt treatment would have saved years of suffering and would also have given better results. Had fluoroscopic examination been made early in infancy much better results would have been obtained. It is interesting that no diverticulum has

occurred

CARDIOSPASM

It has been known for many years that spasmlike obstruction may occur at the cardiac end of This is generally attributed to a the stomach. spasm of the smooth muscle fibers surrounding the cardiac orifice. Some writers, believing that there is no regular sphincter at this point, claim that the crura of the diaphragm act as sphincter and call the condition phrenospasm. The condition is probably due to a disturbance of the vagus control of the cardia. Masseloff in 1928 stated that in over 20,000 roentgen ray studies made at Bellevue Hospital during 6 years only one case of cardiospasm had occurred in a child as young as 11\years of age. He found only 11 authentic cases reported in infancy and childhood. Moersch in 1929 reviewed 691 consecutive cases of cardiospasm seen at the Mayo Clinic. Only 12 of these were diagnosed before 14 years of age. In but three had the symptoms been noted during the first year of life and the diagnosis was not made until adult life.

Birnberg in 1929 could not find that the diagnosis had been recorded in a new-born infant. At that time he reported three cases in new-born infants, two recovered but the third died on the fourth day of cerebral hemorrhage.

He suggests that cardiospasm exists more commonly than has been suspected and that it should be considered as a possibility in vomiting of early

infancy.

R. B. (Fig. 1), male, born November 12, 1930, at the Genesee Hospital, birth weight 7½ pounds. He began to regurgitate on the first day. Most of the vomitus was sweet but some curds were noted. He vomited immediately after nursing and cried a great deal. He had lost one pound and four ounces when I first saw him on his fourth day. There was no visible peristalsis and no tumor. Pyloric stenosis or cardiospasm were

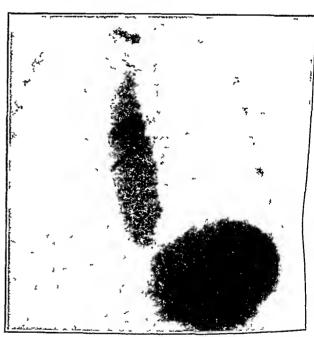


Fig 1 Cardiospasm, Boy, R. B, 6 days of age.

suspected and he was given atropine. He did a little better. Two days later x-ray and fluoroscopic examinations showed that barium hesitated before entering the stomach and that the esophagus became markedly dilated. Three hours later barium was still present in the esophagus and also in the stomach and intestine.

A diagnosis of cardiospasm was made and under the fluoroscope a number 8 catheter filled with the barium mixture was easily passed into the stomach. The catheter was left in for 2

d results by such

treatment. The baby was given atropine until flushing occurred but the catheter feedings had to be given on several occasions for 24 hours. By December 27th the weight was 8½ pounds and he had been put on concentrated feedings of dry lactic acid milk He was fed through the tube if the vomiting was severe.

X-ray and fluoroscopic examinations all showed definite delay in the passage of food into the stomach also dilatation of the esophagus. He was

discharged from the hospital.

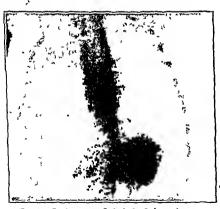
He was readmitted January 26, 1931, and gained up to 10½ pounds. Atropine was given and the catheter was passed without the fluoroscope as a guide. In June he was readmitted and the catheter passed X-ray studies showed little change

At this time Dr. George Carroll passed a dilator threaded on silk thread. At one time through misunderstanding, thread was fed to the baby until one end passed through the rectum

He was redilated in September.

The child gained in weight and would go for long periods without vomiting. To all appearances he was a perfectly normal child. He had pneumonia in February, 1932, and was admitted to the Strong Memorial Hospital. The esophagus gave the same x-ray evidence. He made a good recovery from the lung infection When last heard from a few months ago he was gaining in weight.

J L (Fig 2), female, born at Genesee Hospital December 19, 1932 Birth weight 7½ pounds



Tig 2 Cardiospasm, Girl, J L, 5 days of age.

First child in family, mother had had bronchiecstasis for years Baby began to vomit on second day. Regurgitated some at each feeding Sometimes vomiting was projectile.

First examination by me on December 20th.

Child seemed normal in every way, no pathology. A diet of skimmed milk was given and atronne 1/1000 grain was administered before each feed-The vomiting coning X-ray study ordered tinued. There was some delay in following out orders and on December 24, the fifth day of life, a fluoroscopic examination revealed marked delay at the esophageal opening of the stomach obstruction was not complete as some of the barium did pass through. On the same day under fluoroscope a small catheter filled with barium was passed into the stomach and barium was seen in the intestine 1/2 hour later. A diagnosis of cardiospasm was made. The catheter was left in but had to be replaced several times. Food There was no was given through this tube. vomiting after tube feedings and the tube was left in as much as possible for 4 days. After that it was passed frequently and was discontinued on January 1st. The child had practically no vomiting.

On January 4th the fluoroscope showed no appreciable hesitancy of food at the cardia. Weight

7 pounds 12 ounces

The child was sent home on a formula of boiled milk, Karo syrup and water. She gained steadily, had no more vomiting and at 7½ months weighed 21 pounds 6 ounces

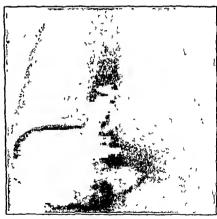


Fig 3 Cardiospasm, Boy, B. J. 3 days of age.

B J (Fig. 3), male, born at the Genesee Hospital on January 24th, birth weight 7½ pounds. Vomited from the first feeding. Vomitus sweet, no curds Examined by me on the second day. Nothing pathological detected. Diagnosis, possible pylorospasm. Given fat free milk and atropine.

X-ray and fluoroscopic examination on the third day showed marked delay at the cardia and

the esophagus was dilated. Three hours later barium was still present in the esophagus but was also seen in the stomach and intestines. Diagnosis, cardiospasm.

A catheter was passed and the child was fed breast milk through this for 18 hours. After that the catheter was passed occasionally and atropine was given. There was no more vomiting and on the 14th day the child left the hospital.

The family left Rochester and the child was put under the care of Dr. H. L. Bibby of Kingston, N. Y. The doctor reports that the baby had no more vomiting. "It gained steadily and was in excellent nutrition."

The baby died suddenly on October 25th, 1932 and "it was considered a thymic death" reports Dr. Bibby, "in spite of all our troubled and uncertain knowledge of that condition." The thymus was about two and one-half times the normal size, most of the increase being in the anteroposterior diameter. There was no pathology at the cardia but the esophagus showed a slight dilutation.

There were no signs of thymic enlargement during life but the parents thought that the baby was somewhat pale and that the face became flushed during feedings for one week before death.

While the shadow of the upper mediastinum is somewhat broad several roentgenologists have stated that a lateral view would have been necessary for a diagnosis of thymic enlargement.

M. S., female, born May 26, 1932 at Strong Memorial Hospital, family history, first child, mother normal, father unknown. Nothing abnormal detected. Sent home and returned at regular intervals to the Out Patient Department.

Was admitted October 25, 1932 at 5 months of age because of repeated vomiting at various intervals between meals and because of malnutri-Was said to have always vomited an abnormal amount. Even vomited when asleep Weight 11 pounds. Was kept in hospital and did fairly well, gained a little from time to time. On December 2nd because of more severe vomiting a fluoroscopic examination was made. There was definite delay at the cardiac end of the esophagus with moderate dilitation above this point. A fair sized residue in the esophagus showed a to and fro motion. The same was noted when the child was held in an erect posture. There was no regurgitation of barium from the stomach. child retained thick cereal fairly well

Baby B, (Fig. 4) female, born September 25, 1932 at the Genesee Hospital, first child, family history negative, birth weight 8 pounds.

Began to regurgitate on the second day and by September 30th had lost one pound. Vomited directly after each feeding, varied from regurgitation to projectile vomiting.

Physical examination—no pathology was de-

tected. The abdomen gave no evidence of visible peristalsis or tumor.

The child was given atropine and fat free On October 1st x-ray examination gave evidence of cardiospasm also dilatation of the esophagus and there was marked delay in the passage of food through the pylorus. The child was given intra peritonial saline. A catheter was easily passed through the nose into the stomach Breast milk was injected. A short time later both the milk and catheter were vomited. This was repeated several times and attempts were made to give cereal through a larger catheter. Projectile vomiting continued and on October 3rd a Rammstedt operation was performed by Dr. Douglas Mitchell. The pylorus was found to be markedly thickened.

The child had a very stormy convalescence. Saline was repeatedly given by hypodermoclysis. Atropine was administered and thick cereal was given. After a week the child began to improve and gained in weight. Discharged October 22nd.



Fig. 4. Cardiospasm and Pyloric Stenosis, Girl, Baby B , 7 days of age.

Since then the child has had little or no vomiting and has continued on thick cereal feeding. It seems to be normal in every way.

Pyloric stenosis was the primary cause of vomiting, the cardiospasm being of but little importance.

Conclusions

New-born children with cardiospasm vomit during or just after feedings, the vomitus contains little or no gastric juice. Vomiting dates from the first attempts at feeding. It is accompanied by the usual results of vomiting loss of weight, dehydration and constipation The eon dition is easily found by fluoroscopic examina-

A small sized eatheter passed through the nose into the stomach may be left in place for one or two days and later replaced at intervals child is fed through this tube. This gives good results iii most cases

Cardiospasm is not well understood but it is probably only a temporary affair in most cases Many such eases may have eleared up in the past under atropine and thick feeding without the condition of the cardin being known. They have probably been considered pylorospasm On the other hand any continued vomiting is dangerous in the new born It is also possible that a continuation of the eardiospasm may lead to dilatation of the esophagus

Many pediatricians are interested in this subtect and more cases of cardiospasm have been found in the last three years than literature indicates

It seems that we have here a condition that is being overlooked but which would be more frequently found if the esophagus and stomach of all infants with continued vomiting were subject ed to fluoroscopic and 1 ray examinations Such examinations will certainly lead to more accurate unagnosis of the condition present

Pylorospasm and Pyloric Stenosis

So much has been written about these conditions that very little need be said here. Pyloro spasm is generally considered in this eoi ntry as a mild or moderate form of Pyloric Stenosis

In these children the symptoms yield fairly well to the use of atropine just before feedings and to thick feedings It is probably much the same condition as is frequently diagnosed in England as air swallowing, accounting for the fewer cases of pyloric stenosis discovered in that country

Congenital hypertrophic stenosis of the pylorus occurs usually in male infants after the first week or two of life, but as we have seen it may be

present earlier

Habitual, forcible, projectile vomiting is charaeteristic of this condition. It may come during the feeding when the fool is but little changed or a portion of the food may remain in the stomach until the next feeding when it is then vomited The bowels are constipated and the urine scanty Wasting and dehydration progress rapidly

The two characteristic symptoms, visible re verse peristalsis and palpable tumor are not al They are more apt to be found in ways present the case that has been allowed to go for a long time before operation. The marked loss of weight in these eases makes the physical signs more evident

The prolonged retention is demonstrated when

the child vomits several hours after feeding a stomach tube may be passed 2 or 3 hours after feeding to determine gastric retention. Up until recently the a ray was not considered necessary for diagnosis. We believe however that it is of considerable value because some of the conditions we have mentioned may also be present

When children have continued projectile vomiting during the first six weeks of life in spite of atropine, thick feeding and most eareful nursing, one must always lean strongly to the diag-

nosis of pylorie stenosis

When pyloric stenosis is suspected the patient must be kept under elose supervision either at home or in the hospital The amount of vomiting must be recorded and the child weighed daily Continued voiniting with loss of weight make operative interference more imperative

The operation in experienced hands gives excellent results but we find that many of the pa tients regurgitate for a few hours or days after

the operation

DUODINAL OBSTRUCTION

All sorts of congenital intestinal obstruction may occur and at any point. We will consider only obstruction of the duodenum cause it is the most common site for eongenital intestinal obstruction second, because it may be confused with pyloric stenosis and also because surgical intervention frequently gives good results

Of 200 cases of congenital intestinal obstruetion, vonReuss found that 1/3 were in the duodenum, usually an atresia. In the jejunum and ileum obstructions are more likely to be multiple and the intestine to be merely a band like strue

When vomitus in congenital obstruction is bile stained we must suspect the duodenum, but if the obstruction is above the papilla there may be no bile in the vomitus According to Cameron in more than 80%, the vonitus is brightly stained The vomiting begins from the first to with bile the third day occurring soon after feedings is profuse but not projectile

Faint peristalic waves may be seen but there is usually no tumor There is seldom a general dis tension of the abdomen The obstruction is usu ally due to a diaphragm in the limen of the bowel but it may be due to abnormalities of in testinal rotation, volvulus kinking, obstruction by peritoneal bands or obstruction by the superior mesenteric artery as it passes into the root of the mesentery

X ray and fluoroscopic examination lead to the diagnosis and rule out the obstructions above the duodenum especially pylorie stenosis

We are able through the courtesy of Dr Morton of the Strong Memorial to report two eases M L, a female child born at the Strong Me

morial Hospital on May 22, 1932. Family history negative. Three other children living and well. Born full term and normal delivery. Birth weight 3350 grams. Given formula of milk, karo and water.

Began to vomit on the 5th day. Physical exam. was negative until the 11th day, when left otitis

media developed, incised.

On the 12th day the vomiting became projectile and peristolic waves were seen, x-ray examination showed definite obstruction apparently in duodenum. Weight 2610 grams. Was given a transfusion and also saline by hypodermoclysis before operation. Dr. John Morton at operation found an obstruction of the duodenum. Gas could not pass this point. On incision of the bowel a diaphragm 2 m.m. in thickness and apparently blocking the lumen was found. The diaphragm was burned down and the intestinal lumen restored.

The vomiting continued on and off following operation. An x-ray examination after the operation showed some delay in emptying time, but barium passed freely through the upper part of

the small intestine.

The child who had dropped to 2600 G. gained until the weight was 3440 G. on July 13, 1932

when he was discharged.

On September 28, 1932 the stomach was found enlarged for the age. The dilated portion of the duodenum was still present. There was some delay in emptying time.

B. S., female, born at the Strong Memorial Hospital on May 1, 1930. Birth weight 2600 grams, family history negative, fourth child.

On the third day it was reported that she passed no meconium or urine for 24 hours and had sev-

eral times vomited a thin brownish fluid.

The abdomen was thin walled and soft. A tubular mass like distended gut was palpated below the left costal margin to the right flank. Some reverse peristalsis was seen. Was given a barium enema and it was thought that a colonic obstruction was present.

On the fourth day she passed meconium but no fecal material. Vomiting was marked and the tumor was still present. On the fifth day she was operated upon by Dr. T. B. Jones and an obstruction was found at the third portion of the

duodenum due to either a diaphragm in the lumen or to a lack of the third portion of the duodenum. It was obstructed at the point where the superior mesenteric artery crosses over the duodenum. A posterior gastroenterostomy was performed.

The child had a normal stool on the second day

after operation and made good recovery.

On May 17th an x-ray examination showed good function from the gastroenterostomy.

The child was readmitted on January 4, 1932 with Mongolian Idiocy and pneumonia. Died.

The results in these two cases demonstrate that obstruction of the duodenum may be diagnosed

and treated successfully.

When congenital intestinal obstruction is suspected x-ray studies may lead to the correct diagnosis. The excellent results reported in these two cases offer us a better prognosis as most congenital obstructions occur at this point.

Malformations beyond the duodenum will not be considered but they are not hopeless as some

have recovered after operation.

By this review of vomiting in the newly born I hope that we have shown that a definite diagnosis as to the cause can frequently be made. Better diagnosis leads to improvement in treatment.

Every new-born child with persistent and unexplained vomiting should be given a complete roentgenological and fluoroscopic examination. Early diagnosis and removal of any cause of vomiting may prevent delaydration, loss of weight, and even death.

Conclusions

The causes of vomiting in newly born children are reviewed. Cases of esophageal malformation, esophageal stenosis, cardiospasm (4 cases), cardiospasm with pyloric stenosis and two cases of duodenal obstruction are reported.

Cardiospasm is probably more frequent in the new-born than we have suspected. It should be considered when continued vomiting is present.

These conditions present a fairly clear clinical picture and differential diagnosis is possible especially after careful roentgenological studies. Early diagnosis and treatment before extreme weight loss has occurred will largely relieve the symptoms and reduce the mortality from these causes.

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Discussion by Dr. George Retan, Syracuse, N. Y.:—I have collected about twenty cases of esophogeal stenosis, all of which showed x-ray evidence of narrowing at the point where the eso-

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phagus passes through the esophogeal opening in the diaphragm. The term cardiospasm does not seem to be accurate. I do not think that cardiospasm exists in new-born infants. The term cardiospasm should be reserved to designate the type of obstruction occurring in later life and which is dependent upon degenerative changes in

the ganglion cells of Auerbach's plexus.

There is further evidence in support of this view from the fact that there is no true anatomie sphineter at this end of the stomach, and also that these cases do not respond in the slightest to very large doses of atropine. I believe the term esophogeal stenesis to be the correct term to use. The stenesis is caused by various mechanical factors of which dipping backward of the esophagus before it enters the esophogeal opening is one of the most important. Mosher has been able to demonstrate this and other mechanical factors in new-horn habies.

The vomiting of esoplogeal stenosis has cer-

tain diagnostic characteristies. It is a projectile, forceful type of vomiting, often less forceful than the vomiting occurring in pyloric stenosis. There may be evident a metallie type of cough preceding the vomiting. I have repeatedly seen the mechanism that produces this cough in the fluoroscope when a small amount of barium mixture is forced up the esophagus and spills into the traclica. We also have found the absence of the visible peristalic suggestive of this condition.

I have treated these cases successfully by passing soft rubber catheters into the stomach beginning with a 12 or 14F, and increasing to about a 28F. These catheters act as effective dilators. They should be passed about every 12 hours for the first two or three days, then once a day for a few more days. This will cure the stenosis

THE STATE MEDICAL EXAMINER By LEOPOLD BRAHDY, M.D., NEW YORK, N. Y.

CPECIALIZATION may be a conscious narrowing of the physician's field of activity or it may be determined by the nature of his work. The physician on the staff of the Labor Department of any state soon realizes that he is dealing with clinical material not common in private practice. He must answer medical questions seldom raised outside of industrial medicine. The difference in the nature of his cases and of his approach to them differentiates his work from that of other physicians. In addition, his civic status as an employee of the state too often causes him to lose interest in the economic problems of his colleagues and to neglect the medical societies. other hand, the societies composed almost entirely of physicians in private practice have paid but little attention either to the scientifie or to the economic problems of the state physician. Quite regardless of what the future may hold for medical practice, the number of physicians in employ of the state must increase with the rapidly developing social legislation. It is hoped that a brief outline of the clinical work of a physician in a State Compensation Bureau will aid in safeguarding the sense of scientific and social kinship of the state physician and the private practitioner.

The primary function of the mcdícal department of the Compensation Bureau is the determination of the disability of claimants and of the relationship of that disability to the injury or industrial disease.

The efficiency with which this function is performed depends upon three factors: the ability of the examiner, the organization of the department and the cooperation of the referees and of the administration. The qualifications of the examiner are—those of a competent experienced

physician.

The state examiner is frequently required to give an independent opinion on cases, which have been reported upon by able men in the community. It is, therefore, essential that he be a man of more than average competence.

There are many similarities and some differences in the parts of a physician's abilities, which are most needed in private practice and in the

work of a medical examiner.

The determination of disability requires aecurate diagnosis of a great variety of pathological conditions. In every physician's verdict of "disabled" or "has recovered his usual earning capacity" is the implication that he knows the signs, symptoms and course of the patient's ill-Too much emphasis cannot be placed on the need for diagnostic ability. Diagnosis, of course, does not depend on the history and the physical examination alone, Roentgenograms and other laboratory tests are often essential. Teachers of medicine repeatedly warn the profession not to accept the verdict of the laboratory as final, but to interpret the laboratory findings in the light of the clinical picture. To no physician does this apply more forcefully than to a state examiner. He must be able to interpret roentgenograms and other laboratory tests without the laboratory reports. At the same time he cannot neglect the assistance of specialized knowledge and teclinical skill. To make full use of specialists' reports but never to accept their verdict blindly is a fine art born of experience re-enforced by a theoretical knowledge of the laboratory test or specialty in question.

In civil practice, great weight is given to subjective symptoms. Although subjective symptoms must be considered, it is difficult to establish a case judicially unless the diagnosis is based to a large extent on objective signs. The industrial physician must learn to find and evaluate physical signs much more than his colleague in general practice. In the medical literature, the distinction between objective and subjective signs is seldom clearly drawn and where the diagnosis can be made on the patient's statements, the objective signs are seldom described in great detail. By careful observation the medical examiner soon learns to shift the basis of diagnosis in many cases from the clinical history to the physical examination.

This shift in the basis of the diagnosis is only one aspect of the difference between the private practitioner and the state medical examiner. some ways, the position of state examiner requires a specialized knowledge of medicine. The most experienced physician will find himself less capable of doing the work of an examiner than his colleague who has done the work for several In private practice the physician seldom concerns himself with the diagnosis of malingering. He assumes that what the patient tells him is an honest statement. The detection of conscious malingering requires as much skill in diagnosis as is required in many pathological con-The prevention of fraudulent medical claims is one of the problems of industrial medi-Exaggeration is frequently met with in private practice, for it is a natural biological tendency of many individuals to exaggerate their symptoms. When added to this natural tendency, we have the claimants' equally natural desire to make sure that the physician does not underestimate his disability, we have a condition which is often impatiently dismissed as malingering. An understanding of the psychology of the injured claimant is acquired only with experience in in-The differential diagnosis of dustrial work. malingering and exaggeration is of the utmost importance in compensation work but plays so minor a role in private practice that the physician scarcely gives it a thought.

At first sight it may seem that it is a simple step from ordinary diagnosis to the determination of functional capacity. That this step requires training and experience becomes obvious when one observes the diversity of opinions of several practicing physicians when there is no difference of opinion regarding the pathological condition. The practicing physician seldom formulates a judgment as to the handicaps resulting from any particular abnormality. He is concerned chiefly with the diagnosis of the pathol-

ogy to guide the treatment.

When the case is no longer amenable to improvement by treatment, it has little interest to the practitioner but is of paramount importance to the state examiner. A knowledge of the effect of time, use and training on the patient, must be considered as well as the effect of treatment.

Prognosis to the practicing physician means a knowledge of the mortality and of the complica-

tions of diseases. It is a somewhat different prognosis the state examiner must make. What will be the probable earning capacity, in five years from now, of this man with a compressed fracture of the twelfth dorsal vertebra? And of this man who has had both semi-lunar cartilages of the knee excised? The medical examiner must answer such questions in order to guide referees in financial adjustment of cases or in order to guide injured workers in choosing a new vocation.

There is no better illustration of the necessity for accurate diagnosis and prognosis than in the functional disabilities:—the neuroses and hysterias. Some of these cases are helped by ending the litigation at the earliest possible time. The criteria on which to classify functional cases, according to whether the unsettled litigation plays an important role, requires experienced and deliberate judgment. The report of a neurologist may be helpful but the decision must finally rest on the state examiner's experience in such cases.

As in the case of prognosis, etiology is of interest to the practitioner whenever it has any bearing on therapy. The relationship of trauma and disease is a subject of minor interest to the civil practitioner but which the state examiner must study closely. The effect of a blow, a sprain, exposure or an industrial poison on any pathological condition is a more difficult and perhaps as important a subject as their effect on normal tissues.

One phase of the examiner's work is very little known to the general professions—that is, the estimation of schedule losses. A schedule loss is the anatomical or permanent functional loss of part of an extremity or of vision. Any physician with his knowledge of the physiology of joints and muscles can learn this phase of the work. It does, however, require experience before his estimations become reliable.

For the practicing physician to know the facts is sufficient. The state examiner must in addition express those facts clearly and simply. If there is a controversy in a case, he requires the logical mentality to enable him to give a clear account of how he arrived at his conclusions. He must have sufficient self-possession so that the attorney for either side cannot confuse him or use him to becloud the issue.

Even more important than professional ability is the character of the examiner. It is obvious he must possess the moral integrity, never to be swayed in his opinion by hope of personal gain or by friendship. He should have the emotional stability to prevent his scientific opinion from being in any way affected by prejudice or sympathy.

To sum up briefly, the state medical examiner must be a man of sound character who has high professional abilities, who is able to express his opinions clearly and who is experienced in the special requirements of compensation work.

SQUAMOUS CELL EPITHELIOMATA OF THE SKIN OF THE FACE

Report of Twenty-six Cases

By EUGENE F TRAUB, M.D., AND JESSE A TOLMACH, M.D., NEW YORK, N. Y. Read at the Annual Meeting of the Medical Society of the State of New York in Buffalo Wednesday, May 25, 1932

TREMENDOUS strides have been made in our concept of cancer but the fact still remains that the only hope for cure hes in the early eradication of the lesion. It follows quite logically that early chinical recognition is essential In squamous cell epitheliomata of the face this is possible because of the typical appearance that the lesion always presents early in its development Although in the early stages of their growth these malignant tumors are mistaken for such be nigh conditions as infected schreeous cyst, mol luscum contagiosum, infected verruca and granuloma pyogenicum, failure to establish a differential diagnosis can be obviated by watching for the typical clinical signs which occur in squamous The diagnosis of squamous cell epitheliomata cell epitheliomata need not depend upon biopsy Biopsy should confirm rather than suggest the diagnosis for the latter can le and should be made from the typical chinical manifestations essential to the early institution of correct therapy

Most of the chinical descriptions of squamous cell epitheliomata found in the literature, with the exception of a detailed one by Darier, are broad and include, without any real attempt at distinction, the various types of epitheliomata such as bisal, bisal squamous, and squamous

In the twenty six cases which we are present ing we shall emphasize the church signs which were unfailingly present and which served to establish the differential diagnosis

INCIDENCE

Squamous cell epitheliomata of the skin occur more frequently than is generally supposed curate statistics are not always available because of the fact that many eases are treated on the basis of elinical diagnosis without the confirma tion of a microscopic study Among 2,000 eases of general epitheliomata observed in the Mayo Chine from November 1st, 1904 to July 22nd 1915 Broders2 found 256 or 128%, to be squamous cell epitheliomita of the skin. A very in teresting statistical study of skin careinomata based upon instologic sections was made by Borr mann 8 He found the squamous type in four out of six eases (663/3%) of tumors of the upper lip, seventeen out of forty one eases (41%) showed the lesion on the nose and in the naso labial fold, in eight out of twenty-three cases (34%) the tumor occurred on the cheeks, in seventeen out of twenty eases (85%) it was on the ear and in that vicinity, eleven out of thirtyseven (30%) presented the lesion about the eye, and in eighteen out of thirty-four cases (55%) the growth was on the forehead and temples

The same high incidence is reported elsewhere Golden,4 in a report of epitheliomata studied at the New York City Cancer Institute stated that of 173 cases, 68 were of the squamous cell variety, with 46 of these occurring above the level of the neck. Forty three eases were diagnosed as epithelioniata without an histological study.

Montgomery⁵ and Darier⁶ reported a rather high rate of incidence of squamons cell epitheliomata of the skin. In 100 cases of epitheliomata, Montgomery found 63% to be of the squamous cell type, and in a like number of cases observed by Darier in private practice, 50% were found

Lunsford and L Taussig studied the ease histories of patients treated in the out patient department of the University of California for a period of six years Of 100 cases of epitheliomata of the face, excluding the ear, 87% were basal cell and 13% were squamous cell tumors. On the ear, out of nine cases, two or 22% were basal and seven or 78% were squamous. This seems to bear out the general opinion that the majority of the lesions on the ear, particularly when involving the cartilage, are of the squamous cell variety. These authors also believe that epitheliomata of the upper lip and the cyclids, involving the mircous membrane surfaces are generally either of the mixed or squamous cell type.

According to Darier, "the cause of facial localization of the vast majority of epitheliomata of the skin is not known, undoubtedly it is to a considerable extent because this region is the seat of election of senile degenerations and leuco plakin, because it is particularly exposed to traumatisms, to inoculations of infectious germs to the influence of atmospheric factors and especially of light which seems to exert a favoring action (and possibly because the complicated planes of embryonic growth in the face afford a ready opportunity for the misplacement of epithelial cells).

The greatest proportion of epitheliomata en countered on the face is above the angles of the mouth. In approximately 1000 cases of cancer of the head and face, Sutton found that more than 25% showed involvement of the nose alone.

ETIOLOGY

The essential cause of eareinomata is unknown Many of the theories offered are at best purely speculative. Attempts at explanation have been made along various lines, all of which are well

known. Briefly, some of the oustanding theories are as follows:

- 1. Cohnheim's¹⁰ theory holds that tumor growth depends upon displacement of embryonic cells.
- 2. Ribbert's¹¹ theory is a modification of the Cohnheim theory. He believes that the isolation of the cells which are to produce the growth may occur in adult life and that this isolation is brought about by the irregular growth of other tissues.
 - 3. The theory of parasitic origin of tumors.
- 4. Theories of tumor growth based on the effect of irritants.
- 5. Theories of tumor growth depending upon disturbance of the equilibrium of tissues.
- 6. Theories of tumor growth depending upon fundamental changes in the character of the cells.
- 7. Warburg's¹² theory links the genesis of cancer with a biochemical factor, such as a change on the part of the precancerous cell from nutrition by oxidation to nutrition by hydrolysis.

8. Handley¹³ states, in an excellent monograph on this subject, that he has found chronic lymph stasis to be a constant factor in the pathogenesis of cancer.

Menetrier¹⁴ has divided the theories of the origin of cancer into two groups; (a) the parasitic theories, which seek the cause of cancer in a specific living agent reaching the body from without, and, (b) the cellular or cyto-physiological theories, which stress the intrinsic modifications of organs and tissue.

Handley¹³ believes that "these views can be harmonized if it is admitted that various nonspecific infections and chemical and physical irritations, or alternatively, certain congenital lymphatic malformations seen in moles, may set up a chronic local lymphatic obstruction which in the course of years profoundly modifies the vital processes of the surrounding cells. The circulation of tissue fluid is impaired, and in the obstructed district the cells no longer receive their due share of the products of the other cells of the body. They are deprived of the hormones by which the cell society exercises its influence upon the cell individual, and particularly of the hormone which limits cell division."

The great number of conflicting theories is of course the best evidence that our concept of cancer is still in a speculative stage.

DESCRIPTION OF THE TYPICAL LESION

The development of the nodule is usually rapid, beginning frequently as a papular lesion of pinhead size, and reaching a diameter of one to two centimeters in from three to six weeks. After this period, the growth is somewhat slower. In patients under forty-five to fifty years of age it is more rapid than in older people. The typical squamous cell epithelioma of the glaborous skin

begins first as a small grayish nodule covered with a scale or crust. As it increases in extent and depth, the crest assumes a reddish color and may become ulcerated or verrucous. The tumor which develops is hard, firmly imbedded in the skin and yet protuberant. Its raised, bulging border presents a glazed or waxy appearance. The presence of numerous small blood vessels in the border gives the base an acute inflammatory appearance which is characteristic because of its invasive tendency. The upper and outer portion of the border is usually more or less hyperkeratotic and in the central area an erosion appears. The latter develops into a perpendicular ulceration which is irregular, fissured, grayish in color, and bleeds easily even upon slight irritation. The appearance of the lesion at this stage may easily simulate a large infected verruca or an infected molluscum contagiosum. The congestion and vascularity of the base of the growth give the appearance of an infection. On the floor of the central crater there can be seen yellowish-gray granules or material simulating the cheesy contents of an infected sebaceous cyst. This latter substance is composed of horny cells and epidermic globules.

In none of our cases was there evidence of glandular or visceral metastasis within the periods of our observation. This contradicts Darier's belief that the lymph nodes draining the affected area become enlarged early but that generalization in the viscera is rare.

In one of the cases reported here (Case No. 1) the lesion when first seen showed the general characteristics of an infected sebaceous cyst and treatment was given on that basis. The histologic findings of squamous cell epithelioma in this instance were unexpected and emphasized the importance of establishing a differential diagnosis as early as possible, between these malignant growths and sebaceous cysts, infected mollusca contagiosa, granuloma pyogenicum, and infected verrucae vulgaris, with which they are too often confused.

DIFFERENTIAL DIAGNOSIS

The following are lesions for which squamous cell epitheliomata are most frequently mistaken and the method of differentiation is given in each

1. Granuloma pyogenicum. These lesions bleed frequently and freely. They grow slowly and do not usually reach the size of the average epitheliomata observed in our cases. They are more vascular and spongy and are purplish-red in color. The base of the lesion is neither as hard nor as inflammatory as the base of the squamous cell epithelioma, and neither is there a central crater with a verrucoid periphery. A history of trauma is almost always obtainable in granuloma pyogenicum.

- 2. Verruca (infected). These growths usually enlarge more slowly than the squamous cell epitheliomata and are distinguished by a more liorny (warty) crest. The base is not as infiltrated nor as hard as in the squamous cell tumors. No central crater or opening is present in verruca and the lesion does not present the characteristic bulging, waxy borders, with telangications which is seen in squamous cell epitheliomata. As a rule other warts are present.
- 3. Mollusca contagiosa (infected). There is a rather close clinical resemblance between mollusca contagiosa and squamous cell epitheliomata but the former are usually multiple lesions and have not the firm, hard consistency, the inflammatory appearance and the increased vascularity of the base of the latter.
- 4. Scbaceous cyst (infected). While the clinical resemblance of sebaceous cyst to epithelioma is often remarkably close, they can be readily distinguished from each other by the fact that cheesy sebaceous material is easily expressed from the cyst. The cyst is usually below the skin and just protrudes upward, whereas the epithelioma seems to spring out of the skin in spite of its deep inflammatory attachment and fixation. There is no central crater in a sebaceous cyst, no telangiectasia, and no rough, warty crest as in epitheliomata of the skin, and generally the lesions are of longer duration.
- 5. Basal or basal squamous epitheliomata. It is often quite difficult to differentiate the basal or hasal squamous cell tumors clinically from squamous cell epitheliomata but the former develop more slowly and are of longer duration. They are flatter and while they may ulcerate centrally, they do not show the characteristic volcano-like crater with the bulging border of epitheliomata of the squamous type. They may show telangiectasia, and deep infiltration, but the inflammatory appearance and deep attachment of the lesions of squamous cell tumors are more marked.

TREATMENT

We shall consider here the various methods generally employed in removing squamous cell growths, with special emphasis on the treatment which we have found most effective.

- 1. Acid or chemical applications of any kind used cautiously simply aggravate the condition. Effective destruction by acid usually entails severe, extensive and unsightly burns. This method of treatment, we feel, should be discouraged.
- 2. The use of radium or x-ray, except as an adjunct before or after removal, is not advised owing to the refractoriness of the cells to radiation. In treating some of the older patients showing lesions of long duration and slow growth, radiation is sometimes advisable, but even in such instances, unless there is some other contraindica-

tion to this procedure, radical excision should be given the preference.

- 3. Removal by knife surgery is effective but our objection to this method is that there is excessive bleeding, and the frequent necessity, especially in large wounds, of resorting to skin grafting in order to obtain a good cosmetic result. This method also has been criticized on the grounds of possible dissemination of cancer cells through the blood stream, but recent opinions have held this possibility a doubtful one.
- 4. Actual cautery knife destruction of the growth by a criss cross grid leaving the charred area in situ as crust is effective, but eliminates the benefit of a microscopic report on the excised tissue. One cannot always be certain when employing this method that the center of the base is entirely destroyed unless it is overcauterized.
- 5. The electric knife or endotherm removal of squamous cell tumors is the method we favor and have used, with a few exceptions, in this series of cases. Two types of knives or tips are used (see illustration). One, a flat broad-bellied

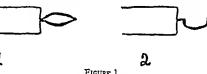


FIGURE 1
Two Types of Electric Knives

knife which is used first to mark the four poles by making stab punctures. This process is then repeated to complete a deep trench about the tumor. The breadth of margin removed about the lesion is roughly the diameter of the growth when the latter does not exceed 11/2 to 2 centimeters; in larger tumors a margin allowance of about 11/6 centimeters is generally safe. After the trench has been completed, the second tip is used. This is a light, flat, sickle shaped wire which is used to cut out the area that has been walled off. If in the dissection a large blood vessel is noted, this is picked up with a small artery clamp, and the handle is then touched with the knife blade, using a coagulating current. In this way most of the bleeding may be prevented, and the base may be carefully excised. It is well to mark the upper pole of the specimen before it is removed, so that the laboratory may definitely report on all borders and the base as to the margin of safety in removal. If the base has not been irradiated after removal, the wound usually heals in about four to six weeks. Radiation delays the healing about one to two weeks. Several of the larger tumors in our cases required an excision that left an operative wound measuring about eight centimeters in diameter. All healed nicely leaving com-

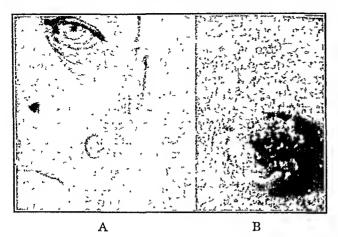


FIGURE 2

(A) Six weeks old lesion, Case 19. Shows typical appearance at this stage. (B) Close-up of same.

paratively small scars which were as a rule soft and flat, except in their central portion where several had a slight tendency to be thick and hypertrophic. Wherever indicated, these may be reduced with radium or excised. The only disadvantage to this method is the slowness of repair,



FIGURE 3

(a) Typical lesion three weeks old, Case 10. Patient had been splashed by molten lead at site of lesion. (b) Same wound seventeen days after excision. (c) Wound immediately on closing. No skin grafting employed.

and in cases where the excision has been large, this cannot well be hastened. However, its many advantages far overbalance this slight inconvenience.

The twenty-six cases which are included in this report are listed here in table form with descriptions of the special features in each case.

Case No. and Date	Name Sex and Age	Dura- tion	History of trauma	Location	Description of lesion	Histologic report	Trealmont	End τesult
1 Dec. 27, 1923	T.B. F. 68	6 wks.	None	Center of forehead	Typical appearance. This was the first case and was originally diagnosed as an infected sebaceous cyst	Squamous cell epi- thelioma.	Excised surgically with line of ex- cision close to margin of lesion	Patient seen only up to Jan. 7, 1924. Further observation and treatment undertaken by another physician. Result unknown.
2 1924	T. M. 52	6-8 mos.	None	Left temporal region	Typical appearance. 1.5 cm. in diameter.	Squamous cell opi- thelioma	X-rays and radium at first without any benefit. Later wide endo- therm excision	Unknown.
3 Aug. 27, 1925	W.F. F. 86	4 wks.	None	Right side of nose	Raised, red, inflamma- tory nodule with typical waxy bulg- ing sides and features already described.	Squamous cell epi- thelioma	Massive dose of radium. Excision had been refused	Alive and well, five years later. At that time there was a thin white sear at site of lesion.
4 Apr. 26, 1926	S.C. F. 33	5 wks.	None	Right cheek near inner canthus of eye	Typical inflammatory nodule which developed at site of surgical excision, two weeks previously of a vascular lesion	Squamous cell epi- thelioma.	Wide endotherm excision. X-rays to base	Excollent result, two months later. Follow-up letters returned because of chango of address.
5 Sept. 23, 1926	C. E. O. M. 78	9 mos.	None	Left cheek	Large characteristic nodule, 4.5 cm. in diameter. Broken down centrally and discharging cheesy purulent material	Squamous cell epi- thelioma.	Wido endotherm excision. X-rays to base	Patient had had no re- currence four years later at which time he died of other conditions due to "old ago."

Case No. ond Date	Name Sex and Age	Dura- tion	History of trauma	Location	Description of lesion	Histologic report	Trealment	En i result
6 Dec. 6, 1926	P.R. F. 67	6-7 mos	None	Middle of nose	Lesion, attached to underlying bone of bridge of nose, was 2.5 cm, in diameter, typical in appearance, with central crater and markedly inflamed base.	Squnmous cell opi- thelioma.	excision. X-ray	Patient could he followe: up for only 9 months a which time condition wa apparently cured.
7 May 5, 1927	N.D. F. 75	l plus years	None	Righttemporal region	Large typical nodule 4.5 hy 5 cm. in diameter.	Squamous cell epi- thelioma.	excision. X-ray	Excellent cosmetic result Patient well to present date. No evidence of local recurrence. No palpable nodes in field of drainage.
8 May 10, 1927	M.T.F M. 38	3 weeks	None	Center of left upper lid	Nodule 5 by 8 mm. in diameter. Looked like molluscum con- tagiosum, but had central erater, bulg- ing, grayish, waxy sides and many small hloodvessels in base.	cell epi- theliomn	Endotherm excision. Radium to base. Two fivo mg. needles in repair ruhher for two hours	Last seen Decomber 8, 1929 Excellent cosmetic result No local recurrence and no pajpable nodes in field of drainage.
9 Sept. 1927	P.P. M. 34	6 weeks	None	Center of right check	Typical nodule, 7 5 mm by 1 cm. in diameter	Squamous cell epi- thelioma	Wido endotherm excision. No radi- ntion to hase.	Unknown. Patient did not return to clinic
10 Jnn. 30, 1929	H.T. M. 41	3 weeks	Hot lead struck face in course of work		Typical nodulo, 1.75 cm. in diameter	Squamous cell epi- thelioma.	Wide endotherm oxclsion. No radi- ation to hase	Patient alive and well at present time. No ovidence of recurrence locally and no lymph node metastasis.
June 11, 1929	G.G F. 50	10 weeks	Rose thorn hro- ken off in skin, many attempts to remove it. Physician used acid	Left side of nose at border of check	Markedly inflamed waxy lesion of typical appearance,	Squamous cell epi- thelioma.	Wide endotherm excision. Radium to hase	Pntient nlive and well at present time. No local recurrence.
12 Sept. 26, 192	P.E. M. 9 50	5 weeks	Patient squeezed pimple	Leftcheck over malar emin- ence	Typical nodule. 2 cm. in diameter	Squamous cell epi- thelioma.	Wide endotherm excision No radi- ation to base	No evidence of recurrence to date.
13 Oct., 1929	L.N. F. 45	3-4 weeks	None	Near inner canthus of right eye	Typical nodule	Squamous cell epi- thelioma.	Wide endotherm excision. No radi- ntion to hase. Slight keloidal scar radinted later	Alive and well to date No recurrence.
14 Nov., 1929	H.R F. 79	years	Lesion arose on site of previous ly removed lesion thought to be hasal cell epithelioma	"	Typical nodule	Squamous cell epi- thelioma	Wide endothermy excision. X-rays to hase	Alive and well. No recurrence.
15 Apr. 19, 1930	L.W M. 30	. 6 wks.	None	Left cheek near naso- lahial angle.	Typical nodule	Squamous cell epi- thelioma	Wide endothermy excision. X-rays to base	No recurrence to date.
16 Oct., 1930	V.R F. 79	. 18 mos.	None	Center of fore head near hair margin		Squamous cell epi- thelioma	Wide surgical excision and Thiersch Graft	No recurrence to day.

Case No. and Date	Name Sex and Age	Dura- tion	Hislory of trauma	Location	Description of lesion	Histologic report	Trealmeni	End result
17 Oct., 1930	H.B. M. 73	4–5 wks.	Had cancer of tongue five years previously	Right side of neck	Lesion was 1.5 by 2 em. in diameter. Typical appearance. No nodes enlarged. No connection with tongue lesion could be found.	Squamous ecll opi- thelioma.	X-ray only	Only slight responseto radiation. Patientdied of tongue cancer.
18 Oet., 1930	M.C. M. 79	6 wks.	None	Right cheek	Typical appearaneo	Squamous eell epi- thelioma.	Removed by surgery. No radiation to base	No recurrence to date.
19 Apr., 1930	R.J.G. M. 40	6 wks.	None	Center left cheek	Typical appearance	Squamous eell cpi- tholioma.	Wide endotherm exeision. No radiation to base	No recurrence to date.
20 Feb., 1930	L.B. M. 47	6 wks.	Removed with cautery 2 weeks previously when diagnosed as wart. Prompt recurrence in two weeks	Near inner canthus left eye	Typical appearance	Squamous cell epi- tholioma.	Wido endothermy excision. Perios- teum of bone of nose curetted. No radiation to base.	No reeurrence to date.
21 Feb., 1930	M.R. F. 62	6-7 wks.	None	Near tip of nose	Typical appearanco	Squamous cell opi- thclioma.	Wide endothermy removal including cartilage at base to which lesion was attached. No radiation to base.	No recurrence to date.
22 Mar., 1930	C.T. M. 06	4-5 mos.	Had had eancer of lip removed. Had node dis- section of neck too	Left cheek	Typical appearanco No ovidence of direct extension	Squamous coll epi- thelioma.	Surgical removal. No radiation to baso	Patient died one year after romoval of cancer of lip No recurrence on check up to time of death, 6 mos. after our treatment.
23 Apr. 22, 1930	W.S. M. 50	6 mos.	None	Overlying but not attached to right mas- seter muscle	Lesion was 5 cm. in diameter, with typical appearanco	Squamous cell cpi- tholioma.	Excised surgically. No radiation to base	Followed up until Nov. 2, 1930. Patient was well and no signs of re- currence.
24 Nov., 1930	W.C. F. 37	7 wks.	Squeezed pimple	Left cheek	Typical but eovered with bloody pellicle.	Squamous cell cpi- thelioma.	Wide endotherm excision. No radiation to base	No recurrence to date.
25 Jan., 1931	J.G. M. 37	6 wks.	Local ointments and electrolysis to treat sup- posed peri-fol- licular infection.	jaw	Typical but thought by some to be blastomycosis	Squamous cell cpi- thelioma.	Surgical excision and node dissec- tion which showed only hyperplasia and no earcinoma.	No recurrence to date.
26 Apr. 12, 1932	C. F. 69	6 wks.	None	Right tem- poral region	Typical lesion with diameter of 2 cm. Skin about lesion rod because of recent X-ray treatment	Squamous cell epi- thelioma.	Surgical excision and Thiersch graft	Recent operation. Too early to determine result.

SUMMARY AND CONCLUSIONS

1. In all of the twenty-six cases, the appearance of the lesion corresponds closely with the description we offered earlier in this paper.

2. In seventeen of the cases the lesion developed rapidly, within seven weeks or less; in one case it was present ten weeks before coming under our observation; in five cases, the duration was four to nine months; and in three cases, it was present one to two years.

3. The development of the squamous cell nodule is usually rapid, reaching a size of one to two centimeters in diameter in from three to seven weeks. After this period the rate of growth is much slower.

4. We are not able to determine any definite relationship between age and rapidity of growth. It appears, however, that the lesions of longer duration occur in the older patients.

5. Five of our cases present a history of

trauma as the precipitating or contributory agent in the development of the nodule.

6. In nine cases, the lesion was removed by a wide endotherm-knife excision alone, and in eight cases this was combined with radiation of the base. Radium treatment alone was given in one case, x-ray alone in one case and knife-surgery was performed in seven cases.

7. In only three cases were we unable to obtain any follow-up history. In one case (Case No. 17) radiation (x-ray) had little effect on the lesion and the patient died of cancer of the tongue which had been present before the skin lesion. One patient (Case No. 22) died one year after an operation for epithelioma of the lip though there was no local recurrence on the cheek at the time of his death (six months after surgical removal of the tumor). Twenty-one of our cases showed excellent cosmetic results and apparent cures after periods of observation ranging from

two months to five years. Thirteen cases have remained well for at least two years.

8. In no case has wide removal been followed by local return of the lesion and yet the cosmetic results are quite satisfactory. When the scar tissue is not entirely flat, it can be corrected by radiation. ' '

'9. In none of our cases, apparently, have the lymph nodes draining the affected areas been in-

·10. In only two cases was a skin graft performed and in each instance the excision had been done by knife surgery.

11. Radiation was not practiced before removal but in the early cases of this group, removal of the lesion was immediately followed by either x-ray or radium treatment. As this procedure delayed healing and seemed to be of no distinct advantage in adequately removed lesions, it has been discontinued.

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A STUDY OF SECONDARY CASES OF SCARLET FEVER

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THE isolation period for cases of scarlet fever in New York City is thirty days, providing desquamation has ceased and there is no abnormal discharge from the nose, ear, or mastoid, and no enlarged cervical glands. Contacts are not quarantined, unless exclusion of school children, school teachers, nursery attendants, librarians, and foodhandlers from school or work may be considered as modified quarantine. Such individuals are excluded from school or work until seven days after the termination of the case, unless they remove to another address, in which event they may return to school or work seven days after such removal, provided they show no symptoms of the disease. The isolation period is counted from the day of onset of the symptoms, or in those mild cases where the symptoms are unnoted, the day of the appearance of the rash. The terms "isolation" and "quarantine" are used

in accordance with the terminology of the Public Health Association.

'In order to ascertain whether this period of isolation and exclusion is unnecessarily long, a study of secondary cases developing in the family was made to determine at what period during the convalescence of the primary case secondary cases developed. Of course, it is impossible to prove that the second case in the family was contracted from the primary case, since the contacts being at large could contract the disease from other sources. To minimize this possibility as far as possible, the cases studied were taken in a year in which the disease could not be said to be epidemic, and hence the possibilities of outside contact infection reduced to a minimum.

The annual average for scarlet fever in New York City for the five year period, from 1926 to 1930 was 10,737. Therefore, a year was selected in which the number of cases reported corresponded approximately to this average.

There were 11,357 cases reviewed. To these 11,357 cases there were 37,788 contacts—that is, members of 'he family or household. Of course, not all of these contacts were potential cases of scarlet fever, since a certain percentage of them had had the disease and should be considered as immunes. It is impossible, however, to determine the exact percentage of such immunes, since, not anticipating such a study, the histories do not include this information. However, to work out a comparative tabulation as to the percentage of secondary cases developing during the various intervals of the primary case this is not important.

Among the 37,788 contacts a total of 901 secondary cases developed. In 850 secondary cases the primary case was uncomplicated and terminated on the usual 30th day or thereafter when desquamation had cleared up; whereas 51 were secondary to a primary complicated case (discharging ear, mastoid, nasal, enlarged glands) which continued beyond the usual 30-day period, and was not terminated until the complication had cleared up. The tabulation, therefore, shows the secondary cases which developed between the 30th and 37th day, the limit of the incubation period, in the primary uncomplicated case; and also the secondary cases which were presumably infected between the 30th day and the day of termination of the primary complicated case.

TABLE I

		Secondary	Per cent.
	Contacts	Cases	Cases
Under 5 years	4,155	299	7.2
5 to 15 years	9,615	539	5.6
16 years and over	24,018	63	0.26

Table number one shows the percentage of secondary cases developing among the contacts in the various age-groups. This might suggest that the isolation period of cases of scarlet fever to whom the contacts are 16 years and over might receive more favorable consideration in the imposition of quarantine than if the contacts are of the age-group under 16 years. However, an isolation regulation based on this would be impracticable in a large city, where the regulations must of necessity be uniform for all classes.

Table 2 shows the diminishing percentage of secondary cases infected during each four-day period after the onset of the primary case. It is interesting to note the uniformity of the decreases in the "uncomplicated" and "complicated" groups alike. In both groups, over 50% of the secondary cases occurred in the first period (less than 7 days). Since the complications in scarlet fever occur for the most part in the later stages of the disease this factor should have no bearing on the percentage rates of the two groups in this period.

	TA	BLE II		
No. of Days Between Onset of Primory and Ut Secondary Cases No	Seco scomplic . Coses	ndary to oted Primory Pereentoge	Secon Complica No.Coses	ndary to led Primary Percentago
Less than 7 days	479	.56	26	.51
7-11 days	167	.20	7	.14
12-16 "	111	.13	6	.11
17-21 "	58	.07	3	.06
22-26 "	19	.02	2	.04
27-30 "	8	.01	2	.04
31-37 "	8	.01		
(uncomplicated primary)				
31 days and over			5	.10
(until primary com- plicated case terminated)				
TOTAL	850		51	

The large number of secondary cases occurring in the first period as contrasted with the later periods is due to the fact that we can rarely hope to get the case isolated less than the fourth day after the onset; and by that time the exposure to the other members of the family has taken place. The secondary cases in this period, therefore, were contracted from the primary case at or about its onset.

Many cases are not reported promptly and hence the delay in isolation accounts for the still high percentage (20%) in the 7-11 day period. There are also to be considered those mild cases that go undiagnosed and are not detected until desquamation occurs. It not infrequently happens that the primary case is discovered only after the secondary case is reported.

In the "uncomplicated group" the percentage of secondary cases is reduced to 2% and 1% respectively after the 21st day. This would indicate that the great majority of uncomplicated cases of scarlet fever are free from contagion after 21 days; whereas in the "complicated group," while the percentage rate continues to decrease, it is more than double this between the 21st and 30th days, and it is usually about this time that the complications arise.

The eight secondary cases recorded between the 31st and 37th day in the "uncomplicated group" need further explanation. Four of these cases should really have been tabulated in the "complicated group" since a complication was later discovered in the primary case, although not known to exist at the time the primary case was terminated. In one instance the primary case was discharged from the hospital in accordance with our regulations, but within one week after discharge three cases developed in the family. Examination of the nose and throat of this child showed an ulcer on the septum of the nose from which a pure culture of streptococcus haemolyticus was obtained. In another instance one case developed in the family within a week after discharge from hospital. The nurse on visiting noted a slight nasal discharge in the case recently home from the hospital. Nasal cultures were reported as positive for streptococcus haemolyticus. Of course, in differentiating between "uncomplicated" and "complicated" cases on a basis of mucous membrane discharge, the human equation will always enter in and certain cases will be terminated and released prenaturely. However, this will prevail irrespective of whatever may be the period of isolation.

During the first five months of 1932 the incidence of scarlet fever in New York reached epidemic proportions and our contagious hospitals became greatly congested. To relieve this overcrowding a modification of our regulations was made whereby uncomplicated cases over 17 years of age were discharged on the 21st day after onset. This released only that group who were for the most part beyond the school age; hence, with the exception of the younger group in the home, they should not be a menace to the community at large since their associations would be for the most part with the older age-group. Two hundred and thirty such cases were discharged from our contagious hospitals up to June 1st. All these cases were followed up and in only one instance was a secondary case discovered. This case, an adult, was discharged from hospital March 29th, and her daughter, age 10, came down with scarlet fever April 2nd. The history of the primary case is interesting, since, although it was discharged as an uncomplicated case, subsequent events proved it to be a complicated case. The primary ease had a slight discharge from the ear while in the hospital, which had cleared up several days prior to leaving. However, the day after arrival home the ear started discharging again.

SUMMARY

- 1. 11,357 cases of scarlet fever were reviewed.
 2 901 or about 8% of these cases were secondary cases.
 - 3. There were 37,788 contacts.
- 4. 901 or 2.4% of the contacts developed scarlet fever.
- 5. Of the secondary cases 56% occurred within one week after the onset of the primary case and were in all probability contracted either from the same source as the primary case or from the primary case before its isolation.

6. The susceptibility of the age-group 16 years and over is comparatively slight.

7. There is a gradually diminishing infectivity in "uncomplicated cases" up to the 21st day at which time the majority are not infective.

8. There is a gradually diminishing infectivity in the "complicated cases" up to the 21st day at which time, although the decrease continues slightly, the infectivity is twice as great as in the "uncomplicated cases." This is probably due to the complication which in most instances arises at this period of the disease.

Conclusions

1. Since the infectivity of desquamation is an obsolete theory, cases of scarlet fever may be terminated without regard to its presence.

2. The few cases in which the contagium persists after the 21st day do not warrant the thirty day isolation period with its concomitant loss of school time for the case and contacts in school children and school teachers, and the economic

loss in business individuals.

3. On terminating scarlet fever a careful examination should be made to determine the presence of a complication, such as nasal discharge, discharge from the ear or mastoid, broken down glands, or cervical glandular enlargement which usually denotes persistence of throat and pharyngeal infection.

4. "Uncomplicated cases" may be terminated on the 21st day with but little danger to the community, or on the 25th day with no greater danger to the community than terminating on the 30th

5. "Complicated cases" should be isolated until the complication has cleared up, unless it can be demonstrated by culture that the discharge is free

from contagium.

6. With a twenty-one day isolation period, school children, school teachers, nursery attendants, and librarian "contacts" to scarlet fever (the first being the most susceptible age-group and the second, third and fourth coming into contact with the most susceptible age-group) should be ex-

cluded from school or work for seven days after the case is terminated.

7. Where the "contact" ceased to be a contact (removal of contact or case, or death of case) prior to the termination of the case, an additional seven-day exclusion should be enforced.

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THE DOCTOR'S VACATION

The best vacation consists in doing what one likes best to do. The successful doctor continues in practice because he likes both the work and also the associations which go with it. When he takes a vacation, he lays aside his responsibility for individual sick persons, but he clings to the associations which go with his profession, and practices them more actively than ever because he has the leisure to do so. He attends outing meetings of his county medical society, and group meetings that combine science with pleasure, as does the Lake Keuka Medical Association in the central Hundreds of doctors will part of the State. spend their vacations in groups which combine foreign travel with medical instruction. That vacation is profitable and pleasant which increases the doctor's ability and gratification in the practice of medicine.

EVERY DOCTOR A HEALTH OFFICER

The March 27th issue of Health News, the weekly publication of the New York State Department of Health, contains the following extract from a letter of a rural physician, who, as the local health officer, had made a report on an epidemic of influenza in his town:

"In making this little study of the flu 'on my own,' I became more convinced than ever that private physician and health officer are two distinct jobs. If I took pains to get the record accurate I had to watch that I did not overlook something about the patient. If I gave my best to the patient, I always forgot something about the record. The physician is an individualist interested in his patient above all else. looks in mild contempt on the statistics and graphs of the health officer. Trained to minute detail he does not find it easy to think in terms of mass trends and mass prevention. The health offieer trained to broad vision finds it hard to focus his attention on a single unit. Each is a big job. Together they are too big for any one man. Any man who wants to, can do either; but only rarely will he wholly succeed

The special importance of this quotation is the various interpretations which have been

put upon it.

Although Health News did not commend this quotation, yet it did commend the author—the only practitioner listed in his town—for his excellent public health work, and especially for an educational article on influenza, which he prepared for the local newspaper. However, the quotation is a good argument for collective action in public health through the establishment of county health departments, which is a major project of the State Department of Health, and of Governor Roosevelt's Health Commission. (See this Journal October 1, 1931, page 1209; January 1, 1932, page 30; and February 15, 1932, pages 214-222.)

A strong argument for individualism in the practice of medicine is set forth by the Ohio State Medical Journal for July, 1933, in the following editorial comment on the quotation, from

Health News:

"The difficulties encountered by the health officer illustrate the inherent evils in any system of medical practice which would not permit the physician to devote his entire attention to the welfare of his patients. No physician can render effective medical care if shackled with too much red-tape or forced against his wishes to follow meehanized, stereotyped methods which may not meet the requirements of individual cases.

"In this pertinent analysis of the difference in viewpoint and responsibility of the physician treating his patient as an individual, and the health officer serving the public generally, there is found a most convincing argument in favor of the practice of medicine on an individualistic basis, and against the organization of medical practice in accord with the principles of mass treatment and mechanization."

Both Health News and the Ohio Journal give the impression that the duties of the health officer are incompatible with those of the family physician. They are incompatible in only one respect-that of police control in epidemiology and in sanitation. The Laws of New York State deal with that conflict by imposing the duties of policing and the proseention of delinquents on the board of health, thereby relieving the physicians of the greatest source of unpleasantness in connection with his office. So far as a sick patient is concerned, there need be no conflict between the doctor and the health officer. All epidemiological facts have a direct relation to the welfare of the patient and his family; and the more the doctor knows about the diseases that exist in his neighborhood, the better can he care for his individual patients.

The members of the medical profession of the State of New York are receptive to the idea of participation in those forms of public health work which have long been regarded as peculiar to the health officer. They are coming to regard the health officer as a speculiation of the work which have long been regarded as peculiar to regard the health officer as a speculiar or whom they may call for either diagnosis or treatment; but those in general practice are also realizing that they are competent to handle the greater number of public health problems which arise in their practice.

There has been a tendency for health departments to develop a system of public health practice that is apart from the individual practice of medicine. Family doctors have been too willing that public health physicians should displace them in epidemiological investigations and even in the care of the sick. But the trend now is to restore the family doctor to his rightful position as medical advisor in giving all phases of medical attention to all elasses of persons. The time is coming when every doctor will be a health officer to his families. The attitude of personal liberty and independence in thought and action impedes the physician in his prevention work just as it does the school teacher and the pastor. The family physician is the educator who will inspire the people with a new attitude of cooperation with their family doctors in public health work.



MEDICAL PROGRESS



A Simple Method of Treatment for Leg Ulcers.-All chronic leg ulcers, says Paul Kahn, writing in the Münchener medizinische Wochenschrift of April 21, 1933, develop under unfavorable conditions of circulation, such as chronic stagnation and edema. Whatever the cause of this, in every case lymph containing new toxic products of metabolism passes out from the obstructed lymph vessels and thus permeates the subcutaneous tissues with injurious metabolic products which under normal conditions would be carried away. The chronic edema hinders the venous return flow, and the circulation lying beneath it in the vicinity brings to naught any least tendency to healing, with the end result that the ulcer becomes stationary. Hence the chief consideration must be to get rid of the chronic stagnation around the ulcer, which has as a rule caused induration of the connective tissue, by stimulating new vessel formation and by improving circulatory conditions, thus bringing about a more rapid removal of the products of tissue destruction. On the other hand, this stimulation serves to vascularize the formation of granulations, which constitute the basis for the epithelization of the ulcer. Kahn attains this end by the old time, but forgotten, method of circumcision combined with application of ointments. At a distance of about 1 cm. an incision is made around the ulcer, penetrating the skin and going deep into the subcutis. Beyond this point the skin is scarified for some distance, as far as signs of induration can be established. The more or less copious bleeding that follows relieves the boggy tissue; harmful products of metabolism are swept away, new vessels begin to form and fresh granulation tissue fills the old defect. A sterile dressing is applied and the ulcer left to itself for a few days, after which in most cases it will have fully cleaned up. Occasionally wide tissue necroses require to be removed by wet dressings before the circumcision is done. After the ulcer is clean, a systematic course of stimulation is begun, with a combinaton of scarlet red and balsam of Peru in the form of a salve, which has been found especially effective. In a relatively short time large defects have been filled in with fresh granulations and have quickly skinned over. Although the number of cases in which this method has been tried is not large, results have been most gratifying. No specific selection of cases was made. Ulcers of various etiology and of great depth and extent have alike been subjected to treatment, all having in common the fact of a history covering one or more years, during which various forms of treatment had

been used unsuccessfully. The method is so simple that it can be carried out by any practitioner even without a large instrumentarium. The time required for healing is short compared with that of other methods, and the permanent results in the author's cases have been excellent.

The Demands Made upon Surgery in Cancer of the Rectum.—The site of cancer of the rectum, its usually solitary growth and the lateness of distant metastases, according to Otto Goetze, all favor the development of a standardized technique, the results of which today are increasingly satisfactory and show a gratifying permanence. Surgery is universally the indication, roentgen treatment having been proved totally impotent to produce cures. Since 1931 Goetze has been using a new modification of the sacral method of approach, which he finds considerably safer than the abdomino-sacral method, provided there is the same careful selection of cases and that the same standard of operability is adhered to. Its principle is based on the fact that after resection of the coccyx it is easy, by going behind the fascia visceralis pelvis and the arteria sacralis media, to push on upward over the promontory and open the lateral Douglas' pouches, right and left on the mesocolon, from behind. In this way one can arrive at the same site of the exposed vascular cord of the arteria haemorrhoidalis superior as by the abdominosacral method, and with the advantage of not touching the cancer on the way. The old method forced a way through the glandular region near the rectum, which is infiltrated with cancerous growth, and in which it is necessary to tie, one by one, innumerable branches of the superior hemorrhoidal artery, on the entire posterior surface of the rectum. In the new method, on the contrary, one can tie the arterial trunk with a single ligature above the outlet of the arteria colina ima, that is, above Sudeck's critical The method has also the advantage of opening the abdominal cavity in the region of the bony pelvis, in other words at the passive part of the abdominal wall, while the abdominosacral operation is carried out in the region of the active muscular walls: hence in the sacral method abdominal breathing is to a great extent maintained; this results in much less shock to the intestine and to the bloodvessels of the splanchnic region, and the injury to the circulation is considerably less, since the blood dammed up in the collateral circulation can be more readily mobilized again. The abdominosacral route, however, has one clear advantage, in that it frequently can establish visually whether there are metastases to the liver,

which the sacral route cannot do, there exists, therefore, greater danger that with liver metastases present the surgeon will do a local radical operation where no hope of permanent cure remains, which is contrary to the accepted concept of correct surgical procedure. This concept is, however, untenable, the question must be answered from the clinical and not the anatomical standpoint, and even though the patient must die eventually from cancer of the rectum, he is en titled to the relief of a pallintive operation despite his liver metastases, provided he still has some power of resistance left Goetze has produced total permanent cures in 34 per cent of 100 cases operated on, local cure without recurrence in 20 per cent, 10 per cent died of local recurrence within 3 years, 25 per cent with artificial anus gained 1 year of life, and only 10 per cent did not survive operation -Deutsche medizinische Wochenschrift, April 21, 1933

Heart Disease in General Medical Practice -I V DePorte presents a preliminary report of a survey conducted by the New York State Department of Health with respect to the morbidity from heart disease in the State, exclusive of New Statistics show that heart disease is York City the leading cause of death in this country 1929 almost a quarter of a million deaths in the registration area of continental United States were ascribed to cardiac diseases The death rates of the forty-six registration States ranged from a minimum of 90 per 100,000 in Oklahoina to a maximum of 304 in Vermont The morbidity survey in New York State was commenced in January, 1931, and includes 1 934 cases, 933 miles and 1,001 females The distribution of the patients by age was as follows under 40 years, 27 4 per cent, between 40 and 60 years 30 5 per cent, 60 years and over, 42 1 The average age was 51 5 years and the median age 55 7 years. The males were, as a group, younger than the females Of the former 24 7 per cent were under 40 years, of the latter 299 per cent The average age of the males was 529 years, the median age 577 the average age of the females, 503 years and the median age 535 The leading etiological fac tors were rheumatic infection, 272 per cent, hypertension, 201, arteriosclerosis 88, syphilis 46, congenital syphilis, 24 In 116 per cent of the cases the etiology was unknown The pro portion of syphilitic heart disease among males was three times that among females A definite statement of pathological changes was made in 1 826 cases Damage to the valves was indicated in 487 per cent, damage to the myocardium in 289 per cent, and to the coronary vessels in 198 per cent Coronary disease was more prevalent among males, while valvular disease and damage to the myocardium were more prevalent among females The proportions were coronary disease

in 237 per cent of the males and 16 per cent of the females, valvular disease in 45 per cent of the males and in 521 per cent of the females, and in 521 per cent of the females and in 30 per cent of the females. Dam age to the coronary vessels was of prime importance in the arteriosclerotic and only of lesser importance in the hypertensive type—American Heart Journal, April, 1933, vill, 4

Experimental Effect of Tobacco and Nicotine on the Coronary Debit -In the course of studies carried out on the isolated rabbit heart, Ch Linbry, J Walser and L Deglinde made the following observations with reference to the effects of tobacco and nicotine (1) An identical effect is produced by a maceration of tobacco and a solution of nicotine with an equivalent amount of meotine (2) Weak doses (2-5 drops of a 1 per cent nicotine in 1 liter of Ringer's solution) uniformly caused an increase of the coronary debit varying between 30 and 60 per cent of the initial figure Medium doses (12 20 drops of the same solution) uniformly produced an increase of the coronary debit, varying from 5 to 20 per cent of the initial figure Strong doses (20 100 drops of the same solution uniformly caused a diminution of the coronary debit, which fell from 10 to 20 per cent below the initial figure (3) The variations of the coronary debit are independent of modifications of rhythm and amplitude of the cardiac contractions. In fact, at the time of passage of the strong doses, there was observed despite the considerable increase of amplitude of the heart beats and the acceleration of the rhythm, an actual diminution of the coronary (4) The difference in intensity of the vasoconstrictor and the vasodilator reactions is quite interesting. When the latter reactions are revealed by an increase of debit amounting to 60 per cent of the initial figure, the former do not exceed 20 per cent. We see in this fact a fresh proof of the considerable predominance of the vasodilators in the coronary innervation. Nic. otine therefore exerts a strong vasodilator action when used in weak doses and a weak vasoconstrictor action when administered in strong doses, at least so far as experimental administration The authors raise the question whether the nicotine concentrations used in the experiments approximated those in the blood of smokers, they are inclined to think this is the Lee estimated that 50 per cent of nicotine passes off in the smoke A moderate smoker smoking 10 cigarettes a day thus absorbs about 125 mg nicotine, which, diluted in 5 liters of blood would make 6 drops per liter. In such dosage the nicotine undoubtedly does not exert any constrictive action on the coronary arteries nor does double this dosage. It would seem that in the mechanism of crises of angina related to

tobacco intoxication the coronary vasoconstrictor element plays a negligible rôle, whereas the toxic effect upon the nervous elements of the cardiac plexus is extremely important. — Bulletin de l'Académie de Médecine, April 25, 1933.

Tests with Reference to Curtailing and Transposing the Time of Sleeping.—Th. Stöckman makes a report in the Münchener medizinische Wochenschrift of March 17, 1933, of a series of observations he carried out in 15 adolescents and adults, all of whom were asked independently to check up on their best sleeping hours. A lower sixth form school boy in rather poor health, who could consequently not meet the demands of his grade, studied late at night and then slept as late as possible in the morning; he observed that the longer he slept, the worse he felt and the more disinclined to study. Changing his habits and beginning to go to bed early he soon discovered that if he took a long sleep before midnight he required less sleep and could curtail his sleeping hours. Finally he observed quite definitely that sleep between 7 and 11:20 p.m. brought the maximum of refreshment to body and mind, and that he actually needed no further rest when he took this time for sleep. similar observations are outlined in detail, as examples of an experience that was common to all the 15 persons, each watching himself independently, namely, that their best sleep was between 7 and 11:20 p.m. The precise time of awaking varied somewhat. One boy awoke regularly on the tick of 11:20, of his own accord, and then worked night and day in perfect comfort. conditions of the experiment were sufficiently elastic to adapt themselves to the individual cases. No tests were made in children. Stöckmann takes occasion to emphasize the "double value" of sleep enjoyed before midnight.

Biological Treatment of Hydatidosis in Man. --According to G. Pennetti all the modern biological methods of diagnosing hydatidosis in human beings are founded on the conception of antibodies circulating in the blood of carriers of cysts, the production of these antibodies being related to the vitality of the cysts; when the cyst dies, the reactions become negative. At the present time treatment may be regarded as exclusively surgical. But even simple aspiration of the hydatid liquid involves the danger of producing anaphylactic shock, and it has also been proved With the idea of immunizing the inadequate. patient against the hydatid toxin, which is dialyzable through the membrane of the cyst itself, Ymas Apphatic of Buenos Aires in 1932 prepared from the cystic fluid, by the addition of formol, a substance which he named anatoxin, of which he distinguished a number of different types, according to the amount of formol present. Experiments proved that with a formol content

of ½ and of ¼ per 1000 (anatoxins I and I) the maximum antigenic property is obtained. Treatment begins with a subcutaneous injection of 2-3 c.c. anatoxin Type I every 6-8 days; the third injection is of Type J, of which progressive doses of 5, 6, 7, 8, 9, and 10 c.c. are given, at intervals that vary according to the rapidity with which specific antibodies disappear from the blood. In the 3 cases thus far treated, 13, 23, and 19 injections were given, containing respectively a total of 100, 196, and 168 c.c. anatoxin. third case was particularly instructive, in a patient already operated on 8 years previously for cysts of the left lobe of the liver; these had recurred, and an additional cyst had appeared in the right iliac fossa. The disappearance of reactions after 19 injections remained constant; the cystic tumor diminished in size and increased in consistency. At operation 4 live cysts were removed, which together constituted a mass as large as the head of a fetus. The interest of the case lies in the demonstration of the undoubted antianaphylactic action of anatoxin in the presence of live cysts. The method merits a wider use, since if its curative action is confirmed, it will shed new light on the biologic and therapeutic problems of human echinococcus.—Riforma medica, April 8, 1933.

Tetanus with an Unusual Early Symptom.— With the object of drawing attention to a lone symptom of tetanus which may confuse the diagnosis, especially in the presence of old minor injuries, Pierce H. Leavitt reports the following case. A boy 13 years of age was admitted to the hospital on May 26, 1932, for abdominal symptoms which had lasted for several days. Physical examination showed a well-developed and wellnourished boy, who was suffering with occasional cramp-like pains in the abdomen, lasting a few seconds and referred to the epigastrium, but the epigastric region was not tender. There were tenderness and resistance and the suggestion of a mass in the lower right quadrant. A diagnosis of acute appendicitis was made and operation was performed under avertin and gas-ether anesthesia. The appendix, four inches long, was hard, red and engorged. On May 27th the patient continued to have attacks of occasional irregularly timed abdominal pain, mostly centered about the wound. As there was no relief from the nausea and vomiting on the following day, enterostomy was advised and performed. On May 29th the cramps were still present, coming about The original every twenty to thirty minutes. wound was clean and the enterostomy was working well. About 2 a. m. on May 30th the patient suddenly complained that he could not open his mouth to drink water. Some slight stiffness of the neck was found. Antitetanus serum was administered, and later avertin for convulsions. This worked so well that the author says he

would use it in other cases. A reconsideration of the patient's past history revealed that five or six weeks previous to the onset of the abdominal symptoms a splinter entered under the nail of the left mid-finger. After removing the splinter the area became mildly septic and a doctor had evacuated the pus. The patient also told about a wound from a B.B. shot received in the right thumb six or seven years ago. The shot could be felt under the skin and the doctor removed it. The wound became mildly septic but healed well. It must be assumed that the finger and thumb were the source of the infection. The classical symptoms of tetanus were not present until very late. The patient had a stormy convalescence for three days after the symptoms of tetanus appeared, and then gradually recovered .-- New England Journal of Medicine, June 1, 1933, ceviii, 22.

Problems and Aims of Bioclimatology .-An increasing number of physicians, says F. Linke, are waking up to the value of the 3 active remedies offered by nature, namely, light, air, and environment, to the study of which the new science of bioclimatology is dedicated. It is particularly difficult, however, to bring to light through statistics the often quite concealed relations that weather and climate bear to physical health. One must really be both a physician and a meteorologist to do this successfully. The most urgent task is that of measuring the actual amount of heat given off into the surrounding air by an individual, and the extent to which this depends on the wind, air temperature, and sunshine, as well as upon the clothing. The physical processes of the body should be studied from this point of view. Individual differences would at once be discovered, which would lead to a better definition of the concept of "constitution"; also individual variations would be established, which are probably related to the susceptibility to disease. Then the effect of masses of air of different origin would have to be studied experimentally and statistically, and in addition the effect of the local climate, which is dependent largely on subterranean conditions, and on proximity to mountains and woods. It is already recognized that in certain cities and in other regions some persons never feel well, and it would be economically advantageous not only to business concerns and large real estate promoters but also to insurance companies to understand these processes exactly and, so far as is possible, to bring these sensitive individuals into a climate that is properly adapted to them. In view of the exhausting effects of the climate in many large cities located in river valleys, studies are well justified with reference to the physical and chemical constitution of the air in such places. After gaining an insight into the remarkable capacity possessed by the healthy

organism of maintaining its heat, mineral, and gas equilibrium, it is reasonable to conclude that the sick organism works less exactly and is on this account more or less at the mercy of external influences of a chemical, electrical, and bacterial nature. Some organic or psychic defect lies at the bottom of every case of "meteoropathy." A rich field of investigation lies open, therefore, to those workers who are prepared to devote themselves to research in this field of bioclimatology. — Deutsche medizinische Wochenschrift, March 31, 1933.

Shock Syndrome in Mercuric Chloride Poisoning.-H. V. Moon and B. L. Crawford, writing in the Archives of Pathology, April, 1933, xv. 4, report the case of a man, aged 39, who had swallowed 175 grains of mercuric chloride in tablet form. He walked to the hospital about thirty minutes later. His most pronounced signs and symptoms were those of mental confusion and profound shock. There was no evidence of heart block or of disturbance of the contraction inpulse. There were no marked gastrointestinal symptoms. He voided urine only once about two hours after admission. From profound shock he went gradually into coma and died at the end of thirty-seven hours. At post-mortem the outstanding histological features were necrosis of the tubular epithelium, acute degeneration of the liver, and widespread capillary congestion, capillary hemorrhages and edema, especially of the lungs. The chambers of the heart were not dilated. The valvular orifices were of normal size. The valves showed no defects, and the myocardinm was firm and of normal color. The heart showed no changes of any kind which would make cardiae failure seem probable Search was made for evidence indicating whether the circulatory failure resulted from cardiae deficiency or from injury to the capillaries. Moon and Kennedy called attention to gross and microscopic tissue changes in traumatic shock. Post-morteni examination in human cases and in shock produced experimentally in dogs showed widespread capillary dilatation and congestion, edema, especially of the lungs, and petechial hemorrhages in serous surfaces. These findings corroborate the explanation that shock is due to capillary damage Landis found that injection of such agents as 10 per cent alcohol or 1:10,000 mercuric chloride solution caused injury to the capillary walls similar to that caused by ethyl carbamate (urethane). They markedly increased capillary permeability. Capillaries treated with mercuric chloride were seven times more permeable than normal capillaries. Evidently mercuric chloride may produce capillary damage similar to that caused by other poisons; as such it produces the same circulatory phenomema and the same gross and miscroscopic changes as are found in shock.



LEGAL



MALPRACTICE—FOREIGN BODY—PHYSICIANS HELD BLAMELESS

By LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York.

Several years ago a case was carried to the highest court of one of the northwestern States, in which a decision was made on two very important points in the law of malpractice. The facts of the case must be stated in detail for a proper consideration of the court's ruling.

A certain young woman was married in 1919. In the year 1917 she had undergone a surgical operation for appendicitis. In the latter part of the year 1919 she gave birth to her first child. A second child was born in June, 1921. In the summer of 1920, after the birth of the first child, her health was not good and she called Dr. K, her family physician, who determined that an operation was required. sent her to a hospital, and called into the case a Dr. H, the chief surgeon of the hospital. The surgeon agreed that an operation was indicated by the patient's condition and it was arranged. Dr. K was present at the operation, but according to the testimony did nothing except assist under the direction of the surgeon. An incision was made on the right side and the kidney was found to be infected and distended to much greater than normal size, and it was removed. In the opinion of the operating surgeon, the kidney infection was of a tubercular nature. Account was taken by the nurses of sponges, packs and instruments used, a record made and the count found to be correct. The abdominal cavity was not entered by the surgeon during the operation. The wound was very slow in healing.

The next June, in 1921, the patient gave birth to a second child. At about that time the incision made by Dr. H reopened, and a considerable amount of pus was discharged. Her family doctor was called and advised hospitalization. She again went under the care of the surgeon, Dr. H, and he operated to relieve a pus condition of the pleural cavity, resecting a rib. During this operation a thorough exploration was made of the operative field of the 1920 operation and a pus cavity was found and drained. No complications were attributed to the drainage of the pleural cavity.

The woman's condition did not improve, but at the end of about three months she was taken home from the hospital, and she died within a week thereafter. A foreign body was found

by her husband two days before her death and removed by him from the old incision of the 1920 operation. According to his testimony, while dressing the wound he "noticed just like a fuzz there, and I took a cotton batting and let the water drop on there and wash it out. It wouldn't come out, so I took a toothpick and I picked on there trying to get that away, but when she had to cough when I took that away, it stuck out not even half an inch. I didn't know what it was, though, so I took hold with two fingers and pulled on there. She did not notice that. Then I had it out a little I didn't know what to do. I knew that the doctor was not home, so I pulled it There was a whole lot of pus came out after this was out, and then afterwards the stool came out; it was open." The foreign body which was removed was upon the trial put in evidence and was a gauze pack in the form of a roll, about seven or eight inches long and an inch and a half in diameter.

The husband as administrator sued both of the doctors and also the hospital, charging them with negligently causing the death of his wife, and seeking damages. Upon the trial the case resulted in a non-suit as to the hospital before the case was sent to the jury. After all the evidence was in, the court sent the case to the jury as against the two doctors. The jury brought back a verdict specifically finding that the gauze pack had been left in the abdomen by the defendant Dr. H, and that both Dr. H and Dr. K had failed to use proper care, as a result of which death had followed. Damages totalling \$10,000 were assessed against the doctors, and from the judgment entered on the verdict an appeal was taken. The higher court considered the record before it and ruled that the lower court should be reversed.

The appellate court first considered the question as to whether there had been any liability shown on the part of the family physician. No claim had been made that he had been negligent in his diagnosis, and no claim had been made that he was negligent in recommending Dr. H. A claim was made that it was the duty of the family physician to supervise the nurses and to generally direct the operation, but there was no evidence to support that contention. The court, in ruling

out the case as to Dr K, the family physician of the patient, said

'Assertion, insumation, argument and innucudo cannot supply the place of evidence When the nurses and physicians were assembled in the operating room of the hospital, they were not there to prepare for a lawsuit, but were engaged in an attempt to relieve human suffering and save human life, and, throughout this case there is not a scintilla of evidence to show that anything was done or omitted to be done, that is usually and ordinarily done by surgeons exercising that degree of care, diligence, judgment and skill which surgeons in good standing of the same school of medicine usually exercised in the same or similar localities like, under like or similar circumstances. having due regard to the advanced state of medical and surgical science at the time of the operation on August 10, 1920, except as hereinafter On the contrary, the evidence excluding the presence of the pick discloses that both hospital staff and surgeons exercised the highest possible degree of carc, both at the time of the operation in August, 1920 and at the second on-Under the undisputed evidence eration in 1921 in this case, if it should be established that the pack in question was left in the body of the deceased on August 10, 1920 Dr K can in no sense be held legally responsible thereof Standards of duty for a family physician attending an operation under circumstances appearing in this case cannot be established by argument or asser-What constitutes ordinary care in a case such as this is to be determined by the testimony of those who know what it is, not as a matter of common knowledge"

The court in its opinion then proceeded to consider whether there was sufficient evidence that the surgeon had left the pack in the deceased's body so as to hold him to liability. It was found that there was no question that the pack had been in fact removed from the body of the deceased and that there was at the time of its removal an opening from the ahdominal cavity through the peritoneum to the orifice made by the incision of the 1920 operation. If there had been no appendectomy in 1917, the proof would have been clear that the foreign substance was left in in the course of the 1920 operation was undisputed evidence that Dr H in neither operation entered the abdominal cavity There was also evidence that packs of the kind in this case are ordinarily used in appendical operations, and further that sterile gauze as this must have been might remain in the body of a patient for years without creating a great amount of disturbance Upon the state of the evidence, the court found that there was no hability proved against the surgeon. In ordering a reversal of the judgment of the trail court, it was said

"The eircumstances of this case are most unfortunate. Two little children have been deprived of a mother, a husband has lost his wife. A verdict charging that responsibility upon an experienced, careful, conscientious surgeon should be supported by evidence establishing the fact, or establishing facts from which it may be inferred to a reasonable certainty. It cannot and it ought not to rest upon evidence which leaves the fact in the field of doubt, uncertainty and speculation."

The justice of the ruling seems clear It was part of the plaintiff's case, before he could hold the surgeon, to establish that the negligence, if any, was committed during the 1920 operation and not during the earlier appendectomy. To permit the jury to speculate on such a point would result in a manifest injustice to the doctor.

On the point first considered, namely, the responsibility of a family physician for what transpires at an operation, the case has been followed as authority in a later case that deserves some In that case a general practitioner adcomment vised the extraction of certain teeth and recommended a certain dental surgeon Arrangements were made for the doctor to act as anæsthetist. and the patient told him that she wanted him to, as she said, "see me through and watch out for my interests through the operation and when I went under the influence of the ether" In that case, in holding that the doctor thus present at the extraction was not responsible for the malpractice of the operator, it was said by the appellate court

"The mere recommendation by one doctor of another does not make the one liable for the malpractice of the other This has been held true where one physician advises an operation, and, with the consent of the patient, arranges for it to be performed by another, a competent surgeon whom he assists And where the physician in charge of a patient calls a surgeon into the case to operate and assists in the operating by doing what he is directed by the surgeon to do, it has been held that he is not hable for negligence in the operation, in the absence of negligence in recommending the surgeon or on his own part in assisting him * * *

"It is well settled that, generally speaking, a physician who merely administers an anæsthetic to a patient who is operated on by another is not liable for the negligence of the operating surgeon"

erence Committees of the House of Delegates, as follows:	Chairmen from New York StateNone Other section officers 7
Dr. N. B. Van Etten, Chairman, on the reports	Number of Sessions of the Sections. 47
of Trustees and Secretary.	Number of papers presented at the
Dr. A. J. Bedell, Chairman, on Medical	sessions 284
Economics.	Number of papers presented by New
Dr. W. H. Ross, on Medical Education.	York State men
Dr. Grant C. Madill, on Hygiene and Public	From New York City 39
Health.	From Up-State 5
Dr. J. N. Vander Veer, on Reports of Officers.	Number of discussors listed from
The representation of New York State on the	New York State 33
scientific programs was as follows:	From New York City 26
Number of sections16	From Up-State 7
	* · · · · · · · · · · · · · · · · · · ·

DISTRICT BRANCH MEETINGS

The schedule for the annual meetings of the District Branches this autumn is now completed. The chronological order of their occurrence follows:

September 5-Third-Mountain House, Catskill.

September 19-20—Fourth—Malone. September 21—Seventh—Rochester. September 28—Fifth—Oswego. October 5—Eighth—Niagara Falls.

October 11—First—Grasslands Hospital, Val-

October 18-Sixth-Norwich.

November 16—Second. Not yet decided.

The proposed programs, as outlined at the executive conferences which have recently been completed, are the most promising that have been made in years. As these programs develop, their details will appear in the Journal.

Joseph S. Lawrence, Executive Officer.

ONTARIO COUNTY

The April Bulletin of the Ontario County Medical Society contains the following information regarding the second quarterly meeting of the Society.

The meeting was held on April 11, at the Clifton Springs Sanitarium, with president H. M. Smith in the chair, and forty members and five

guests present.

Dr. Ĉ. W. Grove of Geneva, Chairman of the County Committee to study the report of the Committee on the cost of medical care, gave a report of which the following is an abstract.

"The committee has endeavored to obtain a cross section opinion of the membership of the

allied professions, and of the lay public.

"Our inquiry has found very little, if any,

interest on the part of the lay public.

"It appears as the cross section opinion of the medical and allied personnel, that the practice of medicine and allied callings should remain in complete control of the professions interested.

"If at any time any type of sick insurance should appear, such insurance must be controlled, directed and managed by the professions interested and should never be permitted to be in any manner directed, controlled, or managed by lay or political organizations or persons.

or political organizations or persons.

"It is felt that medical care, in its entirety, is more than a commodity service and that it is never a machine type of service, but that it is a

service entirely peculiar to itself, which allied medical lines must provide without interference or hindrance for the benefit of the sick and suffering.

"Department store types of medical services will ever be unsuccessful and impossible as each patient and each potential patient will ever be a law unto himself. It would be unjust and unfair that the individual be denied the right to choose his own physician.

"With a metered medical service it is well known that a decided minimum service is delivered with the attendant loss of morale and mutual respects. It would appear that the plan does not fit into the life of this country.

"Experience, of late, well demonstrates that the public is manifesting decided signs of being most wary of accepting further that their private and intimate affairs be paternally directed and controlled by governmental or semi-political agencies.

"It is suggested that lessening or limiting the elaborate flattery and attendant expense that has developed in some and in too many hospitalizations and sick room care would materially lessen the costs of medical care. Needed and well chosen laboratory aids only should be used.

It was moved by Dr. Grove that the society express its appreciation of the work of Dr. Eise-

line, its secretary for the past 36 years, and furthermore, that the society remit his dues henceforth. The motion was carried by unanimous vote.

After a social dinner the following program

was presented:

1. Diseases of the Thyroid, Dr. Adrian S.

2. The Surgical Treatment of Prostatic Hypertrophy, Dr. W. C. Eikner,

3. Hormone Tests for Pregnancy, Dr. W. S. Thomas.

SUFFOLK COUNTY

The regular quarterly meeting of the Suffolk County Medical Society was held in the Irving House, Southampton, April 27, 1933, with 63 members present, and the President, Dr. L. C. Garbin, presiding. Dr. A. C. Martin. President of the Nassau County Medical Society, was present as a guest.

The following new members were elected:

Dr. Bertram Gottlieb, Huntington

Dr. Henry Greenberg, Lindenhurst

Dr. Olive Wheaton, Huntington

Dr. Donald Carmichael, Kings Park

The principal business of the day was the consideration of the Economic Committee, Dr. W. H. Ross, Chairman. The following recommendations of the Committee were adopted:

1. That the Economic Committee be given authority to effect agreements with the Com-missioner of Public Welfare and with the five public hospitals, making whatever compromise is necessary, subject to the approval of the Comitia Minora.

2. That the Economic Committee be increased to five members, one for each of the public hospital districts-Southside, Huntington, Mather, Southampton, and Eastern District—and given power to increase its number by one or more in each hospital district to act as sub-committees.

3. That the Economic Committee be given power to arrange with the Commissioner of Public Welfare a modification of the fee list

adopted in 1931.

4. That the Economic Committee be given authority to make decisions in all matters of disagreement regarding the medical administration of public welfare submitted to it by the Public Welfare Commissioner; and, that when no regulations exist as a guide that it can be instructed to apply the rule of common

5. The question has often been asked, "Shall

the specialist accepting cases under the same kind of authorization as that given to other physicians be entitled to charge the fee of a specialist or a consultant for his ealls or shall he charge the fees of the family physician?" The Committee offers the following recommendation:

That the specialist accepting cases which eome to him directly shall charge the fec of the general practitioner; and the fee of the specialist or consultant for only those calls, consultations or operations which are referred to him by the general practitioner because of his superior skill, providing that authorization is obtained from the Welfare Commissioner

for each consultation or operation.

6. The Committee has studied the plan of compensation arbitration as now in operation by the New York County Medical Society. It has considered the results in six hundred Most of the controversies between physicians and the carriers have been satisfactorily disposed of by the arbitration method. One member of the committee acted in one case as a member of the arbitration board recently in New York.

As a result of the Committee's experience and study it recommends to the County Society that a Committee of Arbitration be established, consisting of one representative of the County Society and one that the insurance carriers association be invited to appoint, under the chairmanship of the President or other member if the Society so chooses for the purpose of giving this method a trial regarding payments for services, "lifting" of cases, and other differences of opinion.

The Scientific Program was as follows:

 Obstetrics, by Dr. Royal C. Van Etten. New York.

2. Office Treatment of Orthopedic Cases, by Dr. D. E. McKenna, Brooklyn. E. P. KOLB, Sccretary.

DELAWARE COUNTY

The mid-year meeting of the Delaware County Medical Society was held in the parlors of the Presbyterian Church at Downsville, with Dr. R. Davidson of Hancock in the chair and twenty physicians present. The program began with a banquet served by the ladies of the church.

The guest speaker was Dr. Louis C Kress of Buffalo, Assistant Director, Division of Cancer Control of the State Department of Health, whose subject was "Five-Year Cures in Cancer," illustrated with lantern slides.

W. M. THOMSON, Secretary

DUTCHESS-PUTNAM COUNTY

A regular meeting of the Dutchess-Putnam Medical Society was held Wednesday, June 7, 1933, at the Harlem Valley State Hospital, Wingdale, N. Y., with 51 members present. There was a golf tournament in the afternoon and a ball game at 6.30 p.m. Dinner was served at eight o'clock, after which the meeting was called to order by the President, Dr. S. E. Appel at nine o'clock.

Dr. J. T. Harrington presented the following report of the Economic Committee concerning the formation of an arbitration board. It was voted that the recommendation of the

committee be accepted.

"The Economics Committee of the Dutchess-Putnam Medical Society makes the following report with regard to the formation of an Arbitration Committee for disputes between the insurance companies and the doctors about compensation cases.

"Two of the members of your committee attended a meeting of the New York County Arbitration Committee in New York on the 25th of May and had an extended discussion with Dr. Morris Rosenthal, the chairman of

the committee.

"At the meeting of the Economics Committee held on June 5th, it was decided to report to the Society (1) that the Economics Committee favors the formation of an arbi-

tration board in this area, (2) the committee feels that the Dutchess-Putnam Medical Society is perhaps not large enough and the amount of work which would naturally come before the arbitration committee in these two counties is not sufficient to warrant the formation of a committee in the Dutchess-Putnam Medical Society, so that it suggests (3) that the Medical Societies of the Counties of Ulster, Orange and Columbia be communicated with, with the idea that an arbitration committee may be formed in all of this area. Further, your committee suggests that the Medical Society of the State of New York be advised that it is the sense of the Dutchess-Putnam Medical Society that the matter of arbitration in the settlement of disputes between insurance carriers and doctors is a matter of sufficient importance to be taken up by the State Society with a view toward districting the entire state into areas where arbitration boards may perform satisfactorily."

There was considerable discussion on the subject of insurance for hospital care, and a motion was made endorsing the general plan of hospital insurance. The consensus of opinion was that the project was too new to be judged fairly at this time.

H. P. CARPENTER, Secretary.

FRANKLIN COUNTY

The regular semi-annual meeting of the Medical Society of the County of Franklin was held in Saranac Lake June 9, 1933, with the President, Dr. J. W. Kissane, in the chairand twenty members present.

The following nominations for officers for 1934 were submitted and unanimously ap-

proved:

For President: Dr. G. C. de Grandpre.

For Vice President: Dr. R. G. Perkins.

For Secretary-Treasurer: Dr. G. F. Zimmerman.

For Censor: Dr. W. W. Woodruff.

Dr. William Spencer Schwartz was elected to membership.

The fee bill for the treatment of County and town cases was discussed at length, and

the following resolution was adopted:

Resolved, that the doctors of Franklin County Medical Society adhere to the fee schedule of July 1, 1931, except that a reduction of twenty-five per cent be accepted in each item during the period of the present depression.

Dr. C. H. Van Dyke, of Malone, discussed

the Venereal Clinics held in Malone, and notified the meeting that the Board of Supervisors was unwilling to appropriate the money necessary for their continuance. The sentiment of those who discussed the clinics was that they were in an experimental stage and should be continued in Malone in order to determine their need and value.

Dr. C. C. Trembley of Saranac Lake, delegate to the New York State meeting, gave an oral report of the principal transactions of the

State Society,

The following scientific session papers were read:

- 1. "Some Aspects of Ovarian Dysfunction," by Dr. J. R. Goodall, Montreal, Canada. This was a learned paper showing some pioneer work in Endocrinology and predicting results that can be expected from its further development.
- 2. "Lumbar and Sacral Pain," by Dr. Edward K. Cravener, Schenectady, illustrated with moving pictures.

G. F. Zimmerman, Secretary.



THE DAILY PRESS



FOURTH OF JULY FATALITIES

The Metropolitan dailies of July fifth and sixth, have followed their usual custom of reporting the number of deaths which may be attributed to Fourth of July celebrations. The New York Times of July 5 says that only four deaths due to fireworks occurred in the United States, while the New York Sun said seven.

The Sun gave 185 as the number of lives lost in the entire country by accidents of all kinds, the figures for previous years being—

Year	Deaths
1928	205
1929	159
1930	178
1931	483
1932	243
1933	185

The deaths from important causes on Fourth of July, 1933, as given by the Associated Press, quoted in the New York Sun, were:

Automobiles	82
Drownings	.58
Drownings Other accidents	38

Commenting on the Fourth of July fatalities

the New York Herald Tribune of July 6, says:-

"There were enough firecrackers in town on Tuesday to preserve a vestige of the "old-fashioned" Fourth, enough explosives to send 670 persons to hospitals to be treated for burns. Luckily, none of the accidents was fatal. Compared with the old excesses of celebration, the holiday in New York and elsewhere could fairly be called safe and sane. Early reports noted only seven deaths from fireworks in the whole country. Thirty years or so ago they were numbered by the hundred.

The campaign for moderation undoubtedly has saved many lives—a clear gain to offset the loss, which not a few oldtimers still regret, of the robust spirit of the traditional Fourth. How well the reform has succeeded may be inferred from the 1933 compilation of 'Accident Facts' by the National Safety Council. In sixty-two pages of statistics there is no specific mention of Fourth of July accidents; apparently they are absorbed as minor details under other headings. The leading agent of destruction on the Fourth is no longer fireworks of any sort. It is the automobile, which presents a problem of safety and sanity, as yet unsolved, for every day in the year."

FREE DISPENSARY SERVICE

The free medical service given by dispensaries and the outpatient departments of hospitals has increased enormously during the last few years, as compared with the visits made during the prosperous years before the financial slimp of 1929. The New York Times of July 5 comments on the reports as follows:

'Use of out-patient clinics and dispensaries has increased in the last six years by nearly one-third in voluntary and municipal hospitals of the city and has more than doubled in the city hospitals, the United Hospital Fund reported yesterday. These figures were based on a study just completed by the Hospital Information and Service Bureau of the fund.

"The study showed that 1,500,000 patients now make more than 6,680,000 visits to the clinics and dispensaries annually, and that the hospitals spend about 14 per cent of their ex-

penditures on out-patients services and 86 per cent on patients in the institutions proper. A special study in forty-eight of the fund hospitals which had 3,700,000 visits last year, showed a deficit of \$1,283,621 in the elinic services.

"In 1927 there were 4,183,933 dispensary visits to all the hospitals of the city. The figure rose every year, passing the 6,000,000 mark in 1931 and reaching 6,688,215 last year. In the fifty-six voluntary hospitals comprising the United Hospital Fund the figures rose from 2,821,939 to 4,017,750 last year. In municipal hospitals the increase was from 842,391 in 1927 to 2,035,372 in 1932.

"The special study of forty-eight institutions with comparable figures for out-patient departments showed one-third of the visits to be entirely free."

ULTRA-VIOLET COLOR PERCEPTION IN BEES

Man's senses are his conscious responses to influences acting on his nervous system. His eyes respond to light whose wave lengths range between the red and the violet. There would not seem to be any inherent reason to prevent the development of eyes which would respond to the ultra violet rays, and the infrared, as certain bees seem to have done. The New York Times of July 3 carries a news item describing the experiments of Dr. Frank E. Lutz of the American Museum of Natural History, New York City, showing the actual response of certain kinds of bees to colors invisible to human eyes. The Times describes the experiments of Dr. Lutz as follows:

"Dr. Lutz made his experiments with the 'stingless bee' (trigona cressoni paratigma), a tropical species distinct from the common honey-bee but with similar visual apparatus. A bee's eye, it may be noted, is radically different from a human being's eye. It has no rods and cones and is far simpler in its elements.

"Dr. Lutz found a colony of these bees nest-

ing in a wall of the laboratory of the Institute for Research in Tropical America, which is on the island. A small hole in the outside wall was the bees' entrance. Dr. Lutz prepared cards on which were painted patterns in black and white, some in ultra-violet white and some a white that does not reflect ultra-violet light. Each card was pierced with a hole the size of the opening to the bees' nest. By placing a card with a certain pattern over the entrance to the nest Dr. Lutz established an association in the bees' 'minds' between that pattern and the entrance. When the patterns were shifted and the pattern that had marked the hole was placed nearby and another pattern placed at the entrance, most of the bees tried to get in through the pattern that had covered the hole and ignored the new pattern. The fact that a few of the bees did not fly to the old pattern was accounted for by the fact that new bees were hatching out while the experiment was in progress and they, of course, did not know the pattern."

BALDNESS

Baldness is the joke of humorists and the despair of scientists, but is of alluring interest to historians and statistitians as is shown in the following editorial from the New York Herald Tribune of July 3.

"In its annual conclave at Chicago the American Association for the Advancement of Science has found time from the discussion of more esoteric matters to consider the relation between the state of one's hair and that of his bank balance. One of the delegates announced that there seems to exist a close connection between income and capillary growth, evidently due to the influence of nervous anxiety on the roots of the hair. According to the new hypothesis of the scientists, a happy age is apparently a hirsute age, and a harried generation is a hairless one.

"Hitherto we have looked on baldness as a purely physical affair without mental affiliations. True, we have noticed that the Indians were never troubled with baldness, though once given to inflicting it on those whites who fell into their hands. If the locks of every Indian from Rowhatan to Sitting Bull seemed as shaggy as a buffalo's head, we ascribed it to

their outdoor life rather than to their lack of cerebration and worry. If the brunette peoples about the Mediterranean seemed less given to falling hair than the blond Nordics, we laid it to the sun.

"If we lift the hats of representative figures in history, we find little basis for generalizing. Socrates and Cicero, Shakespeare and Voltaire, Bismarck and Lenin were bald, though some of them found compensation in a beard. The fact that Caesar was bald and in debt for 25,-000,000 sesterces when he joined the triumvirate was probably a case of cause and effect. Evidence in the bewigged eighteenth century is difficult to gather, but when pates issued again with the French Revolution we find the heads of Benjamin Franklin and John Quincy Adams gleaming in all their republican nudity. In our own time both Mussolini and Mayor O'Brien have shining domes. On the other hand, among the well crested have been Pericles and Plato, Mirabeau and Andrew Jackson, the lion-maned Goethe and Beethoven, and Dumas and Ibsen. So are Trotzky and Hitler. Herriot and MacDonald, however their coiffures may differ."



BOOK REVIEWS



DISEASES OF THE LYE B, HOFRAT LRYST FUCHS, M D
The 15th German Edition of the Lehrbuch der Augenheilkunde as Revised by Maximilian Salzmann
English Edition authorized translation by E V L
Brown, M D Ociano of 641 pages, illustrated delphia, J B Lippineott Company, [c. 1933] Cloth, \$\frac{9}{7}\$ 00

The tenth English edition of Fuchs is ready and reminds us all of the passing of the master and his trans lator The German edition is in the capable hands of Silzmann and Dr E V L. Brown succeeds the lamented Duane. The names on the title page and prefaces are not the only new features of the book. The book is now Fuchs Diseases of the Eye and there are about 600 pages of printed matter. This is a reduction of some 500 pages obtained by eliminating chapters on operations, diagnostic methods and eye museles. Some will like this and some will not but there are conditions now operating that even the publishers must consider velcome addition to the book is a group of 40 colored plates from paintings by Prof Salzmann showing typical and important fundus conditions. It will be difficult to find anywhere equally good material of this kind The book has not a superfluous word in it but on the contrary, there is no lack of clarity or attention to im portant detail. There is but one criticism that can be made and that relates to the slit-lamp as a diagnostic It would seem that more attention should apparatus be given to the role this instrument has assumed in diag nosis We predict that Dr Brown will supplement this fine work with the necessary detail of this phase of diagnosis just as Dr Durne filled out the space allotted to eye muscles

RALPH I LLOYD

OFFICE SURGERY BY FERWICK BEERMAN, M D Octavo of 402 pages illustrated Philadelphia, J B Lippin cott Company [c 1932] Fabrikoid, \$500 (Every day Practice Series)

One rarely reads books so admirably corresponding to their titles and intended purpose as the one under review. Three hundred and eighty six pages of sound information and advice put into succinet and economically worded phrases. The author discusses, in a systematic manner, office anesthesia wounds mijuries, fractures, tumors and surgical diseases suitable for office treatment. Wherever hospitalization is preferable to ambulatory treatment this is stressed. Office Surgery' is the volume of choice in the opinion of the reviewer for the desk of the general practitioner and the young surgeon.

George Werd

THE DIFFERENTIAL DIAGNOSIS OF ENDOCRINE DISORDERS BY ALLAN WINTER ROWE, M D Octave of 220 pages Baltimore The Williams & Wilkins Company, 1932 Cloth \$400

This monograph is a detailed report of twenty years of study of over 5000 subjects who were investigated by the following method. A complete medical history, physical examination special examination and the performance of an eliborate series of routine laboratory tests.

The glandular disorders discussed are those of the putu itary, thyroid gonads and adrenals The results of the examinations are grouped under clinical and laboratory findings and form a valuable addition to our present knowledge on the subject

In view of the prominence which has recently been

accorded to laboratory tests as bases of endocrine diagnosis, it is interesting to note the author's limitations on the interpretation of these tests

the interpretation of these tests

1 No single test can be regarded as significant unless it be checked and controlled by a number of other inde

pendent observations

'2 No single findings suggestive of an endocrine discase should be adduced to support such a diagnosis until all possible non endocrine causes have been ruled out

"3 Careful clinical observation is as important as are laboratory tests. The latter furnish a basis of tested facts for the interpretation of the subjective evidence of the former."

This book is of value to every student of endocrinology and is especially recommended to those who desire to become better acquainted with the present accepted methods of endocrine investigation which in a large measure are based upon the pioneer efforts of Rowe and his co workers in the laboratory Murray B Gordon

The Sex Technique in Marriage. By Isabel Eastle Hutton, MD 12mo of 160 pages. New York, Emerson Books, Inc., [e 1932] Cloth, \$2.00

Here is a small volume of practical value that is easy to read and simple in its presentation of a subject usually considered difficult and often made complicated. It is medically sound and the physician will find it not only safe to recommend to his clientele but worth while read ing himself.

Possibilities and Need for Development of Lecal Medicine in the United States Prepared by Oscar T Schultz, M D Octavo of 135 pages Washington D C Published by the National Research Council of the National Academy of Sciences 1932 Paper, \$150 (Bulletin of the National Research Council, No 87)

This work fully covers the field of the different methods of investigation of the problems of eriminal legal-medicine in the different states of the United States, England and Scotland, and clearly exposes the faults in the different methods by which such problems are handled

His plea for the establishment of fully equipped institutes connected with universities and manned by competent workers for the investigation of such problems as
is done in certain European countries is ideal, but as
he suggests the appointments of the investigators in such
institutes must be free from political influence Whether
it is possible to after our fundamental principles of criminal jurisprudence and prevent the taint of influence, is
a grave question.

ARTHUS C BRUSH

Neue Genanken uber das Blur-und Mieren-Problem By Kurr Bergel. Octavo of 22 pages illus trated Berlin Deutsches Verlagshaus Bong & Com pany [c 1933] Paper, 3 Marks (Irrtumer der Medizin 1)

This monograph embodies certain new ideas relating to the pathogenesis of disease. The author considers the blood from the standpoint of a regulator of pressure, and not as a nutritive agent disease as a disturb ance of pressure the true significance of blood pressure, the mechanics of the kidney, renal disease from the intestine and certain other interesting conceptions. The reading of this pamphlet is a rather novel experience

M LEDERER



OUR NEIGHBORS



HOSPITAL INSURANCE IN WEST VIRGINIA

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"In the southern half of West Virginia, where we have a large number of coal mines in small communities, there has been a system of list hospital practice for many years. The employer takes a check-off from each employee's wages of from one to two and a half dollars per month. Contracts are made with privately owned hospitals and their staffs, whereby medical, surgical, and hospital service is given to the employees and to their families in cases deemed suitable for hospital attention. The hospital may be from three to thirty miles from the industry. A physician is usually employed at the industry to take care of minor illnesses and accidents. He receives a part of the check-off.

"One of the outstanding objections to the scheme is that the employee pays for the care of his industrial accident through the check-off; and the employer is relieved of this obligation, which should be placed on the employer by the State compensation department. Of course, there are many other disadvantages and abuses. It is to the interest of the owners of the private hospitals to get the patients out just as soon as they can. Furthermore, the right of choice of physician and hospital is denied to the employee, unless he chooses to pay his way elsewhere."

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"The Committee recognizes a social movement toward health insurance and believes that a negative position should not be taken by the medical profession, but does not yet find a sufficient crystallization of opinion among physicians regarding the extent of the economic necessity for health insurance to justify the recommendation of any plan of action. Unquestionably there is a certain percentage of our population that must have free medical care; there is another percentage that cannot afford to buy full medical care on the strict business basis of paying production cost plus a reasonable profit; and there is a third large percentage that seeks some plan for getting full medical care for little or no cost.

(Continued on page 902-adv. xii)

0 26

0 16

Relative Values of Carbohydrates

New Findings Confirm Old Truths

Recent scientific investigations in rats (tabulated at the right) are in accord with many years of clinical observations on babies, as shown by the following excerpts from authoritative medical literature reflecting the consensus of three decades of pediatric experience.

CHART OF CARBOHY	DRATE HY	DROLYSIS1
MILK SUGAR GROUP Lactose** (Milk Sugar)	MALT SUC	AR GROU
	Amylodextrin***	
Dextrose* Galactose*	Erythro- descrip***	Achro- dextrin**
	Maltose**	
CANE SUGAR GROUP Saccharose** (Cane Sugar) Dextrose* Lounost	uer of malto troc, which estimilation ucts from	Dextrose ne end proc se is all des means quicke than end proc other carbo rates
*Monosaccharida ** Disac	chande ***1	

Maltore splits into two molecules of dextrose. Sucrose and lactose split into one molecule of dextrose, and one of levulose or galactose respectively. It is no doubt due to the simpler structure of maltose that it is more readily absorbed than other sugars. It must also be considered that after assimilation the levulose of sucrose and the galactose of lactose must undergo conversion into dextrose, which is the only form in which sugar is present in the blood. It is reasonable to suppose that this conversion requires an expenditure of metabolic energy not required when carbohydrate is absorbed entirely in the form of dextrose.

3Morse, J L & Talbot, F B Boston Med & Surg Jt . 159 852.

OF VARIOUS CARBOHYDRATES 1.50 1 MALTOSE. 2 DEXTRIN + MALTOSE 3 Glucose + dextrin.... .32 1 32 4 Glucose + suerose. ... 1 04 5 Glucose ... 0.98 6 Sucrose + maltose 0 98 7 Fruetose + glucose. - 8 Sucrose + dextrin 0 76 0 76 9 Sucrose. 05 10 Fructose.

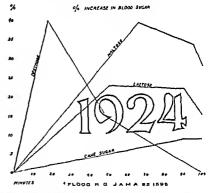
RELATIVE ASSIMILATION VALUES

These authors have also taked 'Maltose fructose glucose starch and dextru fead infutritive value followed by galactose, mannose arabinose sylose, lactose sucruse and glycogen 'B. H. Arryama and K. Takahasi' Biochem Z. 216:209 (1929) and 2J. Agr. Chem. Soc. Japan 5, 674 (1929)

11 Glucose + larto

12 Lactose

RATE OF SUGAR ABSORPTION IN NEWBORN



MALTOSE OR LACTOSE IN INFANT FEEDING'

Answer—The superiority of one form of carbohydrate over another in artificial feeding of infants has been much discussed during recent years. It is generally accepted that one is mile.

amount it is necessary to add carbohydrates in some form Admitting that lactose is the super symphoth in human milk, it does not follow that it is the hugar best tolerated in another medium, such as cow's fulk it is generally believed that lactose is more likative, thin sucrose—that it must be fed with a certain another of caution, as fermentative upsets are likely to follow it, amounts approximating that found in human milk are fed There is cause for disagreement among climicans, as it is important to consider the other food elements, i.e., the amounts of fat and protein fed as well as the medium in which they are fed For example, when lactic each milk is used, more added carbohydrate seems to be tolerated than when sweet milk mixtures are fed Sucrose has the advantage of being much cheaper and is always available Evidence has not been presented that it should

not be used in infant feeding. With its general use in large infant welfare clinics where supervisions a matter of routine, there is less to be said against it as far as elm scal results are concerned. The complaint that it is too sweet is not often encountered when the usual amounts are fed. The dextrin malitose preparations possess certain advantages. When they are added to cow's milk

destrons the maltose and then to destrose, fermentative and ressessant less likely to develop. Those preparations confaming relatively more maltose are more lexative than those containing a higher percentage of destring unless alkali salts such as potassium salts are added). It is common experience clinically that larger amounts of destrin maltose preparations may be fed as compared with the simple sugars. Obviously, when there is a lessened sugar tolerance such as occurs in many diges tive disturbances, destrin-maltose compounds may be used to advantage. *Squeries and Minor Notes, J. A. M. A. 88 266

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(Continued on page 902-adv. xii)

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(Continued from page 902-adv. xii)

"Recently two well-dressed men, driving a fine, new car, stopped at a near-by house. One of the men went in, introduced himself as Dr. Mayberry, a Vicksburg oculist, and asked if anyone was m need of his services. The elderly housewife ad mitted that her eyes were none too good, and submitted to examination, when it was discovered that there was an unusual condition in one of the eyes, the nature of which was unknown to Dr Mayberry. However, most fortunately, the other man in the car was a celebrated Kansas City surgeon, Dr. W. I. Handlow, and at Dr. Mayberry's suggestion, he was invited to examine the eye.

"What might have been expected, happened Dr. Handlow, who, among other things showed the ring of a thirty-second degree Mason as prov of his integrity, diagnosed a "cancerette" behind the eyeball. He had seen a similar case two days before in Vicksburg, for treating which he had been paid \$1,700.00. There are only four place in the United States where these are properly handled: in Atlanta, in Washington, at the May Clinic and—of course—in Kansas City. Else where such conditions call for enucleation of the eye, but at these four places radium is used Luckily Dr. Handlow had a \$5,000 bottle of radium in his pocket, and as the poor old lady was in immediate danger of total paralysis unless the "cancerette" were removed, he was per suaded to take it out, charging only for the radiun used. This he proceeded to do by putting four drops of the radium into the eye at minute intervals. Usually one or two drops are enough, but this was an extremely tough case. Finally he picked the "cancerette" out with a pair of forceps, showed it to the old lady's husband—whose eyes are none too good, explained that it was deadly poison and would kill anything that ate it, and consigned it to the flames. The old lady doesn't see any better than before, but she is rid of the deadly "cancerette" at a cost of only \$380.00, the price of the four drops of radium But the bank holiday proved a sad thing for the eminent Kansas City practitioner, for the husband got his second sight next day and stopped pay ment on the check."

MEDICAL LIEN LAW FOR ARKANSAS

The April number of the Journal of the Arkansas Medical Society contains the following description of the medical lien law that was recently passed by the Legislature of the State:

"To enable physicians, nurses, and hospital to obtain on their own initiative security fo

(Continued on page 905-adv. xv)

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(Continued from page 904-adv ve)

the payment of bills due from patients treated because of injuries suffered through the fault of some other person, the recent Arkansas Legislature enacted into law through which a physician, nurse or hospital who renders service to such a patient can establish a hen for the value of the services rendered on any claim the patient may have against the person by whom he has been injured. This law was known as Senate Bill 361, introduced by Senator Lawrence E. Mitchell of Prescott, supported by our legal advisor, Hon Peter Deisch, and the committee on Medical Legislation, headed by Dr Val Parmley.

"The bill has been signed by Governor Futtell and is now known as Act 130.

"The title of the new law is as follows:

"A Bill for An Act To Be Entitled: An Act Concerning Liens for Money Due Physicians, Dentists, Nurses, and Hospitals, for Services Rendered for the Relief and Cure of Injuries Caused by the Fault or Neglect of Other Persons, on Claims and Rights of Actions Accruing to Such Injured Persons by Reason of Such Injuries"

The text of the law fills four pages of the Journal.

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"CONGESTIVE HEART FAILURE"

Before the Cincinnati Heart Council, Dr. B. A. Schwartz reported on a series of 37 cases of congestive heart failure treated with digitalis and Metrazol (*Ohio State Med. Jr.*, May, 1933, pp. 308-310).

The author made use of the circulatory stimulant Metrazol in place of, or in conjunction with, digitalis in a selected group of 37 cases of chronic congestive heart failure in which digitalis did not prove effective or where the patient's gastro-intestinal or even nervous system was partially or wholly intolerant to this drug.

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Case histories are given and many references made to reports from cardiologists and a comprehensive bibliography is included.

In conclusion Dr. Schwartz writes:
"Our clinical experience with digitalis and Metrazol in this group of cardiac patients with congestive failure, leads us to conclude that there is a definite synergistic relation between the two stimulants. In those cases where normal doses of digitalis had been found to be toxic or ineffective, smaller doses of this drug in conjunction with Metrazol often proved of value in obtaining the desired results. Where digitalis is not tolerated at all, Metrazol alone has

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NEW YORK STATE IOURNAL of MEDICINE

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DIVERTICULOSIS OF THE ALIMENTARY AND URINARY TRACTS* By EDWIN BEER, M.D., NEW YORK, N.Y.

5 one surveys the literature of medicine, one cannot fail to be impressed with the need of the closest cooperation between its many sister sciences The study of pathological anatomy has led to many chinical advances, and, on the other hand, the observations in the clinic have stimulated pathological and chemical researches If one is optimistically inclined, one cannot fail to conclude that many of the pathological conditions that were not observed either in the clinic or in the autopsy room, really existed with about the same frequency as we observe them today, but owing to human oversight or error, they were not On the other hand, if one is more inclined to pessinusin, one might conclude that the human race is degenerating, and gradually succumbing to more and to newer pathological manifestations Perhaps there is some truth in both viewpoints Not so long ago ulcer of the duodenum was considered an unusual entity. whereas gastric ulcer was considered much more common Was this due to oversight and to human error in observation? Again, bladder tumors were considered a rare condition at the commencement of this century and now, since the clinician knows how to recognize them, their fre quency is quite appulling. Perhaps in no group of diseases is this apparent increase more strik ing than in the subject of tonight's presentation Prior to the commencement of this century, di verticula of the hollow viscera exclusive of the verticula such as Zenker's and Meckel's diverticula of the colon and of the urinary bladder were practically unknown in the clinic, and only rarely reported by the pathologist, even though the diverticulum associated with the name of Meekel had been described in 1671 by Morgagni Such diverticula nowadays are so well known to the average chincian, and naturally to the pathologist that it is with some hesitation that a review of this subject is presented tonight It is difficult to believe that these conditions are new entitiesthat they have increased in numbers so rapidly that now thousands of cases are on record. When I collected all published cases of diverticulltis2

of the sigmoid, etc., in 1904, there were only eighteen clinically observed cases recorded About ten years later when I made a similar reviews of the somewhat analogous conditions in the urinary bladder, there were only nineteen cases recorded in the clinical literature. In the intervening period, the hterature has been almost flooded with additional cases of both intestinal and bladder diverticula, and some clinics have reported series varying from over one hundred cases to over one thousand cases of these interesting conditions cases which have been carefully observed and often treated with great success. I cannot but feel that the optimistic attitude referred to above even though it carries with it a certain amount of cruicism of our predecessors, is justified and that the discrepancy between the incidence of the diserse today and thirty years ago is attributable to the human error factor. It is difficult to explain this discrepancy on the basis of increased incidence of these diseases though the prolongation of life and the great increase in the population may have influenced to some extent the marked increment Newer methods of investigation, new instruments of precision have made the recognition of these pathological conditions possible and the Roentgen ray, above all, has thrown a bright light into this whole field and established with great accuracy the frequency of these curious pathological entities

Diverticula have been observed in all parts of the almentary tract from the pharyne to the rectum is well as in the utmary tract from the urcteropelvic junction to the penile urethra both these systems many interesting and instructive analogies are observed and by a study of these diverticula in both systems a somewhat clearer insight as to their causation is obtained Considerable difference of opinion has been voiced as to the factors that lead to diverticula formation, some authors believing that all, or most are acquired, others that most are con genital, and others again combine the two view points From a study of the anatomy of the diverticula and the recognition of all the walls of the organ from which it is derived ie, mucosa submucosa, and muscularis, one can fairly con-

^{*} Read as the Muetter Lecture Lef re the College of Physicians I hild left in Decenter 2 1931

clude that such a diverticulum is of the congenital type, corresponding as it does in structure with Meckel's diverticulum and those found in fœtuses or in early life. Occasionally adjacent disease process may draw on one of the hollow viscera and produce by traction a diverticulum having these same anatomical characteristics and though it is evidently acquired, its structure may closely simulate the congenital type. other hand, many diverticula, in fact most of those that I have seen, have no such regularly disposed layers as the definitely congenital; they are composed of mucosa, more or less submucosa, and here and there smooth muscle bundles. Are these to be considered congenital diverticula in which atrophic changes have taken place as a result of the pressure changes and subsequent stretching of these pouches or are they all acquired? I believe many, especially in the urinary bladder, are to be interpreted in the former sense and others, perhaps the great majority in both the alimentary and the urinary tracts, in the latter sense.

The analogy between the small diverticula that develop as multiple herniations of the mucosa between the hypertrophied and separated muscle bundles in the bladder and those that occur in the colon, especially in the sigmoid, is most striking. They both occur in organs that act as reservoirs, in which pressure changes are frequent, whether urine, feces or gas, produce these changes. They develop usually in adult life in patients who have obstructive conditions in the urethra or in patients who have some intestinal disturbance, whether flatulence or constipation, associated with a possible hypertonicity of the anal sphincter. In both systems they are hernial protrusions of the mucosa with little or no evidence of muscle tissue in their walls. Whether the vascular structures that perforate the walls make for weakness where herniation occurs has not been proven, even though such vessels are often adjacent to the diverticula. Perhaps they lead the way after the weakness in the connective tissue or muscular tissue allow of the inception of the process. Congestive cardiac disease and portal obstruction do not seem to predispose to their development as would be expected if the weakness were primarily where the vessels perforated the involved hollow viscera. This type of diverticula formation has all the earmarks of an acquired process. The same process in the esophagus seems to produce the pulsion diverticula between the inferior constrictor muscle and the cricopharyngeus at the upper end of the esoph-Here the trauma of hasty deglutition (bolting of food) seems to force the weak point and gradually a pouch is acquired which presents the definite picture of a diverticulum.

Between the rather definitely congenital and acquired diverticula there is a large group of diverticula, particularly in the urinary bladder,

which are difficult to classify. The same applies to those diverticula in the stomach, duodenum and small intestine, as well as in the ureter and urethra, in which the pouch formation is not due to giving away of the wall due to inflammatory disease, as in ulcers or adjacent to ulcers. In the urinary bladders we find with some frequency single and multiple diverticula, which are usually much larger than the mucosal herniations referred to above which bear such similarity to the sigmoid diverticula, and many of these show but scanty evidence of smooth muscle tissue in their walls. They are at times seen in early life (I have excised several such diverticula in young children), but may occur or be found at all ages and are frequently associated with obstruction at the neck of the bladder, either contractures or prostatic enlargement. In the children that have had this condition, no evidence of obstruction was detected by me. These diverticula may grow to large size; one recently recorded held five litres of urine.4 It must be apparent that this group is totally different from the group previously described which resembles so closely the diverticula of the colon, and the question is still under discussion as to whether they owe their origin to a congenital fault or not. In view of the fact that they arise so regularly close to the normal ureter opening, in some rare cases the ureter empties into the pouch quite a distance from the lumen of the bladder, one cannot but feel that there is a congenital "anlage" for their development, whether in the form of an extra ureter "bud" or otherwise. The increase in size would gradually develop as a result of the pressure changes in the bladder and what may have been imperceptible at birth or only a dimple, gradually grows in size, so that it can be recognized in childhood or adult life as a sizeable diverticulum. A similar embryologic explanation has been offered for most of the diverticula of the small intestine, but here owing to less pressure changes the large pouches seen in the bladder do not develop.

All the above three types, the congenital, the acquired, and the congenital that have evolved acquired characteristics, are fairly considered true diverticula, as opposed to those false diverticula which result from traction from without, from disease in the organ involved, or from adjacent disease or trauma which perforate the organ that develops a diverticulum. Abscesses may extend into a hollow viscus and communicate with same, producing in this way an artificial pouch. Trauma, such as operative repairs of vesicovaginal fistulæ, may artificially produce a similar pouch with all the signs, symptoms, and possible complications that arise in any true diverticulum.

The most interesting diverticula, as well as those most frequently encountered in our clinical work, are: those occurring in the pharyngo-esophageal area; those occurring in the intestine, especially in the colon; and those occurring in the

urmary bladder In the stomach, small intestine (excluding Meckel's diverticulum), rectum, ureter and urethra the condition is apparently somewhat of a rarity, and this is probably not due to the human error factor, as for a number of years the possibility of their occurrence has been in the number of the clinician and adequate search has undoultedly been instituted

All diverticula, irrespective of the organ from which they arise, are prone to similar pathological changes in the course of their development Their growth is unusually slow and only in the esonhagus, duodenum, and biadder do they grow to any size Irrespective of their size, they are exposed to trauma and infection and both these conditions combined may lead to serious compli-Meckel's diverticulum occupies a pecuhar position in this whole group, as, owing to its varying anatomy and adhesions at times it leads to intestinal obstruction, acting as a band or even gets tied into most bizarre knots that lead to obstructive conditions and to gangrene peculiarity of this congenital diverticulum is the finding in its miscosa of typical bleeding peptie ulcers which are eaused by or derived from misplaced gastrie mucous membrane Other peeuharities of this diverticulum are its opening by a narrow or wide channel at the umbilicus other diverticula, except those rare bladder urachal pouches never empty primarily at the navel nor are liable to produce the above intesti-Foreign bodies are hable to nal complications get lodged in these pouches and may lead to perforation with localized or diffuse infection Even without the introduction of foreign bodies, inflammation and ulceration are hable to develop and these in turn lead to more or less extensive destruction of the various walls of the diverticula and to peri diverticulitis and adhesions to adjacent tissues and organs, without or with perforation into such organs In the colon or the bladder, long stagnation may lead to inspissation of the contents of the diverticula or the development of calcult and quite regularly one finds small hard fecal masses in the acquired diverticula of the colon, much less frequently stones in those developing in the urinary bladder result of the chronic irritative process, occasionally neoplisms develop in these pouches and both benign and milignant growths, carcinomata and more rarely sarcomata have been encountered

Undoubtedly the great majority of diverticula do not give clinical evidence of their existence and are recognized only in careful routine examinations. When inflammatory changes set in, they often begin to give symptoms and cause trouble Esophageal diverticula may give symptoms from pressure and Meckel's and duodenal diverticula may also produce symptoms by mechanical interference with the intestinal lumen or by pressure on adjucent ducts. All others become vocal when infection develops which may lead to local symptoms of the pressure of the context of th

toms or at times to reflex symptoms suggestive of gastro duodenal disease

DIVERTICULA OF THE STOMACH

According to recent study the earliest mention of such a diverticulum was by Helmont in Only a few hundred are recorded in the literature and most of them have been recognized during routine roentgenological studies of the stomach and intestines At operation they have been rarely encountered and at autopsy a few Most of the cases have have been recognized Apparently the true diverbeen found in adults ticula are more common at the cardia where they are composed of all the coats of the stomach and are possibly congenital. In the distal part of the stomach, diverticula resulting from ulceration are found, presenting the picture of false diverticula The frequency of the "Niche" formation in ulcer bases is well known and may be the starting point Symptomatof some of these acquired pouches really these diverticula, unless associated with other pathological changes, give rise to little dis-If associated with these changes, which may lead to perforation or abscess formation, surgical therapy may be necessary

Diverticula of the Duodenum, Jejunum and Ileum

These diverticula are more common than those in the stomach, and those in the duodenum have been recognized with increasing frequency since radiographie investigations are routine Case diagnosed eighty-five cases in this way a recent German publication, another series of fifty duodenal diverticula was recognized in this Diverticula in the rest of the small intestime are rarely visualized in this manner. In some diverticula an air bubble has been seen above the opaque barium 8 Faise diverticula also occur in the duodenum secondary to ulceration, and at times between the ulcer and pyloric ring anatomy of these latter pouches, has not been de seribed as far as I know Those occurring in ulcer bases or adjacent to these are similar to the same process in the bases of gastric ulcers cording to recent publications, about fifty cases of diverticula of jejunum and ileum (excluding Meckel's diverticulum) have been noted and the Roentgenographic diagnosis was reported as made in only three cases. This is evidently innecu rate, as a perusal of American literature shows of Whereas in the duodenum these diverticula are usually single, in the lower part of the small in testine they are usually multiple and in one recent case, over three hundred such pouches were re corded There is considerable difficulty in explaining those diverticula that do not develop from ulcer bases Some authors think misplaced panereatic tissue which is occasionally found in their walls suggests that developmental anomalies under he the process, especially below the duodenojejunal junction. Atavistic influences would thus underlie the development of these curious structures. Others believe there is a primary connective tissue weakness which predisposes to the mucosal herniation. In the various parts of the duodenum, diverticula develop more frequently near the entrance of the ducts than in parts one and three and often grow into the head of the pancreas. In the jejunum and ileum they seem to develop almost regularly between the leaves of the mesentery, differing in this way from Meckel's diverticulum, though some have been noted on the convexity of the bowel and pancreatic tissue, or neoplasms have been found in their walls.¹⁰

Symptomatically these diverticula are liable to be quiescent unless inflammatory changes take place in them or a foreign body is caught in them and leads to perforation with abscess formation or to perforation into the peritoneal cavity. duodenal diverticula, reflex gastric symptoms somewhat suggestive of gastroduodenal ulceration Occasionally obstructive are not uncommon. symptoms, with or without jaundice develop. In view of these varied symptoms, a fair number of duodenal diverticula have been operated upon, either by resection or by infolding. Whether any of these operated cases have subsequently recurred, the literature does not make clear, though early control pictures have given no indication of recurrences. In the ileum, similar resections of the pouches have been made, and in a few cases of multiple, extensive diverticulosis of jejunum or ileum, segments of bowel have been resected.

Meckel's Diverticulum

This congenital pouch occurs usually in the last part of the ileum within one yard of the ileocecal Though usually small, about the size of a plum, it may be thirty centimetres in length: Many of its peculiarities have been referred to in the beginning of this paper. Its frequency is much greater than those in other parts of the small intestine being found, according to the statistics of the British Anatomical Society, in two per cent of autopsies. Considering this incidence, it is surprising how rarely it gives rise to symptoms and how infrequently surgical reports of its removal are published. For many years in every so-called interval appendicectomy that I performed, I examined the lower ileum for such a diverticulum and never encountered one. On the other hand, in a similar series of five hundred seven cases, R. M. Harbin¹¹ has found Meckel's diverticulum in seven cases.

The many bizarre pathological pictures produced by this vestigial organ are fairly well known, even though no one has encountered all of them in his own experience. Derived as it is from the omphalemesenteric duct, it may remain open all the way to the navel and produce a mucous membrane sinus either connecting with the

ileum or ending as a blind pouch. tumors of various kinds may develop in the peripheral or proximal end and at times the prolapsing mucosa may present gastric mucosa. If the peripheral end is well closed, it occasionally is represented by a fibrous band which may lead to intestinal obstruction, as loops of gut become engaged under the band thus formed. Even if no such band exists, similar obstructions are caused by the diverticulum itself, especially if it is adherent or twists itself into knots of most surprising pattern. These peculiar gyrations may lead to strangulation and gangrene of the diverticulum itself; in other cases to strangulation and gangrene of other loops. At times it invaginates into the ileum and leads to extensive intussuscep-Repeatedly it has been encountered in tions. hernial sacs. Perforation by foreign bodies which get lodged in the diverticulum is no great rarity, and hemorrhage from ulceration usuany due to misplaced gastric mucosa is being more frequently recognized and reported. Perforation into the bladder is a rarity.

Fortunately the neck of these diverticula is usually wide and their muscular wall is able to keep them fairly empty so that inflammatory changes are uncommon. If their frequency at post mortem is as great as reported by the English Commission and others, it is surprising how rarely one is called upon to treat their intrinsic disease or conditions secondary to their presence.

The diagnosis of Meckel's diverticulum is at best a good guess, as no pathognomonic features are known. As far as I know, radiographic studies have given no conclusive data, which is surprising in view of their frequency.

At operation, ablation or invagination (in small diverticula) have been carried out. In the more complicated cases with other secondary pathology, further surgical measures must be taken as indicated by the findings.

DIVERTICULA OF THE APPENDIX

These diverticula¹³ are rather infrequent and almost always of the acquired type, resembling the mucosal herniations found in other parts of the colon. They are probably secondary to previous attacks of inflammation and naturally predispose to further trouble in this organ. Some of the pouches may lead to retention cysts and simulate mucoceles of the appendix and when they rupture into the free cavity may give rise to the rare entity known as pseudomyxoma of the peritoneum. They are accidental findings at operation or at autopsy and practically impossible to recognize by radiography.

Recently, in connection with a study of cecal diverticula, a review of these structures has been made and emphasis has been placed on the possibility of acquired diverticula developing in the base of an excised appendix.¹⁴ Apparently the

purse string closure of the eccum over the ligated appendix stump predisposes to this type of pouch formation, sometimes following suppuration about the ligated stump and other times even without such suppuration. By crushing the stump and ligating with plain cat gut, which is rapidly absorbed, the purse string suture method will probably but rarely lead to such artificial diverticula formation.

DIVERTICULA OF THE RECTUM

In this portion of the intestinal tract, possibly because of its excellent support and fixation, diverticula seem to be a great rarity. The literature contains very few reports of this condition which may be in part due to the fact that a careful post-mortem examination of the rectum is not regularly made. Inflammatory changes and malignancy have been reported in connection with the few cases recorded and the diagnosis is practically impossible, except after careful dissection of the whole excised rectum.

DIVERTICULA OF THE URETER

In this structure, pouch formation is very rare, apparently only twelve have been recorded in the literature.15 This may be in part due to the difficulty in recognizing these structures by our older retrograde methods. It is just possible that con-tinued use of one of the seven or eight intravenous or oral urographic media will readily demonstrate more of these pouches. Whether these diverticula are congenital or acquired is not known. Obstructive conditions and stones probably lead to some of them, and these seem to be definitely acquired, though in others the structure is identical with that of the ureter, which suggests an embryonic fault, perhaps an undeveloped branch of a bifid ureter. Apparently they occur anywhere from the ureteropelvic junction to the insertion in the bladder and if they are responsible for symptoms and protracted infection, operative excision or more radical procedures will be necessary.

DIVERTICULA OF THE URETHRA

In the urethra, pouch formation is much more frequent than in the ureter. Almost all cases are reported in males, though recently some diverticula have been discovered in the female urethra.²⁰

In 190817 some sixty-nine cases were collected from the Ilterature. They develop in the floor of the urethra and in the great majority of cases are acquired, though some congenital diverticula have been described in the region of the fossa navicularis, probably due to poor union of the penile urethra with that of the glans. Acquired pouches are due to a variety of causes and are found in any part of the floor of the urethra. They may be the result of retention cysts which rupture into the urethra; they may be due to

periurethral suppuration of varying etiology; and they may result from injuries, accidental or operative. As they may lead to retention of infectious material a prethritis may become intractable. Calculi have been encountered tucked away in these pouches. Some rare diverticula have been recorded as large as a fist, though usually they are no larger than a lima bean. Pouches of any size may cause obstruction and retention of urine. The diagnosis is by no means simple, even though the penile diverticula may be palpated along the ventral surface of the organ. Endoscopy and radiography of the urethra, after injection of opaque substances, will establish the diagnosis and site of the pouch. Surgical removal may become necessary and the difficulty of the operation will vary with the location of the pouch.

All the above interesting diverticular formations are rarities in comparison with the three groups that follow. These latter we all encounter with considerable regularity, while the groups described are "rara aves" in most clinics.

DIVERTICULA OF THE ESOPHAGUS

These pouclies, like most diverticula, occur in adults almost exclusively and more frequently in males. They usually develop in a weak area between the lowest circular muscle fibres of the inferior pharyngeal constrictor and the adjacent ohlique fibres on the posterior aspect of the tube. These upper esophageal pouches are therefore really pharyngeal diverticula, though long established custom has called them esophageal or Zenker Diverticula. An occasional case of diverticulum formation has been described where the pouch was just cephalad to the diaphragm. Between these two areas near the level of the left bronchus, traction pouches develop as a result of adjacent lymphatic or mediastinal disease which pulls up on the esophagus. The former type has long been recognized as a "pulsion" diverticulum and the latter as a "traction" diverticulum. The study of these pouches has to some extent affected the interpretation and nomenclature of diverticulosis in other parts.

Those diverticula that develop in the upper part of the tube, in the hypopharynx, usually present on the left side of the neck and may grow into the thoracic cavity. They show in their walls mucosa and submucosa covered by a more or less thick fibrons adventitia. If long standing inflammation has been present, they may become quite adherent to the adjacent structures, but usually are readily freed, being loosely attached. The mucosal side may show varying degrees of inflammation, secondary thickening, ulceration, or neoplastic changes. Rarely, if not instrumented, does perforation take place. These pouches produce symptoms by pressure on the adjacent esophagus and by reflex spasm of its superior sphineter (the circupliaryngeus muscle) as well as

by the fermentation and putrefaction of the food that stagnates in them. Obstruction to swallowing and slowly developing inanition are the outstanding symptoms. Dysphagia and the discharge of ingested food by pressure on the more or less definite tumefaction on the side of the neck are characteristic of the disease. Instrumental diagnosis with sounds or bougies is rarely necessary, since esophagoscopy and radiography are avail-Roentgenological observation and films after barium meals have displaced almost completely all the earlier diagnostic procedures, though esophagoscopy with proper instruments is more valuable in determining the extent and character of the changes in the mucosa lining the As many of these cases come for diverticulum. treatment in varying degrees of malnutrition, they may have to be built up before any radical therapy can be instituted. Medical treatment and even instrumental stretching of the more or less spastic and deformed entrance of the esophagus adjacent to the neck of the diverticulum have rarely had any lasting influence. Operative excision alone seems to promise real definitive cure. Preoperative feedings through a small calibred tube introduced through the nostril into the stomach, using if necessary the string technic to guide the tube past the diverticulum, should be tried before resorting to gastrostomy in cases with severe or extreme inanition caused by long standing obstruction. The endoscopic route for removal by invagination or for establishing a lateral communication between diverticulum and esophagus seem too dangerous to be recommended. Even if peri-esophagitis, cellulitis and mediastinitis could be avoided, recurrence or palliation is the best that such methods could offer. In larger pouches, excision in one or two steps seems the only rational procedure. Though one group of surgeons favors the one method and another favors the other, it is difficult to be convinced that the mortality of the one-step¹⁸ is greater than that of the two-step procedure and that fisulæ are not much more frequent after the twostep operation than after the one-step. The various refinements of these operations need not be discussed at present. It must be apparent that as far as recurrence is concerned, a clean cut one-step excision without interference with the esophageal lumen either by traction or by suture should guard the patient against future trouble. The dangers of cellulitis and pulmonary complications must be reckoned with in all surgical procedures on these more or less infected pouches.

Those rare diverticula near the lower end of the esophagus are rarely encountered and very rarely grow to any size. Symptoms also are unusual unless cardiospasm is present. In one recent case of this type, care in diet and antispasmodics gave relief. In the very unusual larger pouches, various operations, excising (W. Meyer and Sauerbruch), or anastomosing the pouch with the stomach have been suggested but as far as I could review the literature, only two excisions and one anastomosis (Henschen) have been performed successfully in diverticula of the lower end above the diaphragm.

In the mid region, the small traction diverticula also rarely cause symptoms, even though autopsy examinations show them to be the most frequent type in the esophagus. They usually are composed of the walls of this organ, and lie horizontally or run obliquely upward towards the lymph packet that has distorted the esophagus. Occasionally, if they are so placed that food can enter them, they may enlarge under the influence of pulsion and a so-called pulsion traction pouch develops. The diagnosis of these diverticula and those at the lower end of the esophagus are made by radioscopy. In the absence of symptoms, no therapy is called for, except possibly dietetic management.

DIVERTICULA OF THE COLON

The group of colonic diverticula constitute one of the most important manifestations of this pathological entity. It took ages before inflammatory processes in the right iliac fossa were properly explained and connected with inflammation of the appendix and it took even longer before similar processes in the left iliac fossa were recognized as due to diverticulitis of the lower colon. These diverticula are very frequent, occurring in five to ten per cent of all adults and may occur in any part of the colon from the cecum to the rectum. They are almost invariably multiple and frequently very numerous. small percentage of diverticula seem to produce symptoms. 10 At times, diverticula in the small intestines are found associated with those in the colon. In the sigmoid and descending colon, they occur most frequently and it is here that inflammatory changes are most commonly found. Although this is a disease of adult life, a few cases of colonic diverticula have been found in the young. Males are more frequently affected and most patients complain of flatulence or of constipation. Apparently these pouches are herniations of the mucosa through weakened areas of the intestinal wall, and develop either along the longitudinal bands, into the appendices epiploicæ, or into the mesenteric attachment as the result of pressure changes within the colonic reservoir above a torpid rectum or a spastic, tight sphinc-They rarely are larger than cherries and Intestinal contents collect often much smaller. in these pockets and owing to the narrow necks of the diverticula, as well as to the almost complete lack of musculature, stagnation and inspis-This favors local irritation, insation result. flammation, and ulceration, with fibrous tissue reaction. If these processes are too rapid for nature's reaction, the ulceration may lead to perforation into the peritoneal cavity or retroperitoneally,

which fortunately is a rare occurrence. Usually the process is slow, diverticulitis leads to peridiverticulitis with local suppuration or interstitial inflammation in the colonic wall and mesentery. Some thirty years ago, I happened to see two cases of abscess in and about the sigmoid, associated with tumefaction and incomplete obstruction, which had simulated clinically, carcinoma of the lower bowel. On drainage of the perisigmoid abscess, the condition slowly cleared up. These unusual cases seemed quite inexplicable at the time, but shortly thereafter, while engaged in autopsy work in Prague, I found the probable explanation for the above cases in the inflammatory reaction that I saw in and about the sigmoid in infected diverticula. It was as a result of these observations that I collected all the clinical and pathological data already recorded, and published them in 1904. In some cases, the inflammatory reaction leads to such extensive tumefaction with obstruction of the lumen that the clinical picture suggests neoplasm. At times the inflamed sigmoid becomes adherent to adjacent viscera, most commonly the bladder, and a fistula develops between these organs. Rarely malignancy arises in these diverticula, and then both the clinical and the pathological diagnosis may be most difficult.

The diagnosis of diverticula of the colon may be suspected when the above pathological changes are in evidence, but without the colonie x-ray and the barium meal, the diagnosis is at best only a good guess. Sigmoidoscopy is in general useless, except in so far as it may detect a diseased mucosa which is rarely present in diverticulitis, as this produces interstitial mural changes rather than changes in the mucosa. Direct inspection of the bowel may discover a neoplasm, which may account for the symptoms and thus establish the diagnosis. In those rare cases of sigmoido-vesical fistula, cystoscopy with or without excision of mucosa adjacent to the opening in the bladder may be helpful in excluding tuberculosis and carcinoma, which are the other more common diseases that lead to the condition. The radiographic picture is particularly clear after the bowel is evacuated and the residue that remains in the pouches is visualized as opaque circular shadows along the course of the colon. Whether the prediverticular stage can be recognized radiographically is open to doubt. Its characteristic appearance is said to manifest itself by loss of normal segmentation, more rigid outline and small convexities in the outline.20

For a complete radiological study, both the meal and the enema seem indicated. Following the barium meal, the above globular bodies may be detected many days after the rest of the colon is empty. With the barium enema, similar pictures may be seen after evacuation, and during the filling one usually sees the irregular stockade-like or serrated outline of the involved areas.²¹

As said above, only a small percentage of di-

verticula become inflamed and require either medical or surgical treatment. The former consists in simple diet with lubrication and irrigation of the intestine, so as to put the parts at rest and prevent further irritation. The latter consists in meeting the conditions presented at operation, such as drainage of local abscesses, or treatment of a free perforation by closure and drainage, eccostomy to put the inflamed sigmoid or colon at rest; in suitable cases a Vorlagerung of the involved gut with secondary excision, or separation of bladder and sigmoid in fistulous cases with elosure of both perforations and interposition of omentum to prevent re-anastomosis of the two involved and much-indurated viscera.

DIVERTICULA OF THE URINARY BLADDER

Next to the group just described, diverticula of the urinary bladder are the most frequent seen in the modern clinic. They occur in all ages, though definitely much more common in adults and advanced life. They are very rare in the female, probably because of the rarity of obstructive conditions at the bladder outlet. The small multiple hernial protrusions of the mucosa, seen so often in prostatic obstruction, resemble closely the sigmoid and colonic cases just described. They are found all over the bladder convexity and develop between separated hypertrophied bands of musculature. In the cystogram, they may produce a scrrated outline very similar to that seen in the sigmoid, but here the serration is definitely due to the filled diverticula and are much more blunted or rounded. Infection with perforation into the free peritoneal cavity is very rare, but perivesical inflammation is probably much more frequent than is realized in the clinic. Stones corresponding in size to these small pouches may develop in them and in one case, by pressure here and there against the bladder wall with a blunt instrument within the viscus, I have squeezed out many dozen small stones without any difficulty, each stone jumping out into the bladder like a pea out of its pod. All these diverticula seem to be acquired and secondary to obstruction to the outflow of urine.

In contrast to these small diverticula which rarely are larger than a walnut and usually much smaller, are those interesting large diverticula which are at times single, but often multiple, that seem to be congenital in origin. They occur in young children as well as in adult life. They may be enormous, holding five litres of urine. One that I removed was as large as the distended bladder and held twenty-six ounces. They probably owe their origin to some congenital anlage or malformation and usually grow in size as the individual ages. Obstruction to the outflow of urine from the bladder is not always present, but when it is, growth is probably accelerated and large diverticula present. These diverticula always arise near the ureteral orifices, and as they

grow they occasionally draw the ureteral mound and its orifice into the sac. Insertion of the ureter into the diverticulum at some distance from the bladder wall is much less common, only one such case having been encountered by me. Inflammation in these diverticula is liable to develop, and peridiverticulitis may involve the adjacent lowermost ureter so that it seems to be part and parcel of the wall of the sac. Stones, at times collar button stones, part in the diverticulum and part in the bladder, are liable to develop. In other cases, facetted groups or single stones are found in these pouches. Leukoplakia and neoplasms arising from the diseased mucosa of these diverticula are by no means rarities. Infection in these structures is practically uncontrollable, as they usually have little or no musculature, if they are of any size, and therefore they cannot empty themselves. Their presence disturbs the bladder mechanism as the detrusor forces the urine into the diverticular cavity at each micturition. This disturbance is usually followed by hypertrophy of the bladder musculature and occasionally by giving way of the ureter orifices and dilatation of the upper tract on one or both sides. In one case of large diverticulum which was filled for roentgen study with argyrol, I found the argyrol still in the diverticulum thirty-five days later, though the patient had bladder irrigations almost daily. The presence of such an infected diverticulum may prevent the smooth closure of a suprapubic bladder wound.

Unless infection is present, the presence of these pouches may never be suspected. Rarely they are recognized by palpation either in the suprapubic area where a spherical mass may be palpated after micturition. Several cases in children were detected in this way. By rectum one can also at times feel such a filled diverticulum. The only reliable diagnostic aids, however, are the cystoscopic examination and the roentgenological demonstration with opaque fluids, such as sodium iodide, sodium bromide and the like, the pictures being taken antero-posteriorly and obliquely. Frequently, after emptying the bladder, an aerogram of this organ will show the diverticula still fairly well filled with the opaque solution, while the bladder, is distended with contusting air, With the cystoscope, one regularly sees the dark orifice of the diverticulum, though in a few cases, what looks like a sphincteric closure may temporarily prevent visualization of the orifice.

In the first group of bladder diverticula, so frequently seen in prostatic cases, rarely is surgical treatment required, unless they harbor stones

or are unusually large. Persistent moderate pyuria following adequate relief of obstruction is frequently due to persistent infection in these pockets. On the other hand, the second group demands surgical excision with adequate care of the ureter, if it is involved in the process. Numerous methods of approach for the operative removal have been suggested, both from within the bladder and from without. My impression is that surgical exposure from without, after adequate mobilization of the bladder with visualization of the ureter or ureters, with careful external suturing of the bladder wall is the best approach and the surest method of preventing a recurrence. Almost twenty years ago, in doing the operation in this way I became acquainted with the procedure of complete mobilization of the bladder, stripping it out of its peritoneal covering and its perivesical tissues, which technic I have used since then in my operative work in bladder resections for infiltrating carcinomata. It must be evident that any method that fails to expose the orifice of the diverticulum from outside the bladder will not permit of accurate closure of the neck and predisposes to recurrence, a sequence that has been reported every once in a while in the literature. If the ureter opens near the orifice, it can be-turned into the bladder with a small flap to which it is attached. In those rare cases, when it opens into the diverticulum at some distance from the bladder wall, it can be covered with a triangular flap of diverticular wall and thus introduced into the viscus before the orifice in the bladder wall is closed from without. This triangular flap has its base at the bladder, and as the ureter orifice is introduced into the viscus, the edges of the flap are sewed over the exposed ureter, which then projects well into the bladder. The results of these operations are highly satisfactory and the mortality is low.22

From this review it is apparent:

1. That diverticula of the alimentary and urinary tracts are much more common than was thought only a few years ago.

2. That diverticula may produce clinical symptoms and with our latest methods of investigation they can almost regularly be recognized.

3. That relief by surgical removal or analogous procedures is usually obtainable, without undue

risk.

4. That diverticula in general are acquired. though in many cases they may be congenital or due to a congenital "anlage" and develop only when the factors that make for an acquired diverticulum are present.

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fifty lantern slides were shown.

THE OECOS—THE DEMOS—AND MEDICINE

By IAGO GALDSTON, M.D., NEW YORK, N. Y.

An exposition of the fundamental principles underlying the activities of the foint Medical Information Bureau of the New York Academy of Medicine, and the Medical Society of the County of New York, by its Executive Secretary. Read before the Philadelphia County Medical Society, Pedrary 8, 1903.

THE term economics is derived from the Greek Oecos, meaning household; and the science of economics as first formulated by Xenophon, and later by Aristotic, concerned itself with the efficient management of the house-

Aristotle, of course, was not interested in giving helpful hints to the busy housewife. His concern with the household was due to the fact that in it is to be found the prototype of the State, which in his day meant the Hellenic City, and in ours means the World as a whole. And that which makes the household the prototype of the State is the division of labor witnessed therein.

Aristotle, as is witnessed in the Occonomica attributed to him, fully appreciated the productive increment resulting from the division of labor, but he saw likewise the need for harmony and cooperation among the specialized elements

of the household.

The science of economics has made much progress since the days of Aristotle, so much, in fact, that the oecos has been practically completely forgotten. Today economists are more concerned with business cycles and with theories of value and of exchange, than they are with the household. In this respect, they are like certain of our pathologist brethren who, engrossed in the phenomena of the abnormal, completely forget the patient.

The Larger Occos-the State

However, in the last analysis, in medicine it is the patient with whom we must be concerned; and in economics it is the household. But by household we must undestand not merely a man and his dependents, but our larger social organism: the State, the Nation, and indeed the World. For herein lie both the source of many of our difficulties and the promise of our salvation, that modern civilized society, culturally and economically, has the nature of a household, and is so complex and yet so integrated, that injury or embarrassment in any one part or division, is quickly and painfully reflected in every other part.

Modern technologic developments, the extractdinary division of labor, the complexity of our economic system, have all served to tie are angether by so many bonds that any significant fiturbance anywhere in our extensive realm 1 ... immediate reverberations throughout the civilized world. Very few of our policies statesmen, and economists, however, appear : aware of this fact, or allow its realization . * fluence their treatment of the social and eproblems that beset us. Instead of vitaproblems against the background π : their furthest consequences and governed by the mere expedient and during the last quarter of ze witnessed the baleful results of

But this fault is to be witer manner in which we face to problems, but also in the and mon, everyday life. , .

Modern society is a . many metamerer incomes grades, but also and to function. Inch chig Dana nadil and er 🗽 1. tically all almost

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insulate themselves against the rest of the social organism by developing a specialized language, and largely in consequence, a unique and restricted viewpoint. Practically all of them seek special group and class privileges, unmindful of the fact that such asocial endeavors handicap and injure the large social organism of which they are a part.

This paradoxical, incongruous condition in our socio-economic life has been brilliantly described and analyzed by our little appreciated but great American thinker, Thorstein Veblen, in his "Theory of the Leisure Class," and in his series of essays entitled "The Place of Science in Modern Civilization." The paradox as he demonstrates, lies in this, that technologically and economically we are all most interdependent; but ideologically we are divided into antipathetic, irreconcilable groups. And in this connection it is disheartening to recall that almost twenty-five hundred years ago, Demosthenes and Isocrates. addressing the Athenians, sustained the burden of the same thesis. We know the fate of the Hellenic world exsanguinated by the Peloponnesian wars, and there are some, notably Oswald Spengler in his "Decline of the West," who see a like fate ahead of us.

I, for one, do not share this pessimistic view of the future, and precisely for the reason that modern social and economic life has in fact become so specialized and so interdependent. Modern society is like an animal with highly specialized systems and organs, and with a nervous system in which the association tracts are well developed. It is more exquisitely sensitive than are the lower forms of animals to unfavorable conditions, but it can execute the necessary adjustments more expeditiously and more appropriately.

Medicine and the Oecos

Medicine as a science and profession shares in a substantial measure the faults and shortcomings of current society. In fact, its insularity, its self-imposed isolation from the rest of the living world, is probably epic. We have for many decades gone on our way unmindful and indifferent to the rest of the world, wrapped in our science and confined in our small cubicle. Recently we have been awakened with a jolt. We discover, to our surprise, that the inexorable laws of economics also affect our little portion of the universe, showing no regard for the sanctity or dignity of our profession.

Within the last half century we have witnessed the development of industrial medicine, of life insurance medicine, of workman's compensation; we have seen hospitals, dispensaries, and departments of health grow phenomenally; and more recently we have been startled by the intensive

agitation for state medicine.

We are bewildered by these discoveries and

some of us are not a little resentful. We are also at a loss on what to do. Perhaps at this juncture a little philosophical reflection will help us see the situation in its correct perspective.

I believe it was Aristotle who said that in order to attain perfection, the philosopher must become a physician, and the physician a philosopher. How profoundly wise this dictum is can best be appreciated by those who have witnessed the sterile excursions of philosophy into the arid realms of metaphysics, where nothing of the human prevails. The counterpart of this may be seen in those schools of medicine wherein there is a complete want of philosophy. In this connection I recall the astute words of Professor Siegrist when commenting on the relative fruitlessness of our many years' search for the cause of cancer. He said (I quote him approximately), "The speculative era in medicine is fortunately Today we are in an age of objective Yet every scientific project must have science. its hypothesis; and an hypothesis is a speculation founded on experience. That is philosophy. Perhaps the fault in medicine is due to our want of philosophy, and to the aridity of that little which we follow."

There is indeed much want of philosophy in our ranks. Science, our young wife, has turned our mother, philosophy, out of our house, and has usurped all of our attention. We are ashamed to philosophize. It is no longer stylish. We honor the protocols of the laboratory, even though they be devoted to the merest minutia of minutiæ, but we frown upon the encompassing speculations of the mind. Socrates would find few willing listeners among our ranks, and Plato would be challenged for his lack of graphs and charts.

And yet, it was not always so in medicine. Virchow was not so indifferent to the affairs of men; neither was Abraham Jacoby. In your own great city there lived in the early days of our republic men who were physicians, competent and famous too, to whom, in the spirit of the Latin poet, "Nothing human was alien." Today we have few Virchows, few Jacobis. We have had too few of them in the last hundred years. During this period we have witnessed the most phenomenal changes in our social and economic ex-We, who should have been most competent to judge of the trends, who should have raised our voices in warning and protest, were mute. Our eyes were glued to the microscope, our ears plugged by the stethoscope, our minds too occupied with disease to see the broader phases of human well-being. Now we reap with the rest of the world the bitter fruit of our sowing.

Medical Economics

Economics formerly had no place in our programs or deliberations; and now it is almost com-

monplace. Unfortunately, however, much of the medical economics now discussed and presented is narrow, almost predatory in nature. The problems of our profession are deliberated upon from the dollar and cents viewpoint and not from that of the oecos, the household of lumanity. Many physicians still fail to see that the interests of our profession are tied up with those of the state and of mankind; that our problems are part of the larger problems of humanity; that our difficulties will be solved only as the larger economic problems are settled. Furthermore, few of us realize that we can serve ourselves best by contributing according to our ability to the settlement of the difficulties which today beset all of mankind.

Undoubtedly this is a very large order, too large, in fact, for execution. But then it is not given as an order. It is presented as a background, as a chart of the troubled seas. If one of our leading medical statesmen had understood as much, he would not have seen this depression silver lined by the fact that unemployed parents can now spend more time with their children; nor would he, in the naive spirit of Marie Antoinette, have invited the workless to visit our national parks. The course of a ship is charted in a direct line, but the helmsman tacks to wind and current. We have at hand many problems which require our attention, and to which we can effectively apply our energies. Let us do so, bearing in mind the large stage upon which we play our part.

The Demos-the Citizenry

Consider this, for example. In order that we might, as a profession, participate in the deliberations of the oecos, our economic and social household, we must have an organ of articulation, a means for expression, the machinery with which to make ourselves heard and understood. In so far as we live in a democracy, we must address ourselves to the demos, we must speak its language and talk into its ear. The demos has sensitive cars, and it has an expressive language. We have not, however, cultivated the language of the man in the street, nor have we addressed ourselves to him. Let us confess that a good deal of this was due to our snobbish conceit, and to our contempt for the demos. We write Latin, and the demos speaks a jargon. We are objective scientists and the demos is blown about by the wild winds of ignorance and credulity. But as it is written in I Corinthians XII "The body is not one member but many, and the eye cannot say unto the hand I have no need of thee; nor again the head to the feet, I have no need of you." The body politic and economic is, in this respect, not unlike the body human.

Today medicine must make itself heard, not merely by choice but by necessity. We as a profession must make ourselves heard and understood in the council of the oecos.

For the days when medicine, like the priesthood, was a profession apart and above the rest of the community, are gone. Our profession is ruled and legislated by the common lawmakers. We are scrutinized and catechized from the day we enroll for our medical studies to the time we graduate and enter upon practice. We must enroll with the elerk of our community, and in certain states every year thereafter. The very practice of our profession is legislated, so that the spiritus frumenti which we may prescribe for our patients is dictated not by medical experience, but by laws written in Washington.

The public no longer regards us as a privileged group. They speak of us not with bated but with leated breath. Witness the numerous articles which have appeared in the public press, in which laymen have scourged our profession, charging us with all the multitudinous sins of the modern age. We have been driven from the honored and revered estate of former years to where we have to fight for the opportunity to practice our profession as free individuals. There is much talk of state medicine, of health insurance, and of various and sundry schemes for the reorganization of medical practice and in many of these proposals the medical profession appears to be a pawn in the hands of alien players.

And in the midst of this stands the giant, the medical profession, tongue-tied, if not completely inarticulate. To meet the challenge of this situation, the medical profession needs an articulate

voice and an integrated intelligence.

Medicine and the Demos

The greatness of Athens was not in the Acropolis, but in its market place,—the amphitheatre of Socrates and the university of the Athenian. It was there that men foregathered to exchange thoughts, to listen to the gadfly questionings of the bald-pated philosopher and to swap experiences on various Hippocratic practitioners.

We live today in a greater Athens, in which there is a bigger market place, and our voice should be heard in the babble of the populace, not only that we might defend ourselves against calumny and set men aright in their judgment of us, but that we might also serve the community by bringing to it that knowledge which will serve

better and longer life.

The American public has an insatiable curiosity; and curiosity is the fertile muck in which the rare flower of intelligence flourishes. The public demands, as is its prerogative, to know what is going on in the community, in medicine as in politics. When the King of Siam comes to America to be operated upon, there arise in the public mind a hundred questons, most of which are legitimate and not a few of which are intelligent and useful. When, by the artifices of the publicist a sensation is created in the alleged "one

chance in a million" of success of a certain operation, we are duty bound to enlighten the public and to prick this malicious and fanciful bubble. When a spectacular announcement is made that a cure for cancer has been discovered on the Pacific coast, can we blame the public for its clamor to be informed? Can we afford to fail in the duty to ourselves and to the public that demands information, by enveloping ourselves with the mouldy cloak of dignified silence? Our relation to the public, however, is not one-sided. They are not eternally our debtors. With increasing frequency we are compelled to turn to them, seeking their aid in furthering and defending our profession.

But recently there was issued to the public the report of the Committee on the Costs of Medical Care, and a little later that of the Council of Medical Education. Both of these reports affect us deeply, and not only nationally but locally too. for there cannot be any one universally suitable solution to any of the major medical problems. We needs must comment upon and answer these reports. We must make our side heard, and understood too. We must have for this the sympathy and the good will of the public. More immediately we must have the sympathy and understanding of the press, of the radio, and of all other agencies promoting public knowledge and moulding public opinion. Love may blossom overnight, but sympathy and understanding require long cultivation. The present is none too soon to set ourselves to this task. For even as at this hour we need a telling voice in the affairs of men, so with the passing of time will the need become more urgent.

Medical Information Bureau

And now we come to the practical phase of the discourse: How can Medicine make itself heard

and understood in the community?

The precise method must vary from place to place as the circumstances differ. In New York City we have a Bureau with an executive staff devoting all of its time to the dissemination of medical information. That this information might be authentic and representative of the consensus of opinion in the medical profession, there is a supervising Executive Committee which is constantly in touch with the executive staff.

The credo of the Medical Information Bureau was printed in the special publication of the New York Academy of Medicine in November, 1928,

in these words:

"From its earliest days the profession of medicine has been governed by a code of ethies which has served to maintain the lofty ideals of the followers of Æsculapius. Unhappily, this eode has also served to insulate the profession against intimate contact with the public.

"Whatever may have been the forces and motives that moved the early law makers of medicine to instill an element of secrecy and aloofness into the governing principles of the profession, certain it is that the best interests of the physician and of the public are no longer served by this attitude. The recent and phenomenal progress of modern medicine, and particularly of preventive medicine, necessitates the development of a direct and intimate channel of communication between the practitioner and the community. This is essential, not only that the public may learn to take advantage of the constant advances of modern medicine, but to the end that it may be protected against the hordes of charlatans, quacks and misguided zealots who, strange to say, thrive more than ever in this day of presumptive enlightenment.

"In appreciation of the needs of our day and society, the New York Academy of Medicine and the Medical Society of the County of New York have established a joint Medical Information Bureau. The aims of this Bureau are to facilitate the dissemination of authentic information on medical and public health matters, to stem and curtail quackery and to promote a better understanding between the public and organized medicine. "The Medical Information Bureau is supervised by a

"The Medical Information Bureau is supervised by a Committee representing equally the Academy and the County Society. It is served by a body of over one hundred consultants competent to give expert opinion on a variety of questions relating to their specialties. The full resources in judgment, knowledge and experience of the medical profession in New York are 'on tap' to aid its purpose."

The Medical Information Bureau has been in operation now almost five years. It has been eminently successful in achieving its objectives. It has secured the good will and cooperation of the press, the radio broadcasting stations, and certain other agencies which carry news and information of a medical nature. It has succeeded in presenting to the public through the press important scientific papers presented at the New York Academy of Medicine, and to give notice of various discussions of a social nature. It has assisted newspapers in checking on the authenticity of news items which they have received from various parts of the world, and it has helped them in the preparation of feature articles of a medical nature.

The Medical Information Bureau has not, however, and this is important, set itself up as censor. It has not sought for publicity, in its undesirable phases, for any of the activities of the individual physicians connected with the New York Academy of Medicine or the Medical Society of the County of New York, nor has it publicized these organizations.

Lastly, it has never aggressively promoted medical news. It has released to the press and other news agencies the medical information available, leaving it to them to decide what is news.

FIBROIDS OF THE UTERUS, THEIR RECOGNITION AND TREATMENT By ROBERT T. FRANK, M.D., NEW YORK, N. Y.

From Private Practice and the Gynecological Service of the Mount Sinai Hospital, New York, N. Y.

THE general practitioner as well as the gynecologist, when he discovers or is told that one of his patients has uterine fibroids, should know what advice to give. Frequently I am asked by colleagues, "What should I tell a woman who has asymptomatic fibroids?"

This is not a simple question to answer. When dealing with a malignant growth, it is evident that if the condition is still operable, inmediate operation or radiotherapy must be advised. This does not apply to fibroids, which are benign growths, and in the vast majority of instances,

never become malignant.

Statistics: Of interest in this connection are statistics gathered by me in 1922, based on over 500 cases, as well as those of Lockyer of London, based upon a similar number, both showing a surprising concordance in the method of treatment required for these fibroid growths.1 In my private practice, although it consists largely of referred cases, approximately only 50 per cent of fibroids required operation. The other 50 per cent, consisting mainly of small to medium sized accidentally discovered tumors, merely required observation. Some recent statistics gathered from my service at Mount Sinai Hospital, show almost analogous statistics as can be noted in Tables 1 and 2. Of the 134 patients with fibroids, sent to the hospital, 44.7 per cent required either no operation, or eurettage, or still less frequently, curettage and radiotherapy. The remainder, only 55.3 per cent, were subjected to laparotomy.

	total littlibel of Cases—104	
No operations, Laparotomies	or minor operations	
		134
13	Chief SymptomsBleeding Pain	45
14	Tumor	2
Laparotomies	Size of Growth, Expressed as Months of PregnancyLess than 3 M 3-4 M.	No Op. or Minor Op.
25 11 3		5 3 0

Total Number of Cases-134

74

minor Operations of the Operation (or,
Curettage25
X-ray4
Curettage and X-ray6
No intervention
140 Intersection
60
Associated Lesions
Cardiac11
Pulmonary 4
Neuroses
Pregnancy 4
Table 1. Fibroids on Gynecological Ward Service
Table 1. Piotoids on Gynecological Ward Service
During 1932
Total Number-74
Supravaginal hysterectomy68
Total hysterectomy
Myomectomy 4
Bilateral salpingo-ooph
The detect of salping 0-00 pm.
Unilateral salpingo-ooph
Adnexa left in situ10
74
Deaths, $2 = 2.7\%$
Associated Lesions
Diseased adnexa

Minor Operations or No Operation (60)

 Mainly submucous
 2

 Multiple
 13

 Intraligamentous
 2

 Cervical
 2

 Table 2. Major Operations for Fibroids During 1932

Adenomyosis externa 5

Ovarian neoplasm 5

Variety of Fibroids

Mainly intramural45

Mainly subserous11

Period of Observation. In some instances I have watched women for 25 years or more, seeing them at first twice a year, later once a year, without ever having to advise any intervention. A certain number of these patients, because of increased amount of menstruation, either menorrhagia, or metrorrhagia have been euretted. Frequently this purely diagnostic measure has given permanent or if not, at least temporary relief for months or years. A large number of these fibroid bearers have entered the menopause while under observation and almost regularly the fibroids have diminished in size or disappeared, as far as bimanual examination could determine.

In a certain number of those observed over a period of years, however, the fibroids have increased in size or the tumors have become submucous and extruded from the cervix, or the bleeding has increased to such an extent as to require operative intervention or x-ray treatment. As will be seen from Table I, bleeding is the most prominent symptom in small growths.

The mere presence of fibroids does not necessitate any intervention unless their size and distri-

¹ Frank, R. T. The Treatment of Uterine Fibroids; Based on a Series of Five Hundred Cases. Colorada Medicine, October, 1922.

bution or the symptoms of bleeding, pain, or pressure obliges us to intervene (See Table 1).

Whether a fibroid can be safely observed or should be operated upon without undue delay, requires an amount of experience which the fewest general practitioners can acquire, and therefore conservative expert specialistic advice should be sought. Too many gynecologists, unfortunately still advise operation unnecessarily and routinely in cases in which the growths are harmless and the operation not without danger.

Commonest Indications for Operation. Of the fibroids which require operative, or radiotherapeutic treatment, the commonest are those which have attained a size of 3 months or larger, using the size of the pregnant uterus as a convenient standard of measurement. Intramural growths occasion less trouble than any other group. Subserous tumors, too, may remain asymptomatic unless they become pedunculated and the pedicle shows signs of attenuation or twisting. Under these circumstances, fortunately rare, peritoneal disturbances set in. Fibroids which develop into the cavity of the uterus, submucous, are the most troublesome, as they almost invariably produce profuse and irregular bleeding, are subject to infection and sloughing, or by their action as foreign bodies, produce painful uterine contractions, frequently followed by extrusion of the fibroids into the cervical canal or vagina where the danger of infection or sloughing is even greater. Intraligamentous fibroids developing laterally, should not be allowed to attain large size as not only do they displace the uterus, but likewise occasion pressure symptoms, and when large, offer great technical difficulties in their removal. The same applies to another subperitoneal variety of development, namely cervical fibroids, and the rare variety which develops between cervix and bladder. Let me briefly present a few cases which show how varied the advice and how diverse the procedure must be in a given instance.

Average Case of Fibroids-Menorrhagia and Metrorrhagia, Curettage, Menopause

Case 1. V. E. 49 years of age. Complaining of tired feeling, leucorrhea. The periods had become more profuse and more frequent in the last 1½ years. The uterus was felt 3 fingers above the symphysis. There was a polyp the size of a pigeon's egg (Fig. 1). Gurettage was advised. The polyp was avulsed, the uterine cavity explored, but aside from a fibroid enlarging the uterus to the size of a 2 months' pregnancy, no other abnormality was discovered. This patient has been watched for a year and a half. The normal menopause has set in and the fibroid shows signs of shrinking. The patient is to be seen every 3 months for the present.

Small Fibroids-16 Years' Observation

Case 2. L. H. First seen at the age of 22 years in 1911. Difficult confinement, normal uterus. Five years later small fibroids were discovered. Nothing further done. 1919, at age of 30, same findings. One year ago, because of increasing amount and frequency of

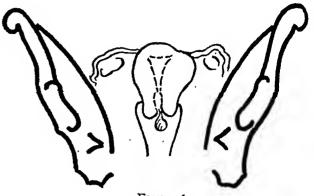


Figure 1
Case 1. Protruding polyp.

menstruation, the patient came for re-examination and the uterus was found about the size of 10 weeks' gravidity. In the last year, now 43 years old, the fibroids have remained approximately stationary (Fig. 2).

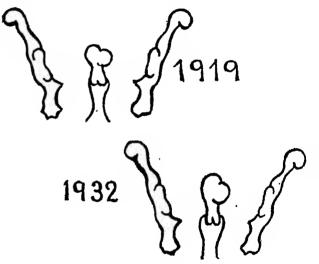


FIGURE 2

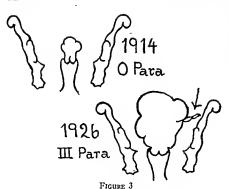
Case 2. No growth in thirteen years.

Fibroids: Observed 12 Years: New Indications:

Case 3. G. H. 28 years of age. No children Two abortions, last one 4 months ago. Since that time she has run some temperature and had pain on the right side. Uterus size of 2½ months' pregnancy. Observation counseled. Nine years later, operated upon for acute appendicitis by another surgeon, drainage required for 3 weeks. Twelve years after first being seen, the uterus was approximately the size of 3½ months' pregnancy. She was suffering from menorrhagia, abdominal cramps and severe backache. Considerable intestinal disturbance. Barium enema showed a marked extra-intestinal pressure exerted upon the sigmoid. At operation the uterus was removed and an infiltrated left mesosalpinx twisting the tube and compressing the sigmoid was found. After the mesosalpinx had been cut, the sigmoid resumed its normal filling (Fig. 3).

Fibroids—Purulent Bronchitis: X-ray and Radium Observation: Operation

Case 4. D. S. 36 years. Two children, last 10 years ago. Chronic bronchitis for years. Accidental find of large uterine tumor. Treated by radium and x-ray be-



Case 3. Arrow points to infiltrated left mesosalpinx constricting the sigmoid.

cause of chronic bronchitis, by another surgeon. Has dyspnea on exertion. Abdomen increasing. Uterus the size of a 5 months' gravidity, hard, nodular, somewhat cystic posteriorly. Again given x-ray. Again seen 3 months later by me. Still stains irregularly. Feet swollen. Persistent bronchitis. Tumor has increased, rising from 1 finger below mnhilicus to above umbilicus. Seen 2 months later. Has lost 10 pounds. Bronchitis the same. Still bleeds, Fibroids still increasing (Fig. 4). One month later, after consultation with a chest specialist, operated under spinal anesthesia. Supravaginal hysterectomy, double salphingo-oophorectomy. Uneventful convalescence. Bronchitis much improved.

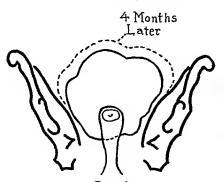
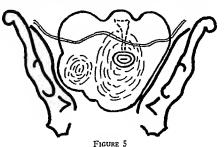


FIGURE 4

Case 4. Rapid growth of fibroid.

Pibroids: Loss of Health: Fever: Operation

Case 5. H. H. 49 years of age. Seen in consultation because of persistent temperature, retention of urine, and accidental discovery of an abdominal mass. The mass reached half way to the umbilicus and the entire pelvic diaphragm was pushed toward the vulva by multiple masses which impinged on the rectum and filled the entire lower pelvis. The diagnosis of an impacted cervical fibroid probably undergoing sarcomatous degeneration was made and immediate operation advised. Operation 10 days later showed a large cervical fibroid impacted in the pelvis and undergoing carneous degeneration (Fig. 5).



Case 5. Impacted cervical fibroid.

Emergency Operation for Fibroids: Transfusion

Case 6. A. T. 33 years. Admitted as emergency to private pavilion, exsanguinated woman. Hemoglobin 35 per cent. Bleeding profusely, At once taken to operating room after a billiard ball sized tumor was found projecting into the vagina. Enucleation from below of a submucous fibroid partly born into vagina (Fig. 6). Direct transfusion of 500 c.c. of blood. Rapid recovery. This patient has been watched for 5 years. Her menstruation has become normal. The uterus is of moderate size.

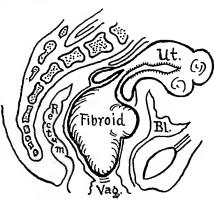


FIGURE 6
Case 6. Extruding fibroid, with hemorrhage.

These six cases illustrate many of the problems encountered both by practitioner and specialist. When the necessity for intervention has been established, the type of treatment must be determined.

Indications for Radiatherapy. Of the 50 to 55 per cent of fibroids which require intervention,

approximately 15 to 20 per cent can be treated by means of radiotherapy. In my experience, x-ray is preferable because it avoids any intrauterine manipulation, permits of more accurate dosage, and avoids local trouble, particularly the persistent leucorrhea that follows radium insertion into the uterine cavity.

In the group amenable to radiation are included in particular the small growths less than 3 months in size, if a submucous site can be excluded and the menstrual symptoms are those of excessive bleeding. Personally I refuse to sanction radiotherapy without a preliminary curettage, not only in order to recognize corporeal malignancy, but also if possible, to exclude the presence of a submucous growth which ordinarily contraindicates radiotherapeutic measures.

We are forced at times to extend the indications for radiotherapy to a group of patients whose fibroids are unfavorable, because of their size and submucous situation, for this type of treatment, but in whom the special indications of excessive operative risks due to pulmonary, cardiorenal or other grave systematic diseases make operation extra-hazardous. I would also include very obese and short necked women who do not tolerate laparotomy well and in whom it has been found that the incidence of thrombosis and embolism is particularly high.

Radiotherapy, which induces the premature menopause, if carried beyond a certain degree, is to be regarded as radical treatment but I limit the designation of major operation to those cases in which the abdomen requires opening per vaginam or from above.

Indication for Major Interventions. The indications for such operative measures are supplied by the dimension attained, continued growth, especially if the increase in size is found to be rapid, or pain and pressure symptoms upon the bladder The size of a growth, if it exceeds the dimensions of a 4 months' pregnancy, usually demands operation per se. Here, in parenthesis, I would say that the mere elevation of a tumor into the abdomen, does not show the exact size unless controlled by bimanual examination, for certain tumors may ride entirely above the pelvic brim and therefore rise higher into the abdomen than much larger growths which originate deep in the pelvis. Smaller growths, if complicated by adnexal trouble, adenomyosis or ovarian neoplasms may require operation because of the coincident condition (33.7%, Table 2).

Furthermore, changes within the fibroids, particularly the so-called aseptic carneous degeneration, occurring most frequently during pregnancy, occasions severe pain, which in a number of instances, has been sufficient to necessitate operation even before the termination of gestation. This applies particularly to patients in whom the

process is accompanied by fever and peritoneal symptoms. However, many of these patients, if carefully watched, may be carried through the attack without operation.

In a certain number of cases the rapidity of growth, the constitutional symptoms, the anemia, the persistent bloody or watery discharge, are sufficiently characteristic to permit the suspicion, and in some instances the certainty of malignancy. Sarcomata have been observed in approximately 4 per cent, fundal carcinomata in smaller number. Under these conditions, operation is imperative. For some unexplained reason, we have seen far fewer sarcomata during the last five years than heretofore.

Diagnosis of Unusual Types of Fibroids. Most fibroids are readily diagnosed by their typical configuration, their direct connection with the cervix and fundus of the uterus. Occasionally, however, interesting or misleading findings are noted.

Case 7 was a woman of middle age admitted twice previously to my service at the hospital for symptomless fibroids the size of a 4 months' pregnancy. She was not operated upon because of severe myocarditis. Her third admission was to the medical service with upper abdominal pain. This patient went into shock, with diffuse rigidity, distension and vomiting. The tumor could not be felt. The abdomen was opened with the diagnosis of ruptured tumor, probably ovarian cyst.

At operation I found the omentum adherent to a large subperitoneal growth, the size of a football. (Fig. 7). After freeing the epiploön, I incised the peritoneum and found a thick layer of fat completely enveloping the fibroid. The tumor was readily shelled out, showed no connection with the uterus, but was found attacked to the right round ligament where this band enters the internal ring. The patient has remained well (1½ years).



FIGURE 7

Case 7. Fibroid of round ligament, and its coverings of fat and omentum.

1. Tumor exposed.

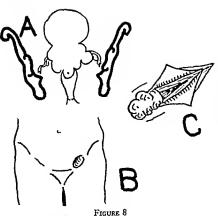
2. F. is the fibroid seen through the incision in the fatty envelope.

3. The relation of the tumor to the round ligament R.L., and the uterus, Ut.

Case 8. Recently I operated upon a private patient for multiple fibroids and incarcerated left inguinal epiplocele. After completing the hysterectomy and closure of the median incision, I cut down upon the inguinal ring. The "hernia" proved to be a fibroid of the round ligament where this structure emerged from the external ring (Fig. 8).

Case 9 was operated upon on my service for large ovarian cyst (Fig. 9). The tumor proved to be a large cystic fibroid (fibro-cyst) containing 2 gallons of fluid

(Fig. 10).

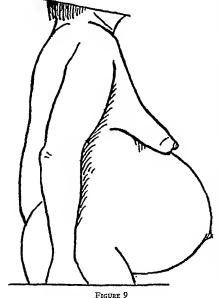


Case 8. Fibroid of round ligament.

A. Pelvic relations. B. "Hernia."

C. Fibraid of round ligament dissected.

Operations for Fibroids. As to the nature of the operation, this, after all, is a question to be



Case 9. Patient with cystic fibroid.

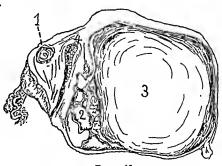


Figure 10

Case 9. The uterus bisected.

1. Small intramural fibroid.

2. Small cyst cavity traversed by vessels.

3. Two gallon cavity (fibra-cyst).
4. Elongated uterine cavity.

determined mainly at the time of the intervention and, as it is essentially a surgical problem, should be left to the operator. The choice of performing a conservative operation, namely myomectomy for multiple fibroids, may arise. This applies particularly to young women with normal adnexae, who desire to have children. In deciding it must not be forgotten that the most careful myomectomy may be followed sooner or later by recurrence of fibroids, which at the time of operation were of such small size as to escape notice. Where special indications do not exist, most men who are conservative in their diagnosis pre-operatively, find it necessary at operation to perform a hysterectomy. (5.4 per cent of myomectomies in my series.) Myomectomy, too, is a more dangerous operation than hystercctomy, with a more stormy convalescence and greater danger from hemorrhage and peritonitis. It is unwise to promise too definitely to perform a myomectomy as this may prove technically hazardous or impossible. The operator's action must be free.

As far as hysterectomy is concerned, I personally prefer, unless very special conditions obtain, to amputate through the cervix, leaving a cervical stump, because even in the hands of experienced men, complete hysterectomy with the removal of the cervix, entails a greater morbidity and likewise a greater mortality. Removal of the cervix does not guarantee against a vaginal carcinoma. If the cervical canal shows signs of irritation, the endocervical mucosa can be cored out from above without in any way increasing the risk. I give this advice in spite of being well aware of the possible occurrence of "stump cancer," having seen a small number of carcinomata developing in the cervical stump (8 cases). If this rare and unfortunate sequel should occur, we have found this type of tumor particularly blood supply is preserved, my hormonal studies amenable to radiotherapy.

Whether the ovaries are to be removed or retained presents an individual problem in each instance. In women up to 35 years of age, every effort, consistent with safety, should be made to retain the adnexa. After 35 years of age I prefer to perform bilateral salpingo-oophorectomy. In 33.8 per cent in my series, castration was imperatively indicated by associated lesions. effect of retention of the ovaries after hysterectomy is very variable. In a few patients no disturbances occur, in others typical menopausal symptoms develop, in the remainder the climacteric troubles are atypical and of long duration. That the ovaries continue to function, if their have shown conclusively.

The operation of hysterectomy in good hands in well selected cases, entails a mortality of from 1 to 3 per cent, but the best of operators cannot avoid the occasional occurrence of fatal thrombosis and embolism, the occasional post-operative pneumonia, and still more rarely, in spite of every precaution, the occurrence of peritonitis. Consequently, the conscientious surgeon and also the family practitioner, should carefully study and weigh the existence of a major intervention before advising this operation; and in borderline cases, should observe the patient over a considerable period of time before counseling radical measures.

TREATMENT OF HEPATIC CIRRHOSIS WITH INSULIN

A PRELIMINARY REPORT WITH CASE HISTORIES*

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TEPATIC cirrhosis is a common, chronic, progressive, fatal disease characterized by a fibrosis of the liver. It has a multiple etiology and a correspondingly variable clinical pieture. It also varies according to its stage both

anatomically and clinically.

The duration of the disease from its incipiency to its finale is difficult to determine. As the majority of the cases show definite signs of eirrhosis in the late forties, and because the etiologic factors that are strongly suspected of producing this disease-alcohol and lues—usually start their effect on the system in the early twenties, one can feel that the disease may run twenty to thirty years. This is borne out by the fact that autopsies on subjects dying from other causes, and subjects operated on for other conditions have shown cirrhotic livers without any symptoms of cirrhosis being present. There are, however, numerous cases reported that have run their course in less than a year.

The progressiveness of cirrhosis is quite apparent by the steady downhill course it takes once the diagnosis is made. That it is progressive throughout its whole course is generally accepted today. Its rate of progress varies with the etiologic factor, with the age of the patient, and because of some unknown or "accidental factors."

Moon¹ has shown from a pathological study that the condition is progressive, but that its rate of progress is not uniform. From an examination of the specimens he was able to detect periods of very active progress and periods of lateney. On checking up with the clinical history he found that the younger the patient the more rapid the progress of the cirrhosis, and in patients over

fifty years of age there was comparatively more healing and apparently a milder and slower advance. It was evident to him that many cases had considerable periods of latency with possible improvement alternating with periods of prog-These periods paralleled the clinical manifestations, being definitely more active when ascites and haemorrhage were present. Snell2 from a clinical study of cirrhosis, came to practically the same conclusions. Also because the diuretics became less and less effective after each course until they finally ceased to act he felt "that the natural course of portal cirrhosis is downward."

Hepatic cirrhosis has a very bad reputation. The death rate may be influenced slightly with the etiology although in the most favorable group it is still high. The prognosis is grave at any stage and it is certain that cirrhosis cannot be cured anatomically. The high mortality of the group studied by Snell gave him startling evidence of the gravity of the situation, even in the early stages. Rolleston3 in 1929 thought the prognosis was far from cheerful and that in chil-

dren it was especially grave.

There is a marked difference between the early and late stages of cirrhosis. The early stage is silent. As no symptoms interfere with his accustomed life, the subject is ignorant of the fact that a disease process is affecting his liver. This unknown period may extend from a month to perhaps thirty years. In the words of Mills4 "the process is so insidious, the damage so gradual, the compensation so perfect" that the greater part of the liver is destroyed before the silence is broken with the familiar clinical signs of cirrhosis. It seems remarkable that such an important vari-functioned organ as the liver can be

^{*} Read before the Midtown Clinical Society, on December 19, 1932.

contracted at times to one-fifth of its size and ca-

pacity without the slightest murmur

The early stage is termed the latent or preascitic From the well-known progressiveness of the disease during the early stage the term latent is misapplied. This name should be reserved for the truly latent periods which are known to occur and the stage should be called the early or preascitic.

The late stage is called the active or ascitic. It usually comes on as a great surprise to the patient. Some precipitating factor can be recognized in most cases and the change appears quite.

quickly as a rule

The commoner symptoms of cirrhosis occur in the second or late stage of the disease. They are aseites, haemmorhage from an esophageal varix, and jaundice. The ascites is by far the commonest, best known and most prognostic symptom, the esophageal haemmorrhage much less common, while jaundice found largely in the bihary type, is of rare occurrence, and when it occurs in other forms, is usually only transient.

The ascites then is the outstanding symptom of cirrhosis and is the symptom by which the vast majority of cases are diagnosed. It is a visible and conspicuous symptom being recognized by the ancients who even at that time associated it with disease of the liver. To the clinician cirrhosis usually implies ascites The difficulties of recognizing eirrhosis of the liver before decompensation occurs have been so great that it is customary to make the diagnosis on the ascites Although the disease may be suspected in the alcoholic, it is difficult to be certain of the diagnosis until the abdominal fluid is evident According to Rolleston,8 ascites occurs in the vast majority of eases that run their course In those cases then that are diagnosed in the early stage one can sooner or later expect ascites providing some other disease does not end life

The rate of development and the rate of recurrence of ascites has a prognostic value. A slowly appearing ascites which fills up gradually after a tapping gives much more hope than one that appears and fills up rapidly

Ascites is a grave symptom of eirrhosis. It is a terminal symptom. Its occurrence, according to Rolleston^a has always spelled the doom of the patient. In 1929 he did not believe that one could look for a recovery once ascites had appeared. He felt that with its onset death from toxemia and coma was prone to follow. Chapman,^b Snell and Rowndtree regard ascites as a critical manifestation and have accepted it as a definite evidence of decompensation of the portal circulation. They furthermore say that the prognosis in decompensated cirrhosis is extremely grave.

Treatment has had little or no effect on the course and outcome of the disease. The authors

of twenty-five to fifty years ago were very pessimistic about the treatment once ascites had oc eurred Hale White' did not accept the diagnosis in cases reported as cures by earlier writers Hawkins' in 1908 said "any such improvement in which the term recovery can be applied is extremely rare, and the possibility of an erroneous diagnosis at onec crops up in such cases recorded case, however, in which the diagnosis was confirmed by the supervention on separate oceasions of mental symptoms and of peripheral neuritis, both elearly of alcoholic origin, the patient was in good health after repeated tappings, the first of which was performed some six years before by Bristrowe And in another instance the patient was in good health after fourteen tap pings-the first of which was more than three years before A striking example is afforded by the case of a patient who died of contracted granular kidneys and pericarditis in St. Thomas' Hospital Twelve years before he had been under the care of Murchison in the same hospital for alcoholic cirrhosis and ascites From that date the patient, who had previously drunk freely became a tectotaler and during those twelve years had been in fair health. Autopsy showed atrophic cirrhosis of the liver"

Bettman* in Forchemer's System of Medicine in 1916 says that it is certain that well-established cirrhosis cannot be cirred anatomically, nevertheless cases are recorded in which apparent cirrhosis with ascites has been followed by actual recovery for many years

For considerable time it has been held by many students of the problem that no treatment was of avail and even tapping was hardly worth while as patients frequently did not live long enough for the second tap, except in cases complicated by chronic peritoritis

As was pointed out by Snell later observers have been somewhat more optimistic. All the literature up to 1928 gave two to five months as the average duration of life after the appearance of aseites. Although eighty-four of Snell's series of one hundred twelve cases were dead at the time the average duration of life was sixteen months after the appearance of ascites. And the twenty-five patients that were then alive had averaged thirty one and three-fourths months after the decompensation.

To-day many clinicians put eighteen months to two years for the average patient to hie after he has developed aseites. It is generally accepted that an oceasional case may subside and live over a period of years. Some cures have been spon tancous and some have followed practically each and every treatment used in cirrhosis with aseites

Too much optimism must not be indulged in for as is pointed out by McIndoe^o there comes a time when not even the palliative measures suffice and the patient succumbs to one or another of the many complications of which they are especially susceptible. They pass by the haemmorhage and ascites and succumb to hepatic insufficiency. Whether or not their cases were cured, Chapman et al left open to discussion. Comfort¹⁰ and Snell brought out the point that there are no specific remedies for hepatic insufficiency and that the natural compensatory processes which accompany chronic hepatic disease are themselves a menace to the person affected. Chapman felt that in most cases treatment can only be directed to the removal of the ascites, a treatment symptomatic at best and which had little if any effect on the varied course of the disease and one that has been criticized by the older writers.

In treating hepatic cirrhosis the first move is to eliminate the etiological factor. This is not always possible. Actually, it is rarely possible. In Chapman's series half the patients gave histories of two or more etiological factors. Alcohol can be accepted as a factor in cirrhosis, but it probably plays an indirect part. Many chronic alcoholics never develop the disease, yet it is not uncommon in abstainers. Nevertheless an alcoholic history is common in cirrhosis and therefore alcohol should be interdicted. That the stopping of alcohol is of value is shown in the cases which are not infrequently reported in which a man who has begun to show signs of cirrhosis stops drinking—gets well, and stays well.

Lues, a well accepted cause of cirrhosis, should be given the approved treatment. Where it can be shown to be the sole factor in the disease, the prognosis becomes brighter. Many clinicians believe that this is the only curable form of cirrhosis. In Snell's series the patients that were alive ten and twelve years after the beginning of ascites were luetic. Luetic cirrhosis takes on two forms, a gumma or, the usual cicatrices and fibrosis. The gumma which is the most characteristic form of chronic syphilis is curable by treatment while the fibrosis is quite unyielding.

Potassium iodide has been used routinely in cirrhosis for many years. It has no effect on the fibrosis but if by chance a gumma is present in the liver the patient will be helped and may even be cured. Likewise the removal of seasonings from the food is an empirical procedure without visible improvement.

When the cirrhosis can be traced to some biliary obstruction surgical intervention is indicated and is usually followed with good results.

All medical treatment of hepatic cirrhosis to date, outside of the aforementioned prophylactic treatment, has been limited to the relief of the ascites. This relief is entirely a symptomatic treatment, and incidently the treatment of a late symptom. There has been no attack on the disease itself so it progresses on at its accustomed rate irrespective of the type of therapy now known.

The surgical treatment of ascites can be divided into major and minor procedures. The major operations may be passed over briefly because of the small number of favorable results in such a highly fatal procedure, and because even in the end they only relieve the ascites and in no way stop the disease. Yet an occasional recovery is reported for each of the operations, and so some consideration must be given to this therapy.

The minor surgical operation in ascites, paracentesis, has been the most popular from the earliest history of the disease up to today. It outranks all other surgical and medical therapy. It is a simple, harmless, procedure which gives immediate relief to the patient. In the last part of the past century some eminent men taught that tapping was a harmful act. Today the consensus of opinion is that tapping has no effect one way or the other on the duration of the disease but is a great relief to the patient and thereby should be done when the patient is suffering from pressure symptoms.

Patients may require tapping in severe cases as frequently as once every other day. A large number average about a week apart; while the milder cases only need paracentesis every six to seven weeks. As a rule, as the case goes on, the operations become closer and closer. There may be as many as fifty tappings in some cases; in fact Barker¹¹ quotes a case that had recovered from the ascites after the fiftieth paracentesis.

The medical treatment of ascites, purges and diuretics have been used from the earliest of times with the same poor results. The strain on the patient was never worth the small response.

Several years ago however, a new element was introduced which, in connection with diuretics, made a marked progress in the medical treatment This was the organic mercury comof ascites. pound generally known under the trade names of Merbaphen and Salyrgan. According to Chapman, et al, eighty per cent of the cases showed some response, a fair percentage showed considerable results, while about twenty-five per cent showed brilliant results . . . one case having had five years relief from the ascites. They felt that it was successful in fifty per cent of the cases as far as immediate results were concerned. They did not believe that life had been prolonged thereby and incidently that the removal of the ascites of itself was not noteworthy in checking the progress of the disease.

The treatment has considerable limitations. Old debilitated patients; those with kidney involvement, jaundice and G-I bleeding; and those seen late in the disease will probably be injured by it. Indiscriminate use may bring on retention of urea and acidosis.

Chapman thought that the response to treatment may be satisfactory to a degree permitting the patient to be dismissed from the hospital, re-

lieved of the discomforts of his disease, and able to carry on his business for a varying time before there is another break in the compensation of the portal circulation. With careful treatment even the second or third break in compensation may be passed successfully and the interval of good health be prolonged.

At the present time dietetic measures are becoming more popular as adjuncts to the treatment of liver disease and we are becoming more acquainted with the high carbohydrate low fat diet

in such cases.

The authors of this paper felt that any rational effort made to reduce the number of tappings, or better to reduce the transudation of fluid in the abdomen, was a step in the right direction and a justifiable therapeutic aim.

We were especially fortunate to have several cases of hepatic cirrhosis with ascites under our care at the City Hospital that sought permanent hospitalization and therefore lent themselves to

study over a protracted time.

We were impressed with the value of the high carbohydrate diet in diseases of the liver12, 13, 14, 15, 16, 17, 18, 10, 20 and also with the ability of insulin to raise the hepatic glycogen,21, 22, 23, 24, 25 apparently so important in regeneration and detoxification, that we put these cases on the high carbohydrate diet and as much insulin as they could take comfortably.

We present the following case reports of hepatic cirrhosis with ascites that were markedly

helped by insulin.

Case History No. 1. Thomas L., 47, a stationary engineer and a drinker for years was admitted to Bellevue December 20th, 1927, because of a distressing ascites. Here he was discovered to be a diabetic and was put on 20 units of insulin a day and a low carbohydrate diet. He was balanced in a week and on the tenth day was tapped of twelve quarts of abdominal fluid. Up to the time of leaving Bellevse, March 1st, 1928, he continued with twenty units of insulin and a low carbohydrate diet. He followed the Bellevse regimen while at home until August 28th, 1928, when he entered the City Hostital pital. At that time there was no evidence of acites nor had there been since his first tapping at Bellevue. For the last five years he has been consistently on twenty units of insulin and a diet of C. 150, P. 100, F. 150.

Outside of the diabetic condition all laboratory data

have been negative.

An examination on February 15th, 1933, showed a well nourished active man with telangiectic veins in the nose but with no abdominal veins visible. The abdomen failed to show any fluid, and the liver and spleen appeared normal in size.

Comment: Here alcohol stands out as a definite etiological factor with diabetes as a secondary agent. We can justifiably assume from the history that his liver was in the late part of the preascitic stage before he became diabetic. ordinarily means a small liver and a reduced liver glycogen. As diabetes is a disease that when untreated lowers the glycogen content of the liver we would expect a very low liver glycogen in this case at the time his ascites appeared. We might further assume that the insulin raised the glycogen of his liver to the amount present before the diabetes occurred.

Perhaps we can explain the occurrence of ascites with the lowering of the glycogen of the liver by the diabetes and the disappearance of the ascites with the increase of glycogen by the in-

Whether the insulin by increasing the glycogen of the cells produced more regeneration than would occur without it cannot be said but such improvement as he made cannot be attributed to a high carbohydrate diet as he never went above 150 grams a day.

Case History No. 2. Louis K., 60, uphoisterer, admitted to the City Hospital, July 8, 1931, with the diagnosis of cirrhosis of the liver. His chief complaint was painless swelling of the abdomen and edema of the ankles. He said he first noticed the ascites in January, 1931, and since that time had been tapped once a month. Denied venereal disease, but admitted a moderate amount of alcohol. An examination showed the patient com-fortable in bed without dypnsea or other complaints, Heart and lungs were negative. There was no evidence of lues. His abdomen showed ascites and there was some edema of the ankles.

His initial treatment was restriction of fluids and salts and various diuretics. On November 19th he was put on a high carbohydrate diet. On December 1st five units of insulin were added before meals with a weighted diet

of 400 grams of carbohydrate.

A progress note dated December 22nd says as follows: "Patient has had a tap once a month for the last yearsometimes at intervals of three and at times six weeks. The last tap was twelve days ago. Feels no fluid in abdomen which is unusual for this number of days. Ordinarily swelling comes back two or three days after the tap. Weight has not increased since he was put on the high carbohydrate and insulin. Feels better since he is on the new regimen.

His insulin was dropped from February 6th when he was given 15 units before each meal. The insulin was

dropped for good on May 4, 1932. He asked for a discharge in August because he said he felt too good to be in a hospital. He left the hospital on August 16, 1932, twenty-eight weeks or 196 days after his last tap. His discharge note reads "No ascites. Greatly improved. Diagnosis: Cirrhosis of the liver."

Dates of tapping at the City Hospital: 8-31, 13,000 c.c. 9-4-31, 20,000 c.c.: 9-15-31, 12,000 c.c.: 10-31, 5,000 c.c. 10-16-31, 6,000 c.c. 10-27-31, 18,000 c.c.: 11-9-31, 12,500 c.c. 12-9-31, 16,000 c.c.: 2-3-31, 6,000 c.c.

All laboratory reports were negative. A recent examination February 15, 1933, shows him greatly improved and considerably fleshed up. There has been no accumulation of fluid in the abdomen and hence no tap since he left the hospital.

Comment: This case exemplifies the dictum that cirrhosis developing in elderly people is mild. The fact that there is no visible etiological factor makes one suspicious of an endogenous toxin. And because he responded so quickly to the treatment one feels that the toxin must have been

Case History No. 3. Edward R., 54 years of age on admission to Bellevue on January 13, 1931. His chief complaint was ascites of eight weeks' duration that appeared suddenly. He gave a marked alcoholic history, but denied venereal disease. While in Bellevue, about

thirty weeks, he was tapped 16 times.

He was admitted to the City Hospital on August 17, 1931. He showed telangieetasis of the nose and eheeks. There were enlarged veins on the abdomen. He had no jaundiee, no history of haemorrhage, and admitted to a good appetite. He had no signs of lues and his heart was apparently normal. During the first week in the City Hospital he was tapped three times. Following that he averaged eight days between tappings for a while.

On December 1st he was started on 5 units of insulin before each meal and 150 grams of earbohydrate were added to the daily ward diet. On the 13th of Deeember he was admitted to the metabolie ward for further study. On the 12th his insulin was raised to 10 units before each meal with a weighed diet of at least 400 grams of earbohydrates. It was very hard to get him to eat his full quota of starehy foods as he complained that he would lose strength and die if he did not get more meat and less carbohydrates. He said that he never ate potatoes or sweets as far back as he could remember, making meat and fish the main part of each meal.

A note on the 16th of December said that he was last tapped on the 11th and that the fluid was not eoming back as fast as usual and that he felt better all over. This tap ineidently was the 37th to date and the 19th

since August 17th.

His insulin was discontinued from May 4th to July 11, 1932. He was then put back on his former dose of 15 units before meals. Up to June 14th the taps were getting further apart. He had six taps so far in the metabolic ward during the 22 weeks. This averages about 25 days between taps rather than the eight-day schedule before starting the insulin. Beginning on the 14th day of June he went 14 weeks without a tap. Unfortunately a poor tap was done on the 14th of September and only 3,000 e.e. of fluid were removed instead of the usual 5,000 to 6,000 e.e. leaving what appeared to be 3,000 e.e. still within the abdomen.

Note on October 26th, says he feels very strong and is anxious for his discharge so he ean resume work.

All laboratory reports were normal. Recent examination February 15, 1933, shows condition excellent, no fluid, 168 days since the last tapping.

Comment: Here is a definite alcoholic history for thirty years. The other possible factor, lues, can be ruled out. It is of great interest, however, to analyze his diet. Here is a man of fifty-four years that all his life lived on excessively high protein with fats a close second. He disliked carbohydrates and went out of his way to avoid them. During his stay in the hospital there was one continuous complaint about the high corbohydrate in the diet. No matter how he was lectured to or scolded worked every ruse to get a high protein diet. The same pressure has to be brought to bear now while he is a clinic patient. Knowing the man we are skeptical about his diet while at home.

Case History No. 4. George H. A Japanese servant -admitted to the City Hospital, July 26, 1931, with the diagnosis of eirrhosis of the liver, probably luetie. He gave a history of a venereal chancre contracted in 1926, a recent positive Wassermann and three injections of arsphenamine.\ He admitted to a moderate use of alcohol for over twelve years. He denied any rheumatic history. On admission he showed ascites 4 plus with edema of the ankles. He left the hospital in the beginning of October. During this stay he received 12 injections of arsenie and 12 injections of bismuth. He was not tapped during this period and left the hospital somewhat improved. He was readmitted on November 5, 1931, with the straight diagnosis of luctic eirrhosis of the liver. He then showed a marked abdominal distention with some swelling of the feet. He was immediately put on 15 minims of K.I. t.i.d. and a teaspoonful of mixed treatment t.i.d.

Tapping was begun on December 2, 1931. On February 3rd he was ordered a high earbohydrate low fat diet. On the twentieth five units of insulin were started before each meal. Fluids and salt were restricted. The insulin was discontinued on March 12th. On March 22nd ten units of insulin were ordered for the day. This was eontinued until July 17, 1932. The insulin was started again on the 28th when 10 units were given before meals. On August 16th twenty-five units were given before breakfast and 25 units were given before supper.

There were 15 taps done from December 2, 1931.

The number of days between taps were as follows: 15, 20, 15, 14 (high earbohydrate diet started, followed by small doses of insulin), 23, 16, 11 (increase in insulin) 18, 20, 31, 30, 34 (further increase in the insulin) 65, 84.

Because the insulin gave him shocks now and then he became very uncooperative and would refuse meal after meal so he would not have to take the insulin. After the tap following the 84 day span he was noticeably emaciated and a very rapid return of the fluid occurred.

The majority of a number of Wassermanns taken

during his stay showed a faintly positive reaction.

Otherwise all laboratory data were negative.

A recent examination—February 15, 1933, shows him emaciated with intervals of about two weeks between taps.

Comment: This is our least responsive case. We consider it a definite luetic cirrhosis. feel that the arsenic and bismuth were detrimental to him. We believe that they added more load for the disabled liver and were in a large part the cause of the decompensation. Perhaps the alcohol played a part.

It would appear that definite fibrosis rather than a gumma is present in his liver as he has had a number of courses of potassium iodide in

large doses without any effect.

He is the only case that showed shocks from the insulin. At the start he was able to handle as much insulin as any non-diabetic but as time went on he got more and more shocks even when the insulin was reduced.

Case History No. 5. Wilfred A., earpenter, 36—was admitted to the City Hospital, service of Dr. Siglar on January 9, 1932, as a Bellevue transfer. He stated that early in December, 1931, he began to lose his appetite and get distress of the state of the He and get distress after even small amounts of food. He had no nausea or vomiting at that time. About the 15th of December became jaundieed. He thereupon entered Bellevue where he was given gall-bladder dye by mouth. On January 1st he began to vomit everything and lost about twenty nounds by the middle of Tongary. about twenty pounds by the middle of January.

The Bellevue transfer diagnosis was lead poisoning Entrance examination to City Hospital showed a middle aged, well built man with marked jaundice, mental dullness and edema of the ankles. The heart and lungs were normal. The pulse was 44 and the blood-pressure was 116/56. There was no ascites or distention. There was no visible masses or rigidity on palpation. Pressure over the gall-bladder region, however, elicited nausea and pain. The liver edge was not felt nor was the spleen palpable. At no time was there diarrhea or the spleen palpable. At no time was there diarrhea or

bloody stools.
On January 11th the blood urea was 20 mgs., the fasting blood sugar 100 mgs., the leteric index 200, the Van den Berg direct delayed reaction was positive and the bilirubin was 125 units. On the 12th of January the stool was negative for blood with benzadine, the E K G was negative, and a Wassermann was negative

Because of excessive vonting he was given by vein at 11 A M and again at 4 P M 300 e c of 10% glucose and 15 units of insulin. On January 14th the interior mdex was 150, the Van den Berg direct was positive and the indirect positive, and the blirtubin was 13.0 material. units An a-ray on this date showed the chest and heart negative There was no sign of abnormalities in the abdomen and no metastatic neoplasms found in the spine, pelvis or upper ends of the femora. This date showed the patient very restless with twitching clonic movements and an increase of the jaundice A diagnosis was then made of Acute Hepatitis (Sub acute Yellow Atrophy) with early cholemia

On January 18th he was better but with the jaundice still present. An intravenous injection of 400 c.c. of 10% glucose was given by vein on the 27th On the 2nd a note says that the patient was much better and the jaundiec improved but a cirrhosis should be watched On the fifth there was evidence of ascites and edema of the scrotum and legs. The teteric index was 100 and the NPN 30 mgs. The Van den Berg direct was immediate and the indirect was positive. The serum albumen was 43% and the serum globulin was 26%

A paracentesis was done on February 13th and 3,300 ce of a cloudy green fluid were removed. At this point the patient was given a high carbohydrate diet and five units of insulin BID. The insulin was continued until the 22nd when it was discontinued until the 28th when it was resumed and given through March 12th. The next paracentesis was done on the 8th of March when one and one half quarts of fluid were removed

The next and last tapping occurred on the 25th of March when 3500 ec were removed
On March 28th the icteric index was 35, the Van den Berg direct was immediate and the indirect was posi-tive. On April 2nd the icteric index was 20 and on May 25th the icteric index was 10 and both the Van den Berg reactions were negative

He was discharged on May 26, 1932, with a note saying that there were no complaints except tenderness about the liver and a continuous itch over the entire body

Comment We have here a case that fits into the class of cirrhosis that runs its course in a

The etiology is not clear though short time Bellevue considered lead to be at the bottom of it How much a part the dye played is a question, but it may have added to the insult. The entrance diagnosis of hepatitis or sub-acute vellow atrophy with cholemia is justified from the his-The use of intravenous glucose and insulm, although of limited amounts, seems to have turned the tide

The patient improved as the jaundice did Decompensation, however, set in about six weeks after the initial symptoms of disease Dr Lisa, pathologist at the City Hospital, is satisfied that cirrhosis commonly follows sub-acute vellow atrophy of the liver and it would seem to have occurred in this case

SUMMARY

These five cases of hepatic cirrhosis show the benefits of insulin High carbohydrate diet was employed when possible-which was in four In the first case the patient, because of hus diabetes, was carried from the start on the low carbohydrate dict and through his own choice remains on it. Yet this case has passed five years without showing a sign of a return of the ascites

We do not offer this treatment as a cure of hepatic cirrhosis nor do we ofter it as a permanent cure of the ascites, because we realize for that, longer periods of observation and post-mortem studies must be made. What we do believe, however, is that it will re-establish compensation in some cases and lower the transudation in others so that the intervals between tapping may be extended From the work of Moon and Snell we conclude that it has brought about a check in the progression of the disease as much at times to be called a latency

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PEDIATRIC DIAGNOSIS OF ORTHOPEDIC CONDITIONS

By ARMITAGE WHITMAN, M.D., NEW YORK, N. Y.

Read at the Pediatric Conference of the Fifth Avenue Hospital in December, 1932.

TAM constantly amused, and perhaps even more constantly irritated by the attitude of patients who resort to specialists for treatment. A man with whom I roomed in college once regaled me with the horrors of his son's broken arm and bemoaned the fact that they knew of no one but a general surgeon to whom they might take him. A patient with curvature of the spine will never suspect that a spine doctor treats feet, nor will a patient with infantile paralysis recommend his specialist for Pott's disease. short, the borderlines of specialization have become so sharply defined that doctors themselves are not quite sure where one specialty leaves off and another begins. Needless to say their uncertainty has communicated itself to their patients, who select their own specialists, osteopaths, chiro-practors or what have you. You are familiar with the results, both to the patients and the medical profession. What this country needs, next to a decent political party, is doctors who are doctors and can see their patients as doctors first and specialists afterward.

These comments were aroused by the fact that when the subject "Early Deformities in Children" was suggested, there was some discussion as to whether such a paper should be presented to an audience of obstetricians or pediatricians. No definite decision was reached as to when a baby was weaned, so to speak, from the obstetrician. It was decided, however, that it was reasonable to suppose that the obstetrician's attention might possibly be slightly distracted by the mother in the case, whereas the pediatrician's professional gaze would, and should, be focussed exclusively upon the child.

I do not propose to enter into an exhaustive catalogue of congenital deformities and malformations. Mothers may usually be relied upon to notice that their child has six fingers or a spina bifida, although one encounters such extraordinary oversights that sometimes one doubts that anyone ever notices anything. I remember a twelve-year-old boy being brought to the hospital because the mother the day before had noticed that he could not supinate his hands. been Jewish this deficiency would naturally have been noticed before. The diagnosis was congenital radio-ulnar synostosis. The family history was taken and no such deformity had ever been heard of on either side of the family. The mother suffered from it herself and had never realized it until the moment of her son's examination.

I take it that everyone is in the habit of making a routine physical examination, examining every portion of the patient whether or not it seems germane to his complaint. I suggest a

few orthopedic additions to the pediatrician's routine physical examination, by which he might notice early defects which age makes it increasingly difficult to correct. I know of no art more hemmed in by superstitions and traditions than medicine. "Don't take her to a hospital, she'll die there." "You can't treat that now, the child is too young." As a matter of fact the growing child is comparable to a growing tree, and the sooner any twist or kink is recognized, the easier is it to undertake treatment and see that the child grows straight. From the orthopedic standpoint the only reason for delaying treatment has been that treatment often implied plaster of Paris, and that it was sometimes impossible to maintain plaster treatment effectively until the child was housebroken.

Beginning at the top and working down, the first member for consideration is the head. I suppose that nowadays in any case of prolonged labor or instrumental delivery the possibility of brain injury would be considered by all concerned. I do not know what the attitude of the pediatricians and neurologists is, but it would appear to me that in any such case, when the baby was either abnormally irritable or abnormally drowsy, a diagnostic lumbar puncture was justified. Whether or not, in cases in which the intracranial pressure continues high, a decompression is advisable is out of my province to say, but if it is, surely the earlier it is done the better. It would seem reasonable to suppose that at least some of the typical spastic cases that we see, as well as some of those rather loosely classed under the head of delayed cerebral development might be averted by early operative treatment. Speaking of delayed cerebral development it might be proper to say here that in badly spastic and deformed patients who can locomote, if at all, only with the most extreme difficulty, judgment as to their mental state should be deferred until their deformities have been relieved. Naturally I exclude the obvious idiots. In the doubtful cases, however, it would appear that the average patient has a given quantity of energy at his disposal, and if he has to use it all on the painfully difficult process of locomotion he has little if any left over for cerebration. I well remember a twelve-year-old colored boy, sent to me from South Carolina for operation. He was terribly deformed, completely helpless, and arrived with the local reputation of idiocy. His appearance and behavior on admission cast no doubt upon the diagnosis. I operated on him under protest really only because he had come from such a distance. As his deformities were corrected and he was enabled to walk, even with the assistance of braces and crutches, his mental improvement was nothing short of extraordinary,

and he left the hospital with an intelligence far above the average.

Harelip and cleft palate could hardly escape attention, and I think the doctrine of early surgery is governly accounted

is generally accepted. Torticollis, on the contrary, is rarely noticed until the child sits up, although occasionally the mother will complain that the baby holds its head habitually to one side. Stromeyer's theory is that the deformity is caused by partial or complete tear of the sternomastoid muscle in the course of a difficult instrumental delivery, and that as a result the muscle undergoes fibrous degeneration. It would seem more reasonable to suppose it the result of some intrauterine condition, but the etiology is unimportant. The deformity is mild at birth and might easily be overcome by systematic daily manipulations. The sternomastoid muscle draws the head toward the affected shoulder and turns the chin to the opposite side. All that is necessary, therefore, to make a diagnosis is to see that the head has an equal range of motion in all directions. After a year old, the only effective treatment is operative division, not only of the sternomastoid muscle, but of all the other contracted tissues in the neck. This is followed by immobilization in plaster of Paris in the overeorrected attitude, followed by systematic manipulation. Neglected eases of course lead to severe secondary deformities; hemiatrophy of the face, and kyphososcoliosis of the spine.

Congenital dislocation of the shoulder is comparatively rare. A condition for which it is frequently mistaken is Erbs' palsy, or obstetrical paralysis. This results from injury to the cords of the brachial plexus, most frequently the fifth and sixth. The common form of paralysis is thus of the upper arm type, the affected muscles being the deltoid, the supra- and infraspinatus, biceps, coracobrachialis, and supinators of the forearm. The common deformity, resulting eventually from unopposed muscular action is that the head of the humerus is gradually suhluxated posteriorly, so that the arm is abducted, flexed forward, rotated inward, and the forearm pronated.

The logical treatment of course is surgical repair of the injured plexus, but such treatment does not seem widely to have established itself. If the deformity is recognized and the arm placed and held continuously in the overcorrected attitude, the nerves seem, in a great majority of cases, to repair themselves. This treatment may easily be carried out by means of a wire splint, and provided it is uninterrupted the recovery is usually very satisfactory. When the injury to the plexus is more extensive as indicated by paralysis of the muscles of the land, the prognosis is much worse, and if early surgical treatment is ever to be employed it is in such cases. The majority of patients seen in hospital practice represent the later neglected cases in which the diag-

nosis has not been made. In these the unopposed action of the normal muscles may have brought about a posterior subluxation, if not actual dislocation of the head of the humerus, and open operation, division of the contracted nuscles, and reduction of the dislocation is necessitated. The degree of recovery is then usually very satisfactory, although of course the upper extremity never loses the atrophy which it incurred during the period of disuse.

Congenital scoliosis-curvature of the spineis almost never noticed until the child sits up, and the force of gravity is allowed to exert its pernicions influence. True congenital scoliosis comes from a bony malformation of the spine, such as a hemivertebra. Frequently such malformations are multiple. They may be detected by a routine careful palpation of the spine, and if found early and treated by prolonged recumbency upon a convex stretcher frame, supplemented later by apparatus they may be arrested. If progressive, in spite of treatment, the logical remedy for such a deformity is a fusion operation. Some enthusiasts, striking at the root of the matter, are recommending removal of the offending vertebræ in toto. While such surgical feats are possible, their advisability seems to me improbable. what a surgeon can do, and what he should do, is a wide margin requiring the exercise of surgical judgment.

Having inspected the head, neek, upper extremities and spine we come now to the most important subject, congenital dislocation of the hip. This is a condition in which, from the orthopedie standpoint, the results are notoriously unsatisfactory. This deformity has been a cinder in the American orthopedic eye since Dr. Lorenz came to this country thirty-two years ago to treat Lolita Armour. Dr. Lorenz is a Viennese surgeon who was long ago forced to give up surgery because his skin would not stand the carbolic spray under which surgeons at that time operated. He thus became interested in seeing what could be done without the knife, and succeeded in reducing a number of congenital dislocations of the hip. He published his method, which was widely employed in this country, and was tried unsuccessfully upon his famous patient by two surgeons. As a last resort Dr. Lorenz, as the originator of the method, was imported, and his effort—a fact which has escaped public attention -was also unsuccessful,

The incident was useful in focussing attention upon the deformity, and since then, while orthopedic ingenuity has been devising more successful methods of treatment, inclining more and more toward various open operations, the truly important factor in treatment is early diagnosis. As a matter of fact, Dr. Lorenz is somewhat to blame for this, as he announced that he did not care to treat children under four years of age.

This was because he used plaster of Paris as a fixation apparatus and there was no use in applying plaster until the child was housebroken. That was logical enough, but at the same time it removed a great responsibility from the pediatricians, because by the time the child began to walk anybody could notice that it limped.

I now propose to place that responsibility back upon their broad and capable shoulders. Professor Vittorio Putti, of Bologna, Italy, lives in a district in which, for some reason or other, the deformity is extremely common. He has succeeded in educating the mothers in that district to look for, and find the deformity, and his results, when treatment by a wire splint is begun early and rigorously maintained, far surpass those obtained anywhere else by any other method.

Inspection and measurement will show shortening in unilateral cases. In bilateral cases it will be seen that the trochanters are elevated and The head of the bone cannot be felt prominent. beneath the femoral artery. If the hip be fully flexed and adducted the head and neck may often be felt displaced posteriorly, rotating beneath the gluteal muscles. Either pulling or pushing on the limb as a whole will disclose the abnormal mobility of the displaced head. When in doubt an x-ray will make the diagnosis, although I resent the degree to which the x-ray has displaced the evidence of our senses. We are rapidly approaching a time when a patient cannot have a disability unless it shows in the x-ray. I digress, excusably, I think, to mention the number of neglected joint conditions that I see, neglected because an x-ray was taken at the time of the injury and the x-ray showed nothing. As respects orthopedic conditions the x-ray shows very little but bone, which perhaps explains the homeopathy of its appeal. Injuries to cartilage, ligaments, tendons and muscles do not show in the x-ray, and if neglected are often far more serious in their late effects than is a simple fracture.

It is Putti's practice to reduce such early cases without an anaesthetic, and maintain the reduction by some form of wire splint which may be removed for cleansing, while the mother holds the limb religiously in the position of reduction. Unsatisfactory results are almost always caused by failure of development of the roof of the ace-When mutual pressure between the head of the femur and the acetabulum is established early it seems of the greatest importance in stimulating development of the roof of the hip joint. The excellence of the prognosis, therefore, varies inversely with the age, and I can think of no disability in which the mutual assistance of the pediatrician and the orthopedic surgeon would be more truly mutual and would bear better fruit.

Congenital contractions of the hips and knees occur, but are rare, are obvious and easily de-

tected. As a rule they may be corrected by simple daily manipulation. I may here interject that there are a great number of conditions that might be cured by simple daily manipulation—provided the parents could be trusted to carry them out. I am continually astonished when I review the scale, starting with chiropractors at the bottom and highly trained gymnasts and physical educators at the top, and think of the time and money that are spent on such treatment that could just as well be carried out at home. Indeed, there are times when one wonders, not whether honesty pays, because of course it doesn't, but whether honesty works. Is not an element of charlatanism necessary to make a patient follow simple, daily routine treatment? I suppose we should not wonder when we recall how long it took us to establish brushing of our own teeth.

Bowlegs and knock knees are subjects which cause much heartburning between pediatricians and orthopedic surgeons. Of course, they are usually caused by a greater or less degree of rickets, and as the pediatrician is supposed to cure rickets before it even appears he resents the diagnosis as casting doubts upon his constitutional treatment. To salve his feelings, therefore, I wish to say that his treatment of rickets has been so successful that as a staple of orthopedic practice bowlegs and knock knees have been almost cut Twenty years ago at the Hospital for the Ruptured and Crippled an operative morning never passed without two or three such cases, and the brace shop was always busy making braces for the milder ones. Last year on my service two such operations were performed. I can also testify that such deformities occur in the absence. of rickets and in most robust and healthy children, so that the pediatrician need not feel slighted by the diagnosis.

The orthopedic surgeon, on the other hand, has his feelings occasionally lacerated by advanced cases that were taken by anxious patients' parents to the doctor, only to have their fears poohpoohed with the phrase, "Oh, the child will grow out of it." The fatal danger of that phrase is that it is so often true. The trouble lies in the tact that I, at least, know of no way of separating those that will from those that won't. There can be no harm in taking tracings of the child's legs and instructing the parents in daily bending of the limbs, which simple measures are in most cases, provided they are faithfully carried out, all that are necessary. In case they are not successful advanced cases may be most satisfactorily treated by operation. In expert hands the operation is simple, accurate and painless. The reason that I venture to emphasize the expert hands is lest some of you may have painful memories of the girl in Chicago who recently lost both legs as the result of inexpert ones. The operation is followed by eight weeks in plaster, during which time the child is encouraged to stand about, and walk with crutches. The plaster is then removed and braces substituted, which are worn for a period depending on the rapidity of bone repair in the particular case. The alternative is corrective braces worn as a rule for over two years. The result can never be predicted with certainty, so that the operative treatment of severe cases seems to me, though involving the shedding of blood, far more merciful.

We started the orthopedic examination of the child at its head, and we have now reached its feet. We may regard the feet as one of the staple sources for low humor, or, as I prefer to, as the foundation of the human body. Certainly I should prefer a good head to good feet, but no one can deny that the foundation is of prime importance to any structure, and that it deserves constant supervision.

I think this subject of such importance that perhaps I may be excused for a brief historical digression. Foot troubles are vulgar. They are vulgar because they are associated with the "vulgus" or mob, whereas the term for aristocrat in Latin was "equester" and in French "chevalier"in other words, a man who rode a horse. Consequently his feet were functionally of no importance, and could be used merely as an ornamental finish to a gentleman or lady. The shape of the shoe had no relation to that of the foot, and was dietated solely by fashion. I recommend a visit to the exhibit of arms and armor at the Metropolitan Museum.

I recently encountered a perfect example of the historical attitude. A patient came to my office, a man I knew socially. With an extremely deprecatory smile he enquired if I ever did anything for the feet, because he had a big toe that was giving him hell. He had injured it in youth and had the equivalent of a baseball finger. Suffering from such an injury to the finger one avoids using the finger, which eventually gets well. Such an injury to the toe gets no rest, and eventually gets worse. The man was thirty-five years old, a stockbroker. He was unable to stand on the floor of the Exchange. He could not play squash, tennis or golf. When he returned home in the afternoon he was forced to take a taxi from the elevated, two blocks from his home. Such effects produced by a decompensated heart would bring tears. Produced by a toe they inexplicably became funny.

I suppose I am in radical disagreement with almost everyone here on the subject of treating growing children's fect and perhaps this is the best opportunity I shall ever have to explain such

an extraordinary difference of intelligent opinion. The feet may be used in two ways-in the active and in the passive attitudes. In the active attitude the feet are held parallel, straight allead, under the leg. The whole foot, not the heel, is brought to the ground at once. The gait is soft, stealthy and catlike. The active attitude is attained by constant practice, and maintained by

muscular activity alone.

When the individual is untrained or fatigued, he lapses into the passive attitude. He collapses upon his ligaments and bones. His feet are abducted, toes turned out, feet held wide apart so that the body weight falls upon their structually weak inner border. He takes long steps and bangs upon his heels. He walks like a sailor on a rolling deck. He emulates the staggering infant or the inebriated adult.

I wish that all bad habits could be cured by conversation. I believe firmly that the treatment of the feet begins in the head, and that if I could persuade a child, his parents, his associates, his teachers and his doctors to take as much intelligent interest in his feet as a child prodigy does in his violin, shoes or any apparatus would never

be necessary. But I cannot do it.

Conversely I have never been able to see how a bad habit is to be cured by persistence in the bad habit. I have no idea of the number of children brought shambling in upon weak feet and knock knees whose parents, when reproached, say mournfully, "I noticed that years ago, and Dr. Blank said, 'Oh, never mind. Take off his shoes and let him run barefoot and he'll grow out of it.'"

This provides a pretty picture of Junior gamboling in the dew, drinking in the sunshine through every pore of his bare feet, but how it teaches him to use them properly I don't quite see.

As a compromise between these two extremes of idealism my father long ago devised the Whitman brace, a form of apparatus the purpose of which, in the treatment of children, has been almost universally misunderstood. It is generally regarded as a rigid, painful, steel support, which does all the work for the muscles, cramps the growing structures, and upon which the child be comes indefinitely dependent. It is contemptu ously dismissed as a form of arch support, and as such, as made and applied indiscriminately by bracemakers and even shoemakers, it deserves such dismissal.

The purpose of the brace is to force the child to hold his feet straight and to hurt him if he doesn't. By keeping his feet straight it forces him to use the muscles of his legs in walking. When his muscles become fatigued the brace supports the foot, but supports it constantly in the correct attitude. The mental aspect is forever emphasized. It is pointed out that the more effective the treatment is carried out the sooner the braces can and should be discarded. I deplore the necessity for placing unyielding metal in contact with an adolescent tender sole, much as I deplore the placing of a curb bit in the tender mouth of a young horse, but I reognize the necessity for

the training of both, and feel that in the end such stern measures are the most merciful.

There is always a tendency in a paper of this sort either to affront your audience by speaking in too simple golden words or to bore it by assuming that it knows too much. I have said much that I am sure many of you knew already. I shall feel rewarded if the pediatrician's diagnostic vision now embraces a little more of structure and locomotive functions of the body.

Discussion: Frederic H. Bartlett, New York. N. Y. In regard to the substance of his paper, all that I can say is that my plan has been to let children walk barefooted, to walk barefooted in the sand, and drag the feet in the sand with a view to strengthening their ankles. If his theory is correct, I have been wrong, and he has almost, but not quite, convinced me that I have been absolutely wrong. I still feel that there is something to be said for the use of the muscles of the ankles and leg as a means of strengthening the foot and

leg. The points in his paper make me wonder if I have been correct. He presents the matter in a most convincing way, although I confess I am still to go one stage farther before I am fully convinced that his advice is entirely the correct one.

As to the future of my own handling of children, I confess I do not know whether to follow Dr. Whitman's plan, or to fear it. The coward always walks in medias res, and I daresay that I will be one of those middle-road men without the courage to take the stand.

THE ONTARIO COUNTY PLAN FOR THE MEDICAL CARE OF INDIGENTS By HOMER J. KNICKERBOCKER, M.D., GENEVA, N. Y.

From the Economics Committee of the Medical Society of the County of Ontario.

HE County of Ontario, State of New York, comprises a territory of 649 square miles. It had a population of 54,276 in 1930. There are two cities, Canandaigua with a population of 7,541, and Geneva with a population of 16.053. There are ten incorporated villages and seventeen organized townships. Each of the two cities is operated independently of the township in which it existed prior to its incorporation as a city. Both of the cities and seven of the villages are more than 40 per cent industrialized. There are 69 physicians in active practice. The County Medical Society roster contains the names of 75 members, in addition to which there are four physicians practicing within the county who are not members of the County Medical Society. Ontario County has a reputation for pioneering. The first rural public health laboratory and the first rural tuberculosis sanitarium in the state are among its achievements.

Article 2, Section 4 of the New York State

Public Welfare Law reads as follows:

"The Superintendent of the Poor, elected or appointed in each county, shall, after January 1st, 1930, be known as the County Commissioner of Public Welfare and shall have all the powers and duties of a County Commissioner of Public Welfare as defined by this chapter."

This applies exclusively to Ontario County without mentioning it. What we now know as the County System originated in the County of Ontario in 1836 and has since been in

operation. Under this plan all Public Welfare relief is chargeable to the county as a whole, and no charging back to the township or city This makes it possible to have a compact unit under which the Commissioner of Public Welfare heads the organization with deputies scattered throughout the county. The deputies do the investigating only. The Commissioner approves or disapproves the applications for assistance and issues all requisitions for medical care and hospitalization. No deputy is permitted to hospitalize a case except in emergency. There are three completely approved general hospitals within the county having a total bed capacity of upwards of 385. In addition there is a small private institution qualified to care for maternity patients, and certain types of medical, old age, and boarding cases. A Childrens' Home, a tuberculosis preventorium, a tuberculosis sanitarium, and emergency accommodations at the County Home are also maintained.

Until 1932 doctors were under contract, one in each town or city in the county. Their annual compensation ranged from \$15.00 to \$150.00, and they were supposed to provide medical care for all people receiving county aid. In some instances they never did earn their money, while in others the pay was ridiculously small for the work done, and in still others the contracting doctors dumped everything they possibly could into the hospitals and onto the service of the medical staff.

Naturally this state of affairs did not meet with the approval of the medical profession in general. After the Public Welfare Law was passed, we sought to have the county abandon the contract system and substitute therefor the privilege of free choice of physician and payment for services rendered by some form of agreement between the County Medical Society and the Commissioner of Public Welfare. All kinds of obstacles were encountered, but finally after twenty months of discussion the Medical Society accepted an agreement of its own writing, and guaranteed to the county that for the year 1932 the expense for medical care alone would be no greater than it had been for the previous year under the contract system.

The essential points of the agreement are as follows:

- 1. That the Board of Supervisors provide a lump sum appropriation for medical services to welfare cases, which remains intact until the end of the calendar year and then is prorated by the Commissioner to the various physicians presenting bills for services based on the County Medical Society Fee Bill. The County Medical Society undertakes to guarantee the validity of these bills by viseing each one before presentation to the Commissioner, Bills are presented to the Commissioner quarterly.
- 2. The custom of employing part time doctors for public welfare cases is suspended during the term of the agreement. Individual authorization is issued for each separate case accepted for medical treatment by the department.
 - 3. The types of cases covered are
 - a. Indigent poor.
- War veterans and their dependents who are accepted by the Commissioner of Public Welfare as proper charges against the Public Welfare District of Ontario County.
- c. Emergency old age cases accepted for hospital treatment but not for treatment in their homes.
- d. Children in boarding houses who are charges against the Public Welfare District of Ontario County.
- e. Public welfare cases employed on relief work projects disabled by accident sustained during such employment, but not to such accident cases in which no disability from work is sustained. This latter class falls under Workmen's Compensation Law so far as medical attendance is concerned. (Ontario County is a self insurer.)
- f. Exceptional cases whose welfare requires, may be treated by physicians in ad-

joining counties only with the approval of the Commissioner and the Committee on Medical Economics of the Medical Society. This last type of case is rare. It consists of the individual who lives near the border of the county, far removed from any physician practicing within the county and adjacent to an approved physician resident in another county, who is willing to accept the terms of the agreement.

The County Medical Society Minimum Fee Bill allows \$3.00 for a visit in a city and \$2.00 for a visit in other parts of the county. Calls between 6 and 10 P.M. are \$4.00 while those between 10 P.M. and 7 A.M. are chargeable at \$5.00 each. Office charges are \$2.00 with medicine, dressings, etc., extra. Uncomplicated obstetrical deliveries \$35.00 with \$50.00 for version or forceps. Anesthetic charges range from \$5.00 to \$25.00 according to the time spent and material used. Appendectomies and abdominal operations of similar magnitude are \$100.00. Hysterectomy, cholecystectomy, intestinal resection and stomach operations are rated at \$150.00. Hernias range from \$75.00 to \$150.00 according to conditions met. The charges for all major surgery includes a period of two weeks of postoperative care in the hospital only. Fracture cases are treated on the schedule sent out by the Committee on Medical Economics of the State Society some years ago and published in the Journal of May 1, 1931, page 555. The schedule includes dressings required for a period of three weeks following reduction. A uniform rate of \$3.50 per day for ward service in the hospitals has been agreed to. This does not include x-ray, ambulance, special dressings or medicines, nor does it include use of the operating room. Laboratory service is provided through the County Laboratory and is free to welfare patients.

Nothing in the agreement is applicable to cases arising within the county and chargeable back to any other county, nor to cases arising in any other county and chargeable back to Ontario County. Under the agreement no services are rendered to the inmates of the county jail, police stations, or the county lome. These are taken care of by individual contracts outside of the agreement with the County Medical Society.

Two emergency calls are approved providing the case is accepted later as a proper case for county welfare assistance. A public health or red eross nurse, police officer, state trooper, or welfare worker calling a physician is considered sufficient authority for the first call, with the understanding that prompt investigation will be made and if the case is accepted the first calls will be considered a valid charge against the allocated fund.

The privilege of caring for public welfare

cases under this agreement is open to every duly licensed physician and surgeon (but not to osteopaths) resident within the County of Ontario.

Neither the Commissioner, his deputies, or any one employed by or serving under his department shall in any way influence the patient in the selection of his or her medical attendant, providing that such selection be made from duly licensed physicians and surgeons resident in Ontario County who are approved by the Commissioner and the Medical Society, and are practicing within a reasonable distance from the patient's residence. The physician treating the case shall have the privilege of selecting any one of the three approved hospitals within the county in which to treat the A uniform hospital rate has been established. Patients are not encouraged to request treatment in hospitals removed from the district in which they reside, but they may be permitted to do so for special reasons. Separate written authorization for hospital care is issued by the Commissioner only on the request of the physician in charge of the case. All authorizations for medical and hospital service is limited to two months, after which it must be renewed.

Physicians treating public welfare cases agree to grant to the Commissioner all the consideration ordinarily granted to parents, guardians, and responsible relatives the same as they do with their private cases. They also agree to give the public welfare case the same consideration in treatment that they do their private cases.

Any grievance which may arise is subject to arbitration before a committee of the County Medical Society. The Medical Economics Committee is charged with the responsibility of making investigations, acting as mediator, and if indicated citing the case for arbitration.

During 1932 the plan worked satisfactorily. Every member of the County Medical Society cooperated. Some thought the red tape too much and presented no bills. Two of the four practitioners of the county, not members of the County Society, came in on the plan. Many bills presented by rural practitioners had to be marked up to meet the requirements of the county fee bill, while only four bills required reduction to the county fee bill standard. At the end of the year the accumulated

bills were prorated among the doctors rendering the service with the result that they received 16.3c for every dollar's worth of work they did. While this amount was ridiculously small, it was, nevertheless, just that much more than we would have received had we not been working on the plan, because under the old contract system no one except the contract doctor received anything for the work he did for cases under public welfare. agreement is a renewal of the previous year's plan with the exception that the appropriation has been raised forty per cent. With the increase in work it is doubtful whether the percentage received by the doctors will be greater than in 1932.

In the 1932 agreement mileage at the rate of 75 cents one way, beyond one mile from the physician's office was permitted. This appeared to work a hardship on the rural practitioner. Some investigation was done and it was found that the doctor who had traveled the largest number of miles on these cases received approximately 36 per cent of what he would have received had the cases been private cases and he had charged his usual fees. The 1933 plan includes a flat mileage allowance of 20 cents a mile one way, the total sum of which is to be deducted from the appropriation and paid to the doctors earning it before what is left of the appropriation is prorated for purely medical service. In this way it is hoped that a more equal distribution might be made so that the general practitioner in the country might receive compensation comparable to the time and energy spent by the doctors working in hospitals.

A survey of the county is in progress with the idea of determining what it cost in 1932 to do a dollar's worth of medical practice, and also what it cost to get a dollar for medical practice for the same year. When this is completed, we should have some definite argument with which to go before the Board of Supervisors when we request some guarantee that we will not be penalized for doing public welfare practice. We believe that we should at least be on the same footing as other individuals furnishing supplies of various kinds to the to the public welfare department. At present these supplies are delivered at cost to the department, and we believe that our services should be likewise compensated.

HYDROGEN-ION CONCENTRATION, ITS ELEMENTARY PRINCIPLES By GERALD MILOT, B.S., NEW YORK, N. Y.

From the Borden Research Laboratories

SINCE hydrogen-ion concentration is a common measure of acidity or alkalinity, it is imperative that all physicians understand the fundamentals of this analytical standard. What is hydrogen-ion concentration, how is it expressed and measured and why is its measurement replacing ordinary titration methods in physiological chemistry?

Review of Electrochemistry: Certain basic concepts of electrochemistry must be reviewed for a clear understanding of the hydrogen-ion theory. While it was formerly thought that acids retain their molecular integrity when dissolved in water, it is now established that a splitting or dissociation occurs. The acid molecule is apparently loosely bound. In water, part or all of it separates into two particles known as ions, bearing opposite electrical charges. These ions cannot be recovered from the solution as separate entities. Their existence, however, is easily demonstrable by electrochemical methods.

All acid solutions, therefore, contain positive ions, negative ions, and, sometimes, undissociated acid molecules. To illustrate, a solution of hydrochloric acid in water does not represent a definite number of HCl molecules permeating the liquid. On solution, the following dissociation takes place:

 $HCI = H^+ + CI^-$

Essentially, the HCl solution becomes a solution of hydrogen and chlorine ions.

All strong acids, such as HCl, HNO₄, and H₂SO₄ dissociate in entirety. The weaker acids, however, such as lactic, acetic, or butyric, are only partly dissociated in water solution. When acetic acid is dissociated, for example, according to the equation:

 $HCH_3COO = H++CH_3COO-$

part of the acid remains undissociated. The solution contains hydrogen ions, acetate ions, and whole acetic acid molecules. In general, all organic acids are incompletely dissociated while the stronger mineral acids are completely split in water solution.

It is a fundamental concept of ionic chemistry that all chemical activity, of the type that involves the union of two chemical entities to form one or more compounds, is a result of the interplay between ions and not between whole molecules. In other words, in an ionic reaction, an acid molecule may be considered to be chemically inactive until it is resolved into its component ions. Hence the chemical potency of an acid is directly related to the amount of ions present in its solutions, i.e., its degree of dissociation.

This theory explains the relative differences in "strength" between the various acids. We speak of HCl as a "strong" acid because of its intense power to react and to combine. In reality, this power is due to the complete dissociation of HCl in water and the correspondingly large amount of ions produced which are ready for chemical action.

So-called "weak" acids, such as lactic or acetic, have a milder degree of chemical activity because their solutions contain relatively fewer ions. It can now be understood why two solutions containing, respectively, equivalent amounts of hydrochloric and acetic acids, do not show the same intensity of acid characteristics. Although each requires the same amount of base for neutralization, the acid intensity of each solution is a function of the degree of dissociation of the corresponding acid and is not directly related to the amount of acid present.

Definition of Hydrogen-ion Concentration: All acids dissociate to form two oppositely charged ions. The negative ion differs for each acid and is characteristic for that acid. In solutions of hydrochloric, nitric and acetic acids, there are negative chlorine, nitrate, and acetate ions, respectively.

The positive ion produced on dissociation is the hydrogen ion and is found in all acid solutions. It is this ion which gives to acids their so-called acid characteristics, such as sharp taste and evolution of gas in the presence of metals. As was shown above, the amount of dissociation, or the number of ions present, is a measure of the activity or intensity of an acid. Hence, the determination of the actual amount of hydrogen ions in an acid solution is an effective yardstick of true acidity. To express this factor, we measure the actual weight, in grams, of hydrogen ions in a liter of solution. The result is known as the hydrogen-ion concentration.

Inadequacy of Simple Titration: If we now consider two solutions, each containing one molecular weight, respectively, of hydrochloric and acetic acid, neutralization in each case is effected by addition of one molecular weight of NaOH. Such a procedure is, essentially, a titration as commonly carried out. Using this method, the analyst would find identical amounts of acid in each solution and would report the acidities to be equivalent. Yet, as we know, these two acid solutions are by no means of the same actual strength, although containing equivalent amounts of acid. Both have the same total or potential acidity but differ in acid intensity because of the disparity in the number of hydrogen ions formed.

5 ---/- merelet It may be a question in some minds why titration with a base fails to show actual acid intensity. This is best illustrated by the classic example of the titration of acetic acid with standard NaOH. The chemical reactions involved, considered from the standpoint of ionic chemistry, explain why simple titration shows only total, potential acidity.

We have already seen the dissociation equation for acetic acid. NaOH dissociates in a similar

manner:

$$NaOH = NA++OH-$$

When the two solutions react, the following ionic interplay occurs:

Note: It is customary to indicate equilibrium in an equation by a double arrow. Furthermore, the heavy arrow shows the direction of preponderant reaction tendency. In the above, H₂O is only slightly ionized and therefore H and OH ions rush to unite. The ions of sodium acetate tend to remain separate.

If examined carefully, this equation is a key to a clear understanding of the chemistry of ions. According to the ionic theory, all chemical activity is between ions. We must visualize the molecules of the acid and the base dissociating to form ions which are then free to react. Since H₂O is only slightly ionized, there is a strong tendency for the hydrogen ion to combine, as fast as it is formed, with the hydroxyl ion which is present in excess. The rapid removal of the hydrogen ion disrupts the delicate equilibrium which has been shown to exist between the dissociated and undissociated phases of acetic acid. More acid immediately dissociates to make up this loss.

As long as there is an excess of OH ions to combine with the hydrogen ions, this cycle repeats itself until the acid is expended. If this reaction is carried out in the presence of a color indicator, such as litmus, a color change will occur at neutralization, i.e., when there is no longer an excess of hydrogen ions in the solution. At this point, we are able to calculate from the amount of NaOH used, the total acidity of the acid solution.

It will at once be seen that such a titration method cannot show actual acid intensity because the chemical reactions involve a destruction of the acid. The end result is not known until all the acid disappears, at which moment the chemist calculates the entire amount of acid that has been destroyed. Actual acidity is determined only by specific measurement of the hydrogen-ion factor.

Physiological chemistry deals with organic

acids, such as lactic, acetic, and butyric, which are for the most part only slightly dissociated. It is apparent that ordinary titration methods, applied to these acids, are subject to serious errors. For the sake of accuracy, it becomes necessary to determine the actual concentration of hydrogen ions. Before hydrogen ion concentrations can be expressed, we must revalue the concept of neutrality, the point which serves as a base for acidity measurements.

Neutrality.—Pure water dissociates to an extremely slight degree into hydrogen and hydroxyl ions.

$$H_2O = H^+ + OH^-$$

Since these ions are formed in equal quantities, there is no preponderance of either. Delicate electrometric measurements have shown that the amount of hydrogen ions in one gram of water is $\frac{1}{1000000000}$ or $\frac{1}{10000000000}$ grams. This figure also expresses the amount of OH ions in one gram of water.

Sorenson, in 1909, suggested the use of the expression pH to denote hydrogen ion concentration. Thus, in the case of water, pH = $\frac{1}{10}$. As this is an inconvenient fraction, the convention is to write pH = 7. Similarly, a concentration of $\frac{1}{10}$ ° grams is written pH = 6, and so on.

Since we can assume that water is ipso facto neutral, the value of pH = 7 is taken as the point of neutrality on the acid-base scale. Now if an acid is added to pure water, there will ensue an immediate increase in the number of hydrogen ions because of the dissociation of the acid. Should this increase amount to ten times the original quantity, the change will be from 1/10° to 1/10° grams of hydrogen ion. Following the convention, we write pH = 6. An increase in hydrogen ions of 100 times will produce a concentration of $\frac{1}{10}$ grams, or pH = 5. Hence, a solution having a pH = 5.6 has between $\frac{1}{10}$ and $\frac{1}{10}$ grams of hydrogen ions. It is important to note the inverse relationship between acidity and the concrete value of the number that expresses pH. An increase in acidity brings about a decrease in the concrete value of the pH number.

Similarly. if a base is added to pure water, the excess of OH ions introduced by the dissociation of the base, will combine with some of the hydrogen ions and thus decrease the total hydrogen ion concentration. If this decrease in hydrogen ion amounts to one-tenth, there will be only 1/10° grams in solution or pH = 8. It must be clearly understood that any solution, whether acid or alkaline, contains hydrogen ions. The concentration thereof serves as a measure of alkalinity or acidity.

To summarize, pH = 7 is the point of neutrality. Values of pH decreasing from 7 show increasing acidity. Values greater than 7 show increasing alkalinity. A unit change in the con-

crete value of the pH number corresponds to a change in hydrogen ion concentration of ten times.

Methods of Determination: The technician has two methods at his disposal for the measurement of hydrogen ion concentration. One, the electrometric method, involves expensive and elaborate apparatus plus a certain technical knowledge on the part of the analyst. Although difficult and tedious, this method permits pH determination with great exactifude, amounting to two decimal places. This corresponds to a degree of accuracy of one billionth, for values in the neighborhood of pH = 7.

Since most laboratory work does not require such fine accuracy, values of pH accurate to one decimal place are obtainable much more simply and rapidly by the second method, the colorimetric. This procedure involves the use of a group of dyes which show a graduated series of color changes at different points on the pH range. For example, a solution of bromcresol green is vellow at pH = 3.8. As the acidity decreases, the dye becomes greenish and finally blue at pH = Intermediate pH values are indicated by definite tints which have been standardized by the electrometric method. In a like sense, phenol red changes from yellow to red over the pH range of 68 to 8.4 and this indicator is selected whenever the pH of an unknown is suspected of being within these limits.

In making the determination, the standardized indicators are tried with the unknown solution by the hit-or-miss method until the pH is found to lie within a certain range. The special indicator which is affected by this range of acidity is compared with the color scale, showing accurate pH values. Excellent commercial sets of indicators and color standards are available.

BUFFER ACTION

No paper on hydrogen ion concentration is complete without a discussion of buffer action since the two are closely linked, both in theory and in practice.

When an acid or a base is added to pure water, dissociation is rapid and the hydrogen ion concentration of the solution changes sharply from pH = 7, neutrality, to its new value. Buffer substances are compounds which, when present in a solution, prevent sudden changes in pH value, as an acid or a base is added. In general, salts of a combination of a weak acid with a strong base are buffers. This phenomenon is best illustrated by a concrete example.

When sodium acetate is dissolved in water, there ensues a hydrolysis of part of the salt, according to the equation:

The heavy arrows indicate the direction in which the tendency to dissociate or recombine is preponderant. As in all ionic reactions, a delicate equilibrium exists between the various components.

Now if, to such an equilibriated system, some acid like hydrochloric is added, there is an immediate potential supply of hydrogen ions. hydrogen ion concentration would be expected to rise sharply. However, the hydrogen ions are being generated in a medium that contains a large quantity of acctate ion, due to the sodium acetate hydrolysis. We have seen that acetic acid tends to remain undissociated. Hence a large quantity of hydrogen ions and of acetate ions cannot coexist in the same solution but must unite to form the un-ionized, and therefore chemically inactive. acctic acid. The effect of the added hydrochloric acid is minimized because the hydrogen ions are combined with as fast as they are formed. spite of a large increase in total acidity, the pH value will be found to have varied only slightly. In the final analysis, what really happens is a conversion of the highly dissociated "strong" hydrochloric acid into the weak, slightly ionized acetic acid. The sudden change in hydrogen ion concentration has been averted and the solution is therefore buffered.

As the acetate ions combine with hydrogen ions, their concentration in the solution decreases. Referring to the equation, it is seen that this disturbs the equilibrium of sodium acetate and forces the reaction to the right to form more acetate As long as there remains enough salt to generate acetate ions, which are then available to bind hydrogen ions, any added hydrochloric acid will be buffered in consequence. Large increases in total acidity will cause small changes in pH until a point is reached where there are no longer sufficient acetate ions available to combine with the added hydrogen ions. Continued increments of acid will then cause sharp changes in pH since the buffer power of the salt has become exhausted and no longer presents an obstacle to the increase in hydrogen ion concentration.

Similar protective action is exerted when a strong alkali, such as NaOH, is added to a buffered solution. The function of a buffer salt, therefore, is to guard against sudden changes in pH in reactions that must proceed within narrow limits of acidity.

Application of Hydrogen Ion Methods: It can be seen at once that titration methods are of little value in controlling buffered solutions since they show only total acid and fail to give an accurate picture of the actual acidity. Any increase in total acidity is shown by titration with a base, even though buffer action precludes change in actual acidity. Since most physiological media contain impurities in the form of organic salts,

the advantages of pH determinations are apparent if errors are to be avoided.

Buffer action plays an important role in blood chemistry. The pH of the blood stream must not be subjected to sudden changes. Organic salts naturally present in the blood, act as buffers against acids that may be introduced following the ingestion of certain foods. Such acid entities are effectively held in check until safely excreted.

The action of buffers is an important factor in industrial processes, since it is doubtful if large scale chemistry involves the use of many pure reagents. Ordinary titration methods would be of little value in dealing with impure, highly buffered solutions that are to be kept within certain limits of acidity. Hydrogen ion control enters into such widely diversified industries as leather tanning, sugar refining, paper, pigment, or glue manufacturing, and boiler water purification.

The theory of hydrogen ion concentration was given widespread notice by the medical profession with the development of lactic acid milk for infant feeding. Marriott¹ determined the pH of the stomach contents in infants at definite periods after ingestion of breast milk or cow's milk dilutions. It was found that babies fed on breast milk showed a stomach pH well within the range that has been established as optimum for digestion, pH = 3.8. This acidity is reached shortly after feeding. Cow's milk, on the other hand, causes a much longer delay in reaching this figure. Because of the high buffer action of cow's milk, more time is needed for the stomach tò adjust its acidity to the proper value.

The following table shows the amount of a tenth normal solution of hydrochloric acid which must be added to 200 c.c. portions of water, of cow's milk, and of breast milk, to produce a hydrogen-ion concentration of 3.8 in each type of solution.

Amount of N	Hydrogen ion concentration			
10	Water	Cow's	Breast	
acid added		milk	milk	
no acid at start	7.0	6.6	11111K	
0.22 c.c.	<u>3.8</u>	6.6	6.9	
20.0 c.c.	2.05	6.35	6.15	
54.0 c.c.	1.68	5.95	3.8	
100.0 c.c.	1.50	5.35	2.35	
182.0 c.c.	1.35	3.8		

Over three times as much acid must be present to bring about the optimum pH = 3.8 in the case of cow's milk as in breast milk. Although most infants are able to cope with the increased buffer power of cow's milk, it is desirable, in certain conditions, to relieve the stomach from the necessity of manufacturing enough hydrochloric acid to overcome the buffer action of milk.

To achieve this purpose, cow's milk is acidified with lactic acid to the point where the acidified mixture affects the stomach acid in a way analogous to breast milk. In other words, the buffer action of lactic acid milk is akin to that of breast milk. Hydrogen ion methods were of enormous value in this work since the high buffer power of milk solution's precludes the use of titration methods.

Lactic acid milk is also made by the fermentation of fresh milk with an acid producing organism. This method gives a better, smoother product, of superior flavor, and is rapidly coming into general use now that commercial cultured milks are available in powdered form.² In the manufacture of powdered cultured lactic acid milk by the Merrell-Soule spray process, changes in acidity are accurately controlled by pH determinations.

Cultured lactic acid milk must not be confused with acidophilus milk, whose virtues lie in the fact that it is a vehicle for massive number of beneficial organisms. Lactic acid is a component of acidophilus milk but only as a by-product of the activity of the acidophilus organisms.

The theory of hydrogen ion concentration introduces a new conception of acidity and makes possible greater accuracy. Scientific papers use this standard with increasing frequency. Universal acceptance and use of pH methods in physiological work is not far distant. It remains for the practising physician to achieve a clear understanding of hydrogen ion concentration so as to be en rapport with his colleagues in the field of research.

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THE HEART IN PNEUMONIA

By LOUIS H. SIGLER, M.D., BROOKLYN, N. Y.

Read before the Harbor Hospital Staff Conference, January 13, 1932.

THERE is a prevailing idea in the medical profession that death in pneumonia is invariably due to heart failure. This organ, therefore, is the center of anxiety and the target for therapy of the attending physician. We do not seem to realize that the disease is productive of complex disturbances affecting all vital centers, and if death ensues, it is a combination of factors rather than one cause which is responsible.

The factors causing the various disturbances are predominantly three-anoxemic, toxic, and septic. The first is caused by insufficient oxygenation of the blood, due to diminished lung bed, caused by consolidation, and poor absorption of oxygen resulting from swelling and exudation of the alveolar walls. How much of a relative part the toxic and anoxemic factors play in the disease is hard to tell. We do know from experience, however, that comparatively little pulmonary involvement in which case oxygenation of blood is presumably not much interfered with, may run a severe clinical course and even end in death. On the other hand, massive involvement with all potentialities for the production of severe anoxemia may be associated with mild clinical manifestations. We must, therefore, conclude that toxemia is a variable but very important factor in the disease. Where severe pneumococcemia is present, the cause of death is probably the invasion of all organs by the organism itself.

In severe cases, the respiratory and vasomotor centers seem to be affected most. At first the respiratory center is stimulated by lack of oxygen and accumulation of carbon dioxide, resulting in an increased respiratory rate. The breathing, however, is shallow, with insufficient expansion of the normal lung bed. This, together with the mucous accumulation in the smaller bronchi, results in localized areas of atelectasis with extension of the pneumonic process. A vicious cycle is thus produced. If progressive, and the organism is excessively virulent or the individual's resistance is poor, respiratory paralysis may result from excessive irritation of the respiratory center.

The vasomotor center is likewise stimulated at first. A normal blood pressure is thereby maintained even in the presence of peripheral vascular irritation and tendency towards dilation, as well as weakened myocardial tone. Sooner or later fatigue and paralysis of the vasomotor center may occur producing a fall in blood pressure, even to a fatal level.

The heart in pneumonia, like the other vital organs, may be affected by septicemia, toxemia and anoxemia. In addition, mechanical interference with the free propulsion of blood through

the pulmonary fields, and vasomotor failure may play a part in the cardiac breakdown.

Taxic and dangenic Research in the Heart

Toric and Anoxemic Effects on the Heart

Although it is reasonable to assume that considerable myocardial damage may occur from these factors, careful analysis shows very few cases of actual myocardial involvement in the course of the disease. This is shown both experimentally and clinically. Experimentally, as long ago as 1899, Romberg and Passler produced pneumococcic death in animals and found such death to be due to vasomotor paralysis without injury to the heart. In very interesting experiments on dogs performed by Newburgh and Porter1, it was found that on feeding the cardiac ventricles of dogs that died from pneumonia with healthy blood, they contracted as well as ventricles of healthy dogs. On the other hand, the ventricles of healthy dogs did not contract with full force if fed with pneumonic blood, but the ventricles from pneumonic dogs contracted with much more force if fed with similar blood. Their conclusions were that the heart in pneumonia is essentially normal and becomes adapted to the toxic blood fairly well.

On the clinical side, we have many reports tending to substantiate the same facts. T. Stuart Hart's, in a study of a number of cases of influenzal bronchopneumonia in 1918, found that patients with normal hearts did not as a rule die from cardiac insufficiency. Anatomically, also, there was no proof of myocardial damage found on post mortem examination. Paul D White3 states that endocarditis and pericarditis rarely result from pneumonia, and the myocardium in fatal cases may show cloudy swelling and necrosis. Such findings, however, are not common. Stones, in a series of 259 autopsies of pneumonia cases, found the hearts to be normal in 57.3% of lobar pneumonia, 66.1% broncho-pneumonia, and 37.9% pneumococcic sepsis. Theodore Janeway in 1907 stated that most cases of death in acute infectious diseases are attributable to vasomotor · failure and not to heart affection.

Little electrocardiographic study has been done in pneumonia. From available data, however, we may conclude that very few inherent changes occur in the electrocardiogram in this disease. Burnett and Piltz* reported some changes in conduction and in the T wave in a few cases. We occasionally get simple tachycardia, paroxysmal tachycardia—auricular, nodal, and ventricular—as well as auricular flutter and fibrillation. These are, however, not distinctive of the disease, and are uncommon.

Thus, experimental, clinical, and electrocardiographic evidence point toward the escape of the

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heart from serious damage in most cases of pneumonia. Furthermore, even in the presence of anatomic myocardial damage, the heart may perform its functions well.

Mechanical Interference with Heart Action

Like the toxic and anoxemic effects on the heart, the mechanical interference with the free flow of blood through the lungs caused by consolidation, should theoretically produce heart fail-To overcome a rather acutely increased pressure in the pulmonary artery, the right ventricle is expected to be overburdened. In actual practice, however, we find good adaptation of this chamber by moderate dilation and compensatory increase in force of ventricular con-Unless acute right ventricular failure occurs, clinical manifestations indicative of such failure are not found in the course of pneumonia. In Stone's series, only 39.4% of fatal cases of lobar pneumonia, 33.6% of fatal bronchopneumonia, and 20.8% of pneumococci sepsis showed dilation of the right ventricle on post mortem examination. Assuming that the average percentage of cardiac dilation in fatal cases of pneumonia is 31, and that the average mortality rate in pneumonia is 20%, we may assume that only in about 6% of cases of pneumonia may acute cardiac dilatation be the cause of death.

VASOMOTOR FAILURE AFFECTING THE HEART

The most serious condition that may affect the heart and the other vital centers of the body is vasomotor failure with its peripheral vascular The blood pressure slowly, or more paralysis. often suddenly, falls. The vital centers as the brain, the kidneys, as well as the heart, suffer from local anemia, which may contribute to the causes of death. But are we to attribute death in these cases to heart affection or to sudden vascular catastrophy? It is true that the heart may show clinical abnormalities under such conditions. We may find marked weakening, or almost disappearance, of the first sound; murmurs may be present; occasionally there may be some form of tachycardia and arrythmia. But all these may be considered to be merely manifestations of anemia of the heart muscle.

PRIMARY MYOCARDIAL AFFECTION

It is important, however, to recognize primary cardiac affection and failure when it does occur. The clinical manifestations of these hearts are similar to those of the abnormal heart in other conditions. These may be divided into two groups—first, the group presenting the various tachycardias and arrythmias, without definite evidence of failure, and second, the group presenting definite failure, with or without tachycardia and arrythmia.

The group presenting the tachycardias and arrythmias.—Here are included hearts showing excessively high rates disproportionate to the temperature, and abnormal rhythms. Many of these cases, if allowed to go on without digitalis therapy, will sooner or later fail, due to over-activity of the ventricular musculature, in addition to the other factors aforementioned. Many of these cases can be recognized by ordinary clinical methods, although some require electrocardiographic study for differential diagnosis. It must be remembered, however, that the mere occurrence of an arrythmia does not spell death. Occasionally we see such cases, especially those presenting auricular flutter, return to a normal mechanism and failure averted by sufficient digitalization. Cases of fibrillation, where a normal sinus mechanism is ordinarily not restored by digitalis, will obtain the benefit of the drug by its blocking effect and slowing of the ventricular rate.

The group presenting heart failure.—It is important to remember that failure may occur even in the absence of the tachycardias and the ar-The first evidences of failure are a rythmias. diminished pulmonic second sound, and definite cardiac enlargement. There may also be some diminution in the urinary output, increased dyspnoea and the development of rales at the bases of the lungs outside of the consolidated area. If not attended to at once, congestive failure may soon become evident. The liver may become engorged, pulmonary congestion increases and peripheral venous stasis and edema may develop.

TREATMENT

The treatment of the heart in pneumonia, then, should be in the vast majority of cases not the treatment of the heart but the treatment of the underlying diseased processes. Digitalis should be used only when indicated. By confining our treatment to the heart alone, we merely sprinkle water on a conflagration which is constantly fed with fuel. Besides, to quote T. S. Hart², "the employment of a method directed against the wrong conception of the pathology may lead to a false sense of security and keep us from directing our efforts to secure remedies better fitted to combat the true pathologic condition."

The general indications for treatment are: first, to combat the toxemia; second, to overcome the anoxemia; third, to maintain the vasomotor tone; and fourth, to support the heart only when such support is called for.

To combat the toxemia, attempts have been made to establish early immunity by serum. The results, however, apparently do not justify the risk of anaphylaxis. The majority of reports of serum treatment are certainly not favorable against types II, III, and IV pneumococci. Only in type I does it seem to decrease the mortality

Cecil and Plummers, in a study of 1,161 cases of type I pneumonia, found that of 412 cases not receiving scrum, 28.2% died. Of 239 treated with Felton's concentrated scrum, only 20% died, and only 11.7% died if treated within 72 hours of onset. Thus, even these figures are not encouraging, and we must still resort to other and older methods of treatment to combat the disease.

The best means of overcoming the toxemia is by copious ingestions of fluids and alkalies, as citrates, and properly regulated bowel elimination by unexhausting drugs. To help overcome the anoxemia, early inhalation of oxygen and carbon dioxide is necessary. Henderson, Haggard, Coryllos, and Birnbaum' feel that if early inhalation of carbon dioxide be given in pneumonia, extension of the process would be prevented and the disease checked. They induced pneumonia in dogs, experimentally, by virulent pneumococci. The disease was then checked and the animals were restored to health by inhalation of sufficient carbon dioxide to cause deep breathing, and continuing such inhalation until the process was cleared. They used 5 to 7% of carbon dioxide mixed with ordinary air. In using a concentration of oxygen of over 40% for a prolonged period, there is, however, a possibility of harmful effects. Faulkner and Moore studied the effects of varying oxygen concentration on normal animals. They found that in atmospheres of over 70% of that gas, symptoms of anoxemia developed. The symptoms were drowsiness, anorexia, loss of weight, dyspnoea, cyanosis, and death. The explanation for this anoxemia was found on post mortem examination in a diffuse hemorrhagic edema of the alveolar walls of the lungs, interfering with the diffusion of oxygen even in the presence of a high atmosphere of that gas.

To prevent and to treat vasomotor failure, cool alcohol sponging and intravenous saline and glu cose injections introduced gradually are to be resorted to. Kastlin and Lynch⁸ recommend 400 to 600 grams of dextrose to be given daily in the proportion of 200 grams to 1,000 c.c. of water

with lemon juice by mouth. If the patient is unable to take up that much by mouth due to nausea, and if toxemia is marked, they used 200 c.c. of 25% solution of dextrose intravenously 4 to 6 times a day, each injection to take at least a half hour. If the blood pressure is very low, intravenous injections of 5 to 15 minims of adrenalin chloride 1 to 1,000 may be given in addition.

As to the use of digitalis, the consensus of opinion is that if improperly used, it is harmful. Wyckoff, Du Bois, and Woodruff⁹ found a decided increase in mortality of 835 patients receiving the drug. They believe that routine administration of the drug is dangerous. Burrage and White²⁰, in a study of 221 eases, found that patients receiving digitalis in occasional doses had a mortality of three and one-half times that of those not receiving any at all. Cases, however, that were kept digitalized, had a mortality of approximately only one-half of those not receiving the drug. Somewhat better results are those of Colm and Jemison, and others.

That digitalis has its pharmaeologic effects on the heart in pneumonia as in any other condition is well established. It must be used, however, only when indicated and then in sufficient doses to have its full effect. The main indications for its use are auricular fibrillation and flutter, and heart failure. The response in many of these cases is excellent. I have used it in a case of auricular paroxysmal tachycardia, where it supposedly has no effect, with excellent results.

Where the drug is indicated, the rapid method of digitalization must be employed by giving large doses at frequent intervals until its full effects are produced or until toxic symptoms shown. The effects to be looked for are slowing of the heart in auricular fibrillation; conversion of flutter into a normal mechanism, and reducing congestive failure.

No mention is necessary of routine symptomatic therapy, for each condition must be met as it arises.

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THE DIFFERENTIAL DIAGNOSIS IN RECURRING ATTACKS OF JAUNDICE FROM COMMON DUCT STONE AND PANCREATITIS; WITH REFERENCE TO BILE SAND.

By R. FRANKLIN CARTER, M.D., NEW YORK, N. Y.

From the New York Post Graduate Medical School of Columbia University.

In the common duct or from subacute pancreatitis the diagnosis of obstructive jaundice can usually be made without difficulty. However, when the gall bladder has been previously removed and the attacks of jaundice occur, as in two patients herein reported, the differential diagnosis between common duct stone and subacute pancreatitis has a very important bearing on the type of treatment to be selected. The presence of bile sand in the aspirated duodenal content may be relied upon to differentiate the two conditions and to determine the type of treatment to be utilized.

The clinical history is similar in both conditions in many respects, and particularly is this true during the early stages of the attacks and at the time when a correct diagnosis is of such importance in preventing serious damage to the liver and pancreas. As a rule the onset of the attack is acute in both conditions; the pain is severe, continuous and located in the mid - epigastrium with radiation through to the back; vomiting usually occurs without affording relief; distention of the abdomen varies and is apt to be more pronounced in patients with pancreatitis; tenderness is constant in the upper abdomen, but not definitely localized in either; and, rigidity is voluntary. The temperature rise is usually sudden and variations occur in different attacks in both instances, a rise to 104 or 105 is not uncommon in late attacks. Chills are frequent and they often initiate the attack.

The attack varies in intensity, character of the pain, rise in temperature, appearance of the jaundice and length of time in the same individuals at different times. The residual symptom of a heavy dull sensation amounting to a dull pain in some instances located in the mid-epigastrium is of importance for as the attack subsides in a patient with a subsiding subacute pancreatitis he will surely speak of this deep seated sensation, whereas a patient that has been freed from an impacted stone seizure feels immediately and completely relieved of all pain when both conditions do not exist in the same individual.

The cholecystogram with the dye is of no value for if obstruction of the common duct is shown, as it rarely will be, the cause cannot be determined unless the stone itself visualizes. As common duct stones rarely contain opaque material, they will seldom be seen.

Liver function tests do no more than show the presence or absence of an obstruction. These may be important in determining the necessity of drainage of the common duct when evidence of liver damage begins to appear, but they do not aid in the differentiation of the two conditions.

During the subsidence of the attack an aspiration of the duodenal content as practiced by Lyons with the Lyons or Twiss tube and examination, both macroscopically and microscopically, for particles that macroscopically look like ordinary sand and microscopically are crystals of calcium bilirubinate, cholesterol and calcium is indicative of stone in the common duct. The absence of such substances is proof of constriction of the common duct having been due to pancreatitis in the great majority of cases. This procedure commends itself because it is simple, easy to apply and in-expensive. Two case histories are reported to demonstrate its value and these findings have been noted to be correct at operation in four other cases

Case No. 68232. A white female, aged 57 years; duration of case record 8-26-31 to 6-1-32; result: Apparently cured. The history was typical of gall bladder disease of two years' standing with nine intermittent acute attacks without the occurrence of jaundice until the last attack. A gastro-intestinal Roentgen study was negative, the icterus index 9.3, Van den Bergh, direct negative, indirect positive. No gall bladder cholecystogram with the dye was made.

Examination on the sixth day after admission revealed rigidity, tenderness of the right upper abdomen, temperature 101, pulse rate of 90. A diagnosis of acute cholecystitis was made and operation advised.

Operation: A cholecystectomy was done with drainage of the common duct through the open cystic duct by means of a tube sewn into the opening.

Findings: Acute cholecystitis, hydrops and stone impacted in cystic duct. The pancreas was firm, not enlarged and no stone could be demonstrated in the common duct.

Post-operative Course: Normal reaction and progress for nine days with drainage of a clear, amber bile from the common duct. On the ninth day the drainage tube was

clamped off, a chill with high fever resulted. The clamp was removed and the tube came away two days later with no further drainage of bile. Three days later another chill with fever and acute abdominal pain occurred. During the next month there were three attacks of fever, chills and a few days of jaundice and light stools followed each attack of pain. The patient left the hospital twenty-six days after operation.

The patient was readmitted to the hospital in the sixth post-operative week, acutely ill with jaundice, fever and acute abdominal The icterus index was 71.4, Van den Bergh, direct and indirect, 4 plus; cholecystogram after the administration of dye re-

vealed no shadow.

Diagnosis: Cholangitis with obstruction by a stone in the common bile duct.

Operation: The common bile duct was found to be three times its normal size, filled with clear, amber colored bile and to contain no stones. The pancreas was acutely inflamed but not hemorrhagic and there was no fat necrosis within the abdomen. A drainage tube was sewn into the common duct opening.

Post-operative Course: The drainage from the tube continued for fourteen days when it ceased because the patient inadvertently pulled the tube out of the wound. Six days later the attacks of acute pain, jaundice, fever and The attacks of jaundice chills reoccurred. continued at irregular intervals for five months and during this time duodenal drainage specimens of bile showed a clear, amber fluid free from crystals of cholesterol and calcium bilirubinate.

Two months after the second operation an abscess formed in the operative scar, below the drainage site, which ruptured spontaneously with the discharge of a large amount of slough and scropurulent material. The attacks of jaundice continued to occur for three months until the final attack which was very severe and lasted for several weeks. Following this attack the patient began to get well and she has regained her strength and there have been no attacks of jaundice for one

The second operation with drainage had no apparent effect upon the pancreatitis and had a duonenal drainage been done with negative findings before operation the absence of a stone should have been determined.

Case No. 11. Hospital No. 63051. A male, white, aged 65 years.

The patient was admitted 3-2-31, with a history of recurring attacks of cholecystitis for four years with four attacks, the last of three weeks' duration with fever and a loss of weight of twenty pounds. There had been no jaundice with any of the attacks. The icterus index on admission was 7, Van den Bergh, negative.

A diagnosis of cholecystitis and cholelithiasis was made and a laparotomy revealed an acute purulent cholecystitis with choleli-The common duct was not dilated thiasis. and it was not explored for stone. The patient made a good recovery and remained well

for three months.

Then, the attacks of jaundice, fever, chills and abdominal pain began and they were treated at another hospital until the patient returned to this clinic. Examination at this time revealed an icterus index of 18 with a positive direct and indirect Van den Bergh reaction.

The attacks of pain became more frequent with increasing jaundice and the patient was admitted to the hospital fourteen months after the first operation with an icterus index of 100. One week later the jaundice was clearing with an icterus index of 25. A duodenal drainage at this time revealed a normal bile stained fluid in which the particles of sand could be seen macroscopically. Under the microscope the particles could be identified as masses of cholesterol, calcium and calcium bilirubinate crystals.

A diagnosis of stone in the common duct was made and at operation a large soft stone was found in the lower end of a dilated common bile duct. The pancreas was not enlarged nor did it appear involved. A tube was sewn in the opening in the bile duct. Bile drainage ceased when the tube was removed on the tenth day and the patient has remained free of symptoms for one year.

Conclusions

Recurring attacks of jaundice with pain. fever and chills following cholecystectomy for cholelithiasis are usually due to either pancreatitis or common duct stone.

The differential diagnosis between creatitis and stone in the bile duct can usually be made by examination of the duodenal contents for bile sand, viz., cholesterol and calcium bilirubinate crystals in the aspirated duodenal specimens.

GAS BACILLUS INFECTION COMPLICATING APPENDICITIS

By CLARENCE A. TRAVER, M.D., ALBANY, N. Y.

Read before the Albany County Medical Society on Feb. 23, 1932.

ASE REPORT: C. S., age 24 years, Albany Hospital No. 3333-30-A young man, twenty-four years of age, was admitted to the hospital on May 10, 1930, ten days after the onset of abdominal pain. When the pain first came on, it was diffuse in character and associated with fever but no vomiting. Later the pain became localized in the right hide of the abdomen and was associated with anorexia and vomiting. He continued to do some farm work and even drove a tractor, but he had considerable cramplike pain. He consulted a druggist who gave him castor oil. Then he consulted Dr. Joslin of Voorheesville, and my father was called in consulta-There was scarlet fever in the family. The past history was negative, and the physical examination was negative except for the abdominal There was marked tenderness and findings. muscular rigidity over the right side of the abdomen, and a mass was felt at McBurney's point. The temperature was 101°, the pulse 88, and the respirations 20. White blood count was 12,500. The urine showed a faint trace of albumen and a few leucocytes. A diagnosis of appendiceal abscess was made from the history and physical findings.

Under ether anesthesia a muscle-splitting incision was made through the right rectus muscle, and free drainage was instituted without soiling the general peritoneal cavity. The appendix was not discernible in the abscess cavity, and it seemed wise not to prolong the operation or increase the risk to the patient by searching for it. A culture was taken, and the wound closed in layers about a large drainage tube. The patient was returned to his room in good condition, and a saline infusion was started.

The morning following the operation the patient was in good condition. The morning temperature was 98°, and the evening temperature 101°. The pulse remained between 90 and 100. patient had a fair day, but in the evening he vomited about ten ounces. The dressing was changed twice; nothing remarkable was noted. There was no swelling about the wound and no discoloration of the skin; no unusual odor was noted. During the night he complained of severe "gas pains" which were not relieved by the insertion of a rectal tube and were influenced very little by three hypodermic injections of morphia, gr. 1/6. He vomited small amounts of water, but retained about thirty ounces. The next morning he complained of severe pain in the epigastrium. The nurse noted that there was considerable foul smelling drainage from the wound. The temperature was only 100°, but the pulse was 130. The respirations were thirty-six. There

were redness and swelling in the epigastrium, The swelling extended into the right axilla. Two incisions were made into this swelling; one near the xyphoid process and another in the axilla. Gas escaped from these incisions and also from the right rectus operative incision which was draining profusely. Cultures were taken from the three incisions. At this time a clinical diagnosis of "gas bacillus infection" was made. Radical treatment such as excision of muscle bundles or free incisions did not seem possible because of the widespread infection and because of the moribund condition of the patient. Taundice developed, and the temperature rose to 106.8° by rectum. Death followed seven hours after gas was found in the tissues and forty-three hours after operation. Antiserum for treatment of gas gangrene was not at hand, and although I have used it with good result in a case of gas gangrene that followed a compound fracture of the forearm, I doubt whether it would have changed the outcome in this instance.

Autopsy was done two hours after death and revealed, among other things, an interesting condition of the right rectus muscle. third of the muscle was pinkish in color, soft, and necrotic; and from it there could be expressed a hemorrhagic, purulent fluid containing gas bubbles. There was gas in the subcutaneous tissues of the abdominal wall and of the chest wall. The appendix was gangrenous and lying in an abscess cavity whose walls were black and necrotic. There was an area of localized peritonitis extending upward behind the cecum to the under surface of the diaphragm, and there was a fibrinous exudate on the convex surface of the liver. There were gas bubbles in the large abdominal veins, in the inferior vena cava, and in the heart. The heart muscle appeared normal. There were no abscesses or gas bubbles found in the liver, either on gross or microscopical examination. However, microscopical examination showed evidence of gas in the gastric mucosa, in the pancreas, and in the kidneys. The rectus muscle showed much hyaline degeneration with much polymorphonuclear infiltration. There were large areas of necrosis containing clumps of bacteria; also much interstitial œdema with many small gas Vessels showed mural thrombi. tures showed Bacillus welchii as well as staphylococci, streptococci, colon bacilli, and rare pneumococci. The original abscess contained Bacillus welchii as shown by the culture taken at the time of operation. Subsequently the same organism was found in the abdominal wound, in the incision near the xyphoid process, and in a blood culture taken two hours post mortem. It was not found in the axillary incision, although there was gas in the tissues at this point. I believe the infection came from the intestinal canal and that the infection spread due to contamination of the abdominal wound (split rectus muscle), although it is possible to have the infection in "clean" cases when the catgut is improperly sterilized.

Winter2 was the first to describe employsema of the abdominal wall as a complication of laparotomics. He reported two cases. This was in 1889, and it was then believed that air left in the abdominal cavity was the cause of the emphysema which spread through the subcutaneous tissues. Heil3 then collected twenty cases from the literature and gave the results of his experimental work on animals and human bodies to prove that the emphysematous condition might be due to air left in the abdominal cavity at the time of operation. Veillon and Zuber were the first to note the presence of Bacillus welchii, which they ealled Bacillus perfringens, in infections of the appendix. Russell' reported two cases of the infection from the gynccological service at Johns Hopkins Hospital in 1897. One of these followed suspension of the uterus; the other a panhysterectomy in which the intestine was inadvertently opened. Dayton⁸ reported a case with emphysema involving the neck, and supra- and infra-clavicular regions following a perforated gastrie ulcer. Other instances have followed abortions, hypodermic injections, operations on the gall bladder, on the genito-urinary tract, and on the gastro-intestinal tract. The incidence in wounds during the World War varied from three to ten per eent, and the infection is not infrequent in civil life as a complication of compound fractures. In a recent article in Surgery, Gynecology and Obstetrics Millare tabulates 607 cases of gas gangrene occurring in civil life.

In 1915 Simonds of the Rockefeller Institute stated that the relation of anaërobes in general, and of Bacillus welchii in particular, to appendicitis was still unsettled. He found Bacillus welchii in the sporulating form in pus from an appendiceal abscess and found spores in ninety per cent of normal appendices obtained at autopsy. The organism was present in approximately one hundred per cent if the appendix contained fecal material. Like the colon bacilli, anaerobes are normally present in the intestinal tract and may invade the appendix secondarily. Once a foothold is obtained, the anaërobes are capable of producing potent toxins, supportation, and gangrene. They also have a symbiotic influence upon the aerobes present but are unable to attack living, healthy tissues. The difficulty in the individual case arises in deciding whether or not the anaërobes are growing and toxic.

Jennings⁸ states, "It is evident that Bacillus welchii is present in the lumen of most appendices and is frequently found outside the lumen

of the gut in an actively growing form in appendiceal abscess, in localized peritonitis, and in a rather large number of cases in the free peritoneal exudate. In most cases its activity is eut short by operation with removal of the appendix and adequate drainage.

Gas bacillus infection of the abdominal wall is a rare condition. Butler® reports two examples and states that these were the only instances to develop in a series of approximately 7,000 laparotomies over a period of fifteen years. In one of these two cases the infection followed an appendectomy; in the other, a eolostomy. Acute gangrenous appendicitis is perhaps the most frequent abdominal condition following which the Bacillus welchii manifests itself in the form of gas gangrene. According to Millar's recent article® forty-eight eases have been reported following operations; eight of these followed appendectomy.

Jennings⁸ at the Brooklyn Hospital has adopted the following routine: In all cases in which a gangrenous change is apparent in the appendix 100 e.e. of serum (polyvalent antigangrenous serum) are added to 1,000 c.e. of normal saline and given by hypodermoclysis. Anaērobie and aērobie cultures are made from the peritoneal extidate in the immediate vicinity of the appendix and from any fluid found in the pelvis. Further administration of serum is guided by the result of the cultures and by the course of the case. If indicated, 200 e.e. may be given daily for two or three days.

For use in general surgery the polyvalent serum is now obtainable mixed with tetanus antitoxin for prophylactic injections. It is as easily administered as tetanus antitoxin alone, and it should be used more generally. The cost is about three dollars for the prophylactic dose.

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EDUCATING FISCAL BOARDS

The service of medicine has outrun that of social and economic relief in the care of the sick. Doctors are doing their share of giving relief to the needy poor; and if the service is insufficient, the fault lies in the hospitals, the public health nursing, and the Welfare officers. Delay in donating the means for relief has always characterized government officials and the people themselves to a far greater extent than physicians.

The people do not realize that the peculiar services of the doctor account for only onethird of the cost of sickness; and that hospitals, nursing, economic relief, and other services cost twice as much as the doctor. Many boards of supervisors are reducing their appropriations for public health nursing thereby crippling the service of medicine. The treatment of this hypofunction of the board is education to be supplied by county medical societies.

THE PUBLIC RELATIONS OF PHYSICIANS

The report of the monthly meeting of the Committee on Public Relations which is printed on page 957 of this Journal, and that of the Committee on Temporary Emergency Relief on page 958, illustrate the numerous contacts which physicians have with other groups of persons that are interested in the solution of public health problems.

The growth of a sense of responsibility for social conditions is a striking characteristic of the present decade. The scientific physician has always felt a personal responsibility to relieve the suffering of individuals with whom he comes in intimate contact. But it is only in the last decade or two that the medical profession has developed a keen sense of collective responsibility to give impersonal relief to groups of sufferers whom they will never see. This new consciousness of social duty has affected all classes of people, so that philanthropic organizations have sprung up, each designed to deal with a specific condition in sociology or economics.

It happens that sickness, poor health, and physical defects enter into most conditions with which philanthropic organizations deal; and so physicians have been asked to contribute not only their proportionate share of relief money as citizens, but in addition to donate the entire service of diagnosing and treating the medical conditions. However, the relief agencies, especially those of an official nature, are now beginning to recognize the justice of paying the physicians for their professional services on a fee basis, rather than by contract, or giving them no pay at all. As a matter of fact the fees in most instances cover merely the direct expense to which a physician is put in treating a case, but this is better than nothing.

One excellent accomplishment of the voluntary philanthropic organizations is that of arousing the people generally to their social duties in helping one another. A quarter of a century ago, when a doctor was called to pneumonia case, for example, the burden of getting a nurse, filling a prescription, and securing food for the family fell on the doctor, especially if he was a rural practitioner. He often solved the problem by referring the case to some good woman friend, or to a church society. But today, the doctor calls up the public health nurse who gets into immediate contact with a half dozen relief organizations.

The Committee on Public Relations is largely a liaison committee between the medical

profession and the several Departments of the State Government that touch upon health; and its great function is to develop agreements as to the relative share of the burden of medical relief which shall be borne by the physicians and by the people generally. Five important subjects that were discussed at the last meeting were venereal disease clinics, blood donors, crippled children, physical defects of school children, and the hard of hearing. In each of these subjects the committee dealt with a definite organization or a division of Government, which was vitally interested in the same problem

The State Medical Society Committee on Temporary Emergency Relief was formed in order to assist the officials of New York State to give relief to the unemployed, both economically and medically. The State supplies the money and distributes it through the Welfare Commissioners of the several counties. It supplements the Welfare Law, in that it provides State funds in addition to those supplied by local governments.

On reading the comments of the Committee one gets the impression that the State Government and the medical profession are working in close cooperation to provide medical service to those unable to pay for it. However, the report recognizes that physicians do not score one hundred per cent in doing their part; their failures are largely clorical—conditions which are especially aggravating to administrators who are compelled to give an account of every penny of funds and to justify the detail of every method of action.

The evidence of the present interest of physicians in their relations to other civic organizations is in striking contrast with conditions a decade or two ago. The New York State Journal of Medicine for July, 1908,twenty-five years ago,-does not record a reference to public relations, except a brief editorial condemning correspondence schools for nurses. The Journal for July, 1923,-ten years ago,-is almost equally barren of articles on the civic relations of physicians, but it discusses editorially the duty of a physician to attend cases remote from a doctor. But today every journal contains several pages of news of the civic activities of physicians and their medical societies.

The New York State Journal of Medicine and the Journals of the Medical Societies of the other States, afford abundant evidence of the willingness and eagerness of practicing physicians to discharge their civic duties.



MEDICAL PROGRESS



The Ketogenic Diet in Normal Individuals: a Biochemical Investigation.—Frank L. Apperly and Joan H. Norris state that, although a number of reports have appeared on the good results of the treatment of epilepsy and asthma by the ketogenic diet, no one seems to have made a complete examination of the changes in the acid-base balance of the blood under the influence of this diet. They, therefore, undertook such an examination in three healthy women students, aged from 21 to 23. The tabulated results show that in all subjects there was a slight fall of plasma carbon dioxide, a more marked fall of red cell carbon dioxide, and a fall in the ratios of cell carbon dioxide to plasma carbon dioxide, and of cell chloride to plasma chloride. These findings were interpreted according to the laws relating to the distribution of chloride, bicarbonate, and hydrogen ions in the blood, as worked out by Van Slyke and his associates. The result showed that alkalemia was almost constantly present. It is suggested that the alkalemia is the result of hyperpnea produced by direct stimulation of the respiratory center by certain ketone derivatives in the blood, and that in these experiments this effect outweighed any acidemia produced by ketogenic acids, and further, that the failure of the ketogenic treatment of many cases of epilepsy and asthma is due to the relative preponderance of the former effect. A study of any conditions tending to raise the ketonic acid: acetone ratio would be of benefit in the treatment of epilepsy and asthma.-American Journal of the Medical Sciences, June, 1933, clxxxv, 6.

Superalimentation.—Lea A. Riely says that although we can estimate the nutritional needs of an individual by his size, body surface, age, sex, and the type of work he expects to do with as much accuracy as the amount of a certain specification of steam coal to carry a ship from one point to another, nutrition will never be governed by mathematical accuracy. There is in normal man some regulatory mechanism which balances appetite and desire for physical exertion. Unconsciously a man who eats too much feels the need for a little more exercise, and he takes it; or if his activities are restricted his desire for food is lessened. When this safety-valve action is obtunded unrestrained appetite has its sway, and we\get the chronic type of overeating; this leads on to obesity, which is altogether a matter of overeating. In adults who have access to a liberal food supply the memory of appetite is probably a greater factor in the ingestion and di-

gestion of food than hunger. Under these circurnstances appetite and habit supplant hunger as nature's dietary guide. Superalimentation, like overdrinking, is a disease. We have been slow to realize the effect of overeating on the heart and arteries, the lungs, kidneys, and gastrointestinal tract with its accessory digestive glands. Many think that temperate eating has been a potent factor in our diminished death rate The surgeon looks during the depression. askance at the obese patient. The internist sees him as an extra hazard because when he is febrile or fasting he breaks up his fat into fatty acids with resulting acidosis. The insurance actuary finds that he cannot write these patients at an equal rate with the normal or underweight person, so the obese individual is a marked man wherever he turns. It is universally conceded that overfeeding is one of the causes of gout. It has been shown that there is a preponderance of cases of diabetes among the obese. Once pathological physiology begins, the metabolites of carbohydrate, fat, and protein produce deleterious effects on the arterial tree, with resulting damage to various tissues. According to Dublin's statistics for the Metropolitan Life Insurance Company, expressed as percentages of the death rate of normals as a group, diabetics have a death rate two and one-half times in excess of normal, but extreme overweights have a mortality eight times the normal, and thirteen times the underweights. The figures show a similar excessive mortality from organic heart disease and arterial disease among overweights. The incidence of angina pectoris among older overweights is twice that for normals. Verily, the glutton digs his grave with his teeth .- Southern Medical Journal, June, 1933, xxvi, 6.

Modern Views on the Mechanism of Gall-Stone Formation.-In reviewing our knowledge on gall-stone formation, David H. Patey starts with Naunyn's classical theory, which dates from the last century, according to which the essential factor in the formation of gall-stones was infection, usually of intestinal origin. Later the importance of metabolic factors began to be realized, particularly by Chauffard in France. Aschoff attempted to reconcile the two views by describing two types of gall-stones, one the result of pure metabolic factors, the other the result of infection. Rosenow's claim that there are certain types of streptococci with a selective affinity for the gall-bladder has not won general acceptance, but anaerobic organisms have been shown to be not infrequent invaders. The general opinion now

is that there is some relation between infection and gall-stones, since the gall-bladder wall is infected in 70 per cent of cases, the fluid contents in 40 per cent. It is on the biochemical aspect that the greatest advances have been made, and this possibly affords the most promising line of investigation at the moment. The metabolism of cholesterol, the question whether the gall-bladder absorbs or secretes cholesterol, the factors responsible for the varying amounts of bile acids and cholesterol secreted in the bile by the liver, and the effect of inflammatory and other lesions of the liver and biliary passages are all of great importance in this connection. Schade's work on the physico-chemical aspects of gall-stone formation is interesting. He states that failure to explain biliary and urinary calculi on simple laws of solution is because of the colloids in body fluids which increase the stability of the solution. He says the pure cholesterol calculus is due to precipitation of cholesterol from a hypersaturated solution, but it is a special type of precipitation, resulting from the presence of small amounts of fatty substances in the bile. The common cholesterol-pigment gall-stone, on the other hand, he believes is inflammatory in origin, due to the presence of an appreciable amount of irreversible colloid in the gall-bladder, which acts as a binding material for the crystalloid elements. The chief surgical contribution to the pathology of gallstone formation in the last twenty years or so has been the discovery of the "strawberry gall-bladder." This condition at present affords an inportant field of study for the etiology of gallstones. The evidence that vitamin deficiency is a factor in gall-stone formation is very slender. On the statistical side the most important contribution is that of Gross, especially her conclusion that married women are no more liable than single to gall-stones. The three chief factors postulated by Naunyn as predisposing to stasis of bile-namely, lack of exercise, tight lacing, and pregnancy-are all open to serious criticism in the light of modern knowledge. It is of interest that gall-stones seem to be more common in the more variedly and richly fed peoples of Western civilization than in the East .- British Medical Journal. May 20, 1933, i, 3776.

Successful Treatment of Purulent Septic Meningitis Due to Streptococcus Haemolyticus, of Orbital Origin.—G. Canuyt, B. Tassowitz, and Ch. Wild report the case of a girl of 11, in whom, following a wound inflicted upon the lower left eyelid by a twig, suppuration developed, with violent headache and fever, presenting on the tenth day a clear meningeal syndrome. The purulent character of the cerebrospinal fluid, with 17,000 white cells per cubic millimeter, a polymicleosis of 90 per cent, the presence of numerous altered and clumped polyniclears as well as of microbes, and the absence

of macrophages, all combined to render the child's condition very grave, and the prognosis extremely unfavorable. Surgical exploration of the internal wall of the orbit revealed no lesion at the level of the ethmoid region. A general anti-infectious treatment was carried out consisting of intravenous injections of a septicemic antitoxin and the production of a fixation abscess. Cultures of the cerebrospinal fluid revealed colonies of Streptococcus hamolyticus. This led to treatment with Vincent's antistreptococcus serum in large doses of 80 c.c. per day, of which 40 c.c. was given intravenously and 40 c.c. intramuscularly. The following evening the cerebrospinal fluid was distinctly less cloudy, the white cells less frequent, and the polynucleosis had dropped to 68 per cent; no microbes could be observed, and 2 per cent of macrophages had appeared. Cultures remained sterile. In the days following there was considerable clinical improvement, but the persistence of 51 per cent of polynuclears still made the prognosis reserved. Two blood transfusions were now done, on the tenth and twelfth days respectively of the treatment. The patient received in all 1,010 c.c. serum, one-half of which was given intravenously and the other half intramuscularly. During convalescence an acute left otitis media with a mastoid reaction developed, for which, despite early paracentesis, trepanation proved necessary. The results were excellent, the patient making a complete recovery. The case shows once more the happy effects of Vincent's antistreptococcus serum, associated with transfusions and fixation abscess in streptococcus infections, which made it possible to save this girl attacked by a purulent septic streptococcus meningitis. It also shows that it is not necessary that the serum be injected into the spinal canal, and that results are excellent when it is injected into the general circulation, especially intravenously. The case also demonstrates that daily lumbar punctures for the purpose of examining the state of the cerebrospinal fluid constitute a valuable element in prognosis, since they indicate much more clearly than do the symptoms whether the meningitis is evolving toward a fatal result or toward a cure.-Bulletin de l'Académie de Médecine, April 11, 1933.

Treatment of Adiposity.—Superfluous fat, according to F. Segesser, must go by the same way it came. Adiposity of an exogenous nature, as distinguished from obesity of endocrine origin, arises through an intake of nutriment in excess of the output of muscular energy; more food is ingested than the body uses up. Such adiposity disappears when the individual, by increased muscular exercise and diminished intake of food, uses up more nutriment than he takes in. To take a reducing treatment and then return to the same old habits of overeating and overdrinking is of little value; the

patient must return again and again for renewed treatment. He must be made to understand exactly how to adjust his diet and his muscular activity to a new regimen. diet of those undergoing treatment for obesity must for the most part be an undernutritive one. Once or twice a day the heart condition is examined and the weight taken: then according to the findings the patient is put on a diet of tea, grape juice, milk, potatoes, bread, fruit, raw food, vegetables, or on a normal diet. An occasional change is desirable. The Karell milk cure is quite useful, but patients tire of milk exclusively; a diet of raw food gives just as good results, is full of variety, and more rational because of its richness in vitamins and poverty in salt. Bread days serve to remove surplus water from the organism; grape juice days are welcomed by those obese individuals who suffer from thirst. During periods of undernutrition or fasting, the patients are not put to bed unless the cardiac condition demands it. Every morning before breakfast there is a gymnastic hour, in which all patients whose hearts permit participate. many corpulent persons, especially women, the musculature is atrophic and needs to become toned up; particularly do abdominal muscles require regeneration through walking, deep breathing, and other forms of exercise. addition certain forms of physical treatment are given, such as light and sun baths, vapor baths, wet packs and the like, for their effect upon the general health. In most cases also a daily massage is given to stimulate the muscles. When these measures, which usually suffice, fail, recourse is had to cathartics: in the event of these too proving inadequate, protein therapy (injection of 1-6 c.c. boiled milk) has in some cases produced further loss of weight. The cure should not be forced too rapidly; due regard should be paid to the patient's comfort and endurance. Upon discharge all patients should be instructed how to order their habits to prevent a return of obesity.-Schweizerische medizinische Wochenschrift, April 22, 1933.

Transitory Arthritis of the Hip-Joint in Childhood.—Richard W. Butler emphasizes the desirability of an early and exact diagnosis of arthritis of the hip in childhood. From time to time children are seen with the classical signs of arthritis, but with a history of only a few days' trouble, no signs of general illness, and a normal x-ray appearance of the joint. These children must be carefully observed for the possibility of an early tuberculous infection. Of 97 cases studied at St. Thomas' Hospital 50 proved to be tuberculous, while 34 were suffering from a transitory arthritis only. Seven had a transitory arthritis

as a reaction to a localized bone infection near the joint, without true joint infection. analysis of these cases with reference to their origin indicates that although the condition may sometimes be traumatic in origin, it is more often infective, being frequently secondary to a focus elsewhere in the body. The prognosis of this transitory arthritis is excellent. A follow-up of 22 cases for an average period of three years showed that there had been no return of symptoms in 19. Of the other three children two had hysterical contracture of the hip and one had congenital syphilis. The inclusion of these children shows the type of mistake that may arise if one accepts too lightly a diagnosis of tuberculosis. A transitory arthritis is most difficult to differentiate from tuberculous arthritis of the hip in childhood. Clinically the two may be identical and remain so for days or even weeks. The x-ray is negative in a transitory arthritis except in the type due to a well-defined neighboring bone focus—but a negative x-ray does not absolutely exclude tuberculosis. As a matter of fact, however, the x-ray is seldom negative in tuberculous arthritis when the child is first brought for examination. Of the fifty-six children in this series coming under treatment for early tuberculous arthritis of the hip there was only one in which the x-ray picture was absolutely negative. The differentiation of transitory arthritis from pyemic joint and from pseudocoxalgia seldom gives rise to difficulty. All doubtful cases of arthritis in childhood must be watched carefully and treated with the respect due to an arthritis that is likely to be progressive. Time alone will then solve all doubts of the diagnosis.-British Medical Journal, June 3, 1933, i, 3778.

The Influence of Puberty Upon the Color of the Eyes.—All colored tissues of the body -skin, hair, iris-undergo changes of coloration at puberty, says Paul Godin. A close study of the iris reveals in fully 50 per cent of individuals the existence of two zones, an internal one immediately adjoining the pupil and an external one surrounding the former. It is the latter which gives the eye its predominant color. Eyes in which the two zones are not easily recognizable are especially those of a very dark brown color. The evolution of the color of the eyes is shown," at the beginning of puberty by a "brightening" of the original color. The most striking changes concern the tint, the combination of colors and the arrangement by which two or more colors seem to be juxtaposed or superimposed, sometimes similarly in the two zones, sometimes differently, taking the form of stripes, spots, specks, or dots in the external zone, and of rays in the internal one, designed upon the background by means of 1 or 2 colors. Variations have been observed, where qualified colors appear-brownish, greenish, yellowish. In the course of the four years from the age of 131/2 to 171/2 the intermediary colors, while departing little from the coloratious of the background or from that of the superimposed colors, do not follow a regular progression toward the final color, and seem to escape any fixed rule. The author's 100 cases, in each of which observations were taken nine times, at half-yearly intervals, between the ages of 13 and 18, constitute the basis for the construction of a scale of iris colors, taking into account their infinitely varied combinations and changes during this period An understanding of the oculochromatic evolution of puberty will save the expert the embarrassment which he might experience upon establishing at the age of 17 a different color of the eyes from that which he noted in the same subject at the age of 15 In cases of retarded puberty, changes in the color of the pig ment of the iris are more numerous Oculochro matic stabilization, 10, the definite color of the eyes, is accomplished when puberty has become fully established, or about two years after it began. The observations revealed no difference between the two sexes in respect to this behavior of the iris -Bulletin de l'Academie de Médecine, May 9, 1933

Treatment of Acute Coryza by Autogenous Vaccines -The object of this study was to determine whether autogenous vaccines were of any greater value than stock vaccines in the treatment of coryza In previous studies Hoyle found that individuals who suffered from unusually frequent and severe attacks of coryza harbored pneumo cocci, influenza bacilli, and "mouse pathogenic green streptococci" in large numbers, these organisms showing an increased incidence during infections Hemolytic streptococci and Fried lander's bacilli were present in some cases view of these findings all vaccines employed contained pneumococci, influenza bacilli, and the mouse pathogenic green streptococci," and, if an autogenous strain were not available a stock strain was included Hemolytic streptococci and Fried lander's bacilli were included in the vaccine only when autogenous strains were available seven patients with frequent and severe attacks of coryza were treated by autogenous vaccines, with the result that in 28 cases there was no benefit whatever, in 23 cases the severity of the attacks was reduced, but not the frequency, while in 16 cases there was a reduction in both the severity and frequency of the attacks. These results indicate that autogenous anticatarrhal vaccines, like stock vaccines, do not appreciably affect the incidence of attacks of acute coryza, although in some instances the attacks were less severe, but the benefit, in the author's opinion, was not sufficient to justify any very extensive use of such vaccines The suggestion has been made by previous workers that while stock anticatarrhal vaccines have no effect on the incidence of acute

eoryza, they tend to diminish the frequency of severe complications such as pneumonia, this suggestion has been supported by a small number of cases treated by autogenous vaccines.—British Medical Journal, June 10, 1933, 1, 3779

A Newly Discovered Danger to Smokers — Neumann-Wender states that in the course of many years' study of the effects of tobacco he has become convinced that, in addition to nicotine, other ingredients of a harmful nature are present in smoking tobacco. Among these is a tar that forms in the process of smoking The greater the amount of woody portions of the leaf incorporated in the manufactured product, the greater is the amount of tar delivered in the course of smoking, to be retained in the capillaries of the lungs upon inhalation. These woody portions are present especially in the ribs and nerves of the leaves, and it is these that give occasion to tar formation condensed smoke, along with volatile acids, the author has also found methyl alcoholan experience confirmed by certain other writers Through determination of the amount of methyl alcohol it has been found possible to determine the content in lignin of the hard ened cellulose and the degree of "lignifying" Neuberg and Ottenstein found that a smoker who smokes 10 medium size cigars a day con sumes in round figures 70 gm tobaeco containing 42 mg methyl alcohol, a eigarette smoker consuming 20 cigarettes a day inhales about 40 mg methyl alcohol. Although these small amounts are not in themselves poisonous, one must not forget that the action of methyl alcohol is cumulative, and that its absorption over a period of years may possibly be the cause of the disturbances of vision ob served in confirmed smokers. It is evident that with an increased use of the lignified ribs a larger amount of methyl alcohol is given off in the process of smoking At the present time these hard, woody ribs are being adapted to use by means of special machines that roll cut or dissolve them into fibers, after which they are sold to eigar manufacturers in more or less considerable amounts. When this manipulation was but little resorted to, the danger was relatively slight, but the use of ribs has so greatly increased of late that the supply of the home product in Germany has proved madequate, and ribs are now being imported from foreign countries From 3,528 dozen ribs imported in 1927 the number has risen in 1932 to 76 637 dozen This enormous increase in the smoking of ribs is certainly not above suspicion Since these contain neither incotine nor aromatic substances, and give off harmful substances when burned they must be regarded as inferior waste products - Münchener medizinische Wochenschrift, May 12, 1933



LEGAL



MALPRACTICE—RECENT NEW YORK DECISION EXONERATING PHYSICIAN

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The opinion of a distinguished judge in which he exonerated a physician of charges of malpractice in an action recently tried by your Counsel's office, is, we believe, worthy of discussion in these columns. The case was one which arose out of a series of treatments for a glandular disorder suffered by a young woman about thirty-five years of age. At the time the doctor was first consulted the patient complained of an itching condition of the skin of a number of months duration. The patient remained under the doctor's care and he examined her and prescribed for her condition from time to time over a period of nearly nine months. During part of that time she was under the doctor's care, confined to her bed When he last saw her, she was improved although not cured. The details of treatment and the facts surrounding the patient's condition are fully discussed in the court's opinion, to which reference will be made later in this

Within a few months after the patient was last seen by the doctor, she started a Supreme Court action against him, charging him with malpractice and seeking to recover \$25,000 damages. plaintiff's complaint, which was drawn in very general terms, stated that the defendant had been employed to attend her and cure her of a malady consisting of an itch of the genitalia, and that as a result of defendant's negligence she continued to be sick, nervous and disabled; that her health and constitution were injured, and that she was thereby prevented from attending to her vocation. The negligence charged by the complaint was that he prescribed improper medicines, pills, tablets and capsules for the plaintiff and failed to properly observe her condition from time to time.

A bill of particulars was served by the plaintiff's attorney in which it was particularly charged that the negligence of the defendant had consisted of prescribing excessive quantities of thyroid extract and in ordering the plaintiff to omit all carbo-hydrates and milk from her diet, and in failing to examine her at least once a month. The bill of particulars set forth her claimed injuries to include: an operation for subtotal extraction of the thyroid gland with a resultant scar, tremor of the hands and loss of weight. Special damages including medical and operative fees were claimed.

The case came on for trial before a judge sitting without a jury and after all the evidence had been put in on both sides, the judge directed a verdict in favor of the doctor. In his opinion the court summarized the testimony that was introduced so clearly and tersely that it is well to quote from the same nearly in full. The court said:

"The physician in this case, while he is a specialist in neurology, and specializes more particularly in certain branches of neurology, was not consulted as a specialist by this plaintiff. He does not claim to be, and did not hold himself out to be a specialist in endocrinology. The fee that he charged for his services was a very modest one. He did not charge the fee of a specialist. He charged the fee of a general practitioner.

"In an action of this kind two questions are presented.

"In an action of this kind two questions are presented. First, did the physician violate the duty which he owed the patient? And second, was his violation of duty, the competent, producing cause of the resulting injury claimed?

claimed?
"I have already outlined the duty which a physician owes to his patient. The question is whether that duty

has been violated in this case.

"Now, at the first examination of this plaintiff the doctor made the regular examination that would ordinarily be required in a case of the kind that he was considering. He arrived at a diagnosis; and, from all the testimony in this case there is not the slightest basis for finding that his diagnosis was unreasonable, because all the doctors that were called agreed that the skin affection from which the plaintiff was suffering, might be caused by a glandular condition.

be caused by a glandular condition.

"He prescribed at that time some thyro-ovarian extract. That contained a quarter of a grain of thyroid extract mixed with four grains of ovarian extract. He prescribed 100 tablets

prescribed 100 tablets.

"The patient followed that prescription. When she eame to the doctor her pulse was normal, her heart was normal, her respiration was normal. She took this prescription, and, according to her testimony, it produced no ill effects on her at all. Her condition was just the same, except, possibly, so far as her rash was concerned, after she took this first prescription.

"Of course, one might say that the doctor should have head a beauty at the doctor should have the doctor shou

"Of course, one might say that the doctor should have had a basal metabolie test before he gave any prescription at all. Well, that would be the height of prudence and caution, perhaps; but certainly such a high degree of prudence and eaution is not expected of a physician, and sometimes not desirable. The test itself involves a considerable amount of inconvenience to the patient, and a substantial fee has to be paid for it.

"However that may be, there were no ill effects at all in convenience of the patient, and

"However that may be, there were no ill effects at all in consequence of the prescription which the doctor gave at the time. The patient did not react unfavorably, nor did she show any sensitivity to the thyroid extract in that small amount. This medicine was designed to last for several weeks. The doctor put her on a diet because of the rash. That was a normal thing to have done.

Even a layman understands that.

"Now, on March 13th she came back again. Thus far there certainly is no evidence that the doctor acted in any other way that a conscientious, painstaking doctor would have acted under the circumstances of this case. Whether he was in error in his diagnosis certainly is not

for this court to say; because, assuming for the sake of argument that there was an error in the diagnosis, that would not be a basis for an action for malpractice, for if that were so we would soon have very few doctors left. And what would become of the lawyers and judges I hesitate to say.

"On March 13th the doctor thought that the rash was getting a little better. The tablets were stopped, and she was given a nerve scolative, and the doctor at that

time prudently advised that a basal metabolic test be lad.
"Then we come to the visit of April 17th. Up to that
time there was certainly nothing at all wrong in the
light of all the testimony in the case. Dr. G. (an expert
witness) said that the food had nothing to do with this
condition. I am referring to the restriction of the diet.

"Now, on April 17th the skin condition became worse; and, in view of the fact that the report of the basal metabolic test was on the fringe of normal—because it was either minus 10 or minus 12—the doclor in his judgment thought it wise to prescribe thyroid extract, one grain to be taken twice a day, or a total of two grains a day.

"Well, up to this point, the patient not having reacted unfavorably to the prior prescription (smaller in dosage, to be sure); the basal metabolic test being on the fringe, according to the testimony of everyone who appeared here, it cannot be said that the doctor did anything other than the customary and usual thing in prescribing this thyroid extract. Assuming, for the sake of argument, that here also there may have been an error in judgment, an action in malpractice cannot be based upon that course of treatment under the circumstances of this case.

"So we come to May 1st. And here again, although she had taken this thyroid extract for a period of two weeks, which time it may reasonably be assumed would be adequate to determine whether the patient was sensitive to this form of drug, she herself testified that there was no change in her general condition up to that time, and the doctor found no change. The skin condition was getting worse, however, and he changed the treatment there.

"Then we come to what I consider to be the most important factor in this case; namely, what took place between May 1st and June 18th, and we have a conflict in the testimony there.

"It can hardly be said that the doctor was guilty of malpractice in not having the patient call to see him oftener. He saw her two weeks after the thyroid extract treatment was commenced on May 1st. He found no ill effects. The patient herself experienced no ill effects.

"Now, of course, lindsight is always better than foresight; but it is pretty hard to hold a doctor for malpractice when he conscientiously gives the best advice of which he is capable and does not desire to put a patient to any more expense than is necessary in his opinion. A patient can always come to see the doctor whenever he or she desires. There is nothing at all to stop that. Moreover, there were no warning signals up to May 1st that would have put the doctor on guard and cause him to insist on more frequent visits. Besides that, the doctor did in this case what some physicians refuse to do. He would talk to the patient any time she desired over the telephone, and he did give his advice from time to time.

"On May 8th there was this telephone conversation which the plaintiff claims took place and which the doctor denies. In the light of all the circumstances in this case I must accept the doctor's version, because I feel, from the testimony in this case and based upon the doctor's experience and the way he acted throughout the entire case, if the doctor's attention had been called to the fact that there was a sharp increase in the rate of the heart-beat and the condition which the plaintiff claims that she was suffering from at about that time,

he would have done at that time what he did on June

"I do not believe that any action for malpractice can be based or should be based upon an alleged telephone conversation denied by the doctor and which does not appear to be reasonable and probable in the light of all the circumstances.

"The plaintiff claims that on May 8th the doctor told her to stop using the thyroid extract for a period of about three days, and then to resume it and to come to him again when she had finished. The doctor states that, as the skin condition became worse, and as the patient manifested considerable anxiety over that condition and attributed it to the pills which she was taking, he told her to stop for three days.

"Now, up to that time, if she had followed his prescription regularly, she should have taken about 40, at least, of these pills, and she should have come to him of her own accord before June 18th, assuming that the dose was reduced from two pills a day, or two tablets a day, to one a day. But, I find from the evidence in this case that up to June 18th the doctor was not guilty of any act of omission or any wrongful act on which an action

act of omission or any wrongful act on which an action for malpractice may be based.

"From June 18th until he ended his connection with the case the evidence is clear that the doctor acted in the eustomary and usual way. It is difficult to see what else he could have done under the circumstances. It is true that, from the evidence in the case, the Court is bound to come to the conclusion that the use of the prescription of thyroid extract was a producing or contributing factor in bringing about this hyper-thyroid condition; or, that it did aggravate a pre-existing, latent condition. That seems to be the inference that can fairly be drawn from the testinony in the case. But I don't see how it could be found that the doctor is in any way responsible therefor.

"After June 18th he at once stopped the thyroid extract. He did give some pituitary gland extract. Whether that was proper under the circumstances is another matter of judgment. Even Dr. G.— (the expert witness), however, said that the use of pituitary gland extract, although he did not think it was proper, had nothing to do with what developed here.

"The rest, the change in the prescription, were all customary and usual methods of treatment.

"There is a dispute as to whether or not there was a change made in the dict, and when it was made. But it is unnecessary to go into that because certainly, if the plaintiff claims that the doctor told her that he had made a mistake in depriving her of these things, that she should have had these articles of food, it is most reasonable to assume that he told her that she could have them from that time on. It is rather far-fetched to assume that he would tell her that, and at the same time either tell her to continue the old diet or remain silent about it. But, further than that, Dr. G— (expert witness) testified that the diet would have nothing to do with the development of the condition of hyperthyroidism which manifested itself."

In coming to his conclusion the court stated his summary of the law applicable as follows:

"A physician is not an insurer. He is not held to guarantee the success of his treatment. His duty is defined in the leading case of Pike v. Honsinger, as follows: 'Upon consenting to treat a patient, it becomes his duty to use reasonable care and diligence in the excrise of his skill and the application of his learning to accomplish the purpose for which he was employed. He is under the further obligation to use his best judgment in exercising his skill and applying his knowledge. The law holds him liable for an injury to his patient resulting from want of the requisite knowledge and skill, or the omission to exercise reasonable care, or the failure to use his best judgment. The rule in relation to learn-

ing and skill does not require the surgeon to possess that extraordinary learning and skill which belong only to a few men of rare endowments, but such as is possessed by the average member of the medical profession in good standing. Still, he is bound to keep abreast of the times and a departure from approved methods and general use, if it injures the patient, will render him liable, however good his intentions may have been.' The plaintiff cannot succeed merely by establishing that the physician was guilty of a mistake of judgment. 'The rule requiring him to use his best judgment does not hold him liable for a mere error of judgment, provided he does what he thinks is best after careful examination.'"

The case so quoted from by the court has been for years the leading authority in this State as to the law governing the liability of physicians for malpractice.

In applying the law to the facts of the case, and in concluding that in the light of all the circumstances the plaintiff had failed to establish her case, the court said:

"Of course there are differences of opinion as to what treatments should be given by physicians under certain circumstances, just as there are differences of opinion among lawyers as to the course of action to be pursued in a litigation, or in any controversy that comes up. In this case, taking the testimony of the doctors called on behalf of the plaintiff, there was a difference of opinion as to what treatment should be given. Dr. G— (expert witness) thought that an immediate operation, or, at least, an operation would be necessary, and he gave a certain treatment. Dr. P— (an expert witness) at first thought that an operation would not be necessary, and he followed a different method of treatment. It seems to me it would be going entirely too far and beyond the bounds of reason to say that either one, or both, of these physicians was guilty of malpractice because a mistake may have been made. So it would be going beyond the bounds of reason to hold that because unfortunately a post-operative pneumonia developed there was something wrong with the doctor who performed the operation or who administered the anesthetic.

"Mistakes will happen. There is no question about

"Mistakes will happen. There is no question about that. The best of physicians, the best of lawyers, the foremost experts in every line of endeavor, will make mistakes from time to time. The law does not hold that simply because an honest mistake or an error of judgment has been made that the person who makes it shall be guilty of malpractice."

It is interesting to note that in the last analysis this case hinged on lay testimony. In nearly every

malpractice case we have ever tried or handled there is testimony by the patient and her relatives seeking to establish negligence on the part of the physician. The decision on these sharply contested questions of fact is often determinative of the action. It is heartening to note that in this opinion the court rejected the testimony of the patient, and accepted the testimony of the physician, as to what transpired during a certain telephone conversation in which the plaintiff claimed to have told the doctor of certain symptoms which, concededly, if he were told, would have put him on notice that the treatment should be changed. This telephone conversation was categorically denied by the doctor. As the court said in determining this important question of fact:

"In the light of all the circumstances in this case I must accept the doctor's version, because I feel, from the testimony in this case and based upon the doctor's experience and the way he acted throughout the entire case, if the doctor's attention had been called to the fact that there was a sharp increase in the rate of the heart-beat and the condition which the plaintiff claims that she was suffering from at about that time, he would have done at that time what he did on June 18th."

In the course of your Counsel's experience in the handling of malpractice cases, which covers a period of about fifteen years, we have never read any decision from any court which displayed a more comprehensive and understanding point of view toward the practice of medicine. The judge who wrote this decision is one of the ablest judges in the State of New York. He is not only able but he is fearless, and his opinions are respected by his colleagues. Particularly do we wish to call attention to that part of the opinion in which the court says:

"Whether he (the doctor) was in error in his diagnosis certainly is not for this court to say; because, assuming for the sake of argument that here was an error in the diagnosis, that would not be a basis for an action for malpractice, for if that were so we would soon have very few doctors left. And what would become of the lawyers and judges I hesitate to say."

We feel sure that this learned opinion will be of great value as a precedent in malpractice cases.



NEWS NOTES



COMMITTEE ON PUBLIC RELATIONS

The regular monthly meeting of the Committee on Public Relations of the Medical Society of the State of New York was held in the Albany office of the Society on Monday, June 26, 1933, holding an all-day session lasting from 10:30 a.m. until 5 p.m. There were present Dr. Sadlier, Chairman, and Drs. Mitchell, Hambrook, Cunningham and Ross. There were also present Dr. T. P. Farmer, Chairman of the Committee on Public Health and Medical Education, and Dr I. S. Lawrence, Executive officer.

Veneral Disease Clinics: A discussion of Venereal Disease clinics, which was begun in the meeting of May 29 (Journal, July 1, page 838), was continued with Dr. Parran, State Commissioner of Health present. The discussion was an informational conference which resulted in a clarification of the relations of the practicing physicians to the State Department of Health.

Blood Donors: The listing and control of professional blood donors was considered, and regulations similar to those in Greater New York were proposed. The subject will require investigation before action can be taken.

Crippled Children: The discussion of the care of erippled children, which was begun in the May meeting, was continued, but a decision was deferred until further information is obtained.

Examination of School Children: The subject of the physical examination of school children in Homer, Cortland County, which was considered in the May meeting of the Committee (Journal, July 1, page 838), was continued. The following explanation by Dr. D. R. Reilly, Conmissioner of Health of Cortland County, was read:

"The follow-up work on discovered defects in school children is one of the activities of this Department. We do not have sufficient funds, however, to permit us to undertake the actual correction of the defects. We attempt to have the parents concerned undertake the correction through their own physicians. Eye defects and dental defects we are able to correct through the generosity of some organization, such as Rotary. Of conrse, only a few are taken care of in this fashion. The Board of Education in Cortland employs a part time dentist, while Homer had available only about \$50.00 for dental work. Tonsil cases are taken care of for a nominal fee (\$2.00) which is provided by the parents.

"With a sufficient number of nurses this Department would carry on a satisfactory school program in all parts of the country, as well as in Homer. To do this in conjunction with our other

activities would require about six nurses. We have three. The only alternative scents to be the employment of school nurses by the local Boards of Education. Since there are at least four communities which would require school nurses the net cost would be somewhat greater.

"Even then the correction of defects would depend on the willingness of Boards of Education to provide funds for the payment of physicians or on the willingness of physicians to contribute all or part of their services."

It was the opinion of the Committee that Cortland County should not be singled out for comment, for the problem of discovering and correcting the defects of school children is universal, and Cortland County is putting its limited means to excellent use.

The Hard of Heoring: The Committee resumed a discussion of "The Hard of Hearing," which was reported in the July first Journal, page 838, and listened to a presentation of the subject by Dr. Emily A Pratt of the State Department of Education, and Miss Estelle E. Samuelson, of the New York League for the Hard of Hearing, 480 Lexington Avenue, New York City. The speakers developed the following argument for action.

From four to ten per cent of school children show some degree of hearing defect.

Facilities are not adequate for dealing with the defects.

Otological examinations are difficult to obtain without the payment of a fee.

Children arc committed to institutions for the hard of hearing on insufficient evidence—sometimes of physicians, sometimes of dentists, and sometimes of laymen.

About 150 children are committed to the institutions annually.

The children in the institutions do not receive adequate attention in regard to their fears, because there is no money to pay otologists, and no otologists are on the staffs.

Deafness has been excluded as a condition to be treated under the crippled children's law.

The speakers summarized the situation as follows:

"There are schools for the deaf, absence of otological service, no available list of otologists who could be called upon, and no provision for fees for them. There are two situations—one in the public schools of the state which is reasonably well handled; and the other in the schools for the hard of hearing which is not well handled.

"In New York City the otologists ecoperate in

solving this problem. In the State the problem is not well met and the real question is, shall it be solved under the direction of the State Medical Society or under the direction of the League of the Hard of Hearing? It came to the surface that the State of New York pays \$600 per year for each child in the schools for the hard of hearing. It was stated that the State Department of Education would welcome an investigation regarding medical care of the hard of hearing in these schools, and would receive kindly suggestions as to how the problem could be met.

"An increased use of the audiometer in 45 places shows that there are 210,547 children in 45 different places having some defect in hearing; that 88 nurses are made use of in the care of

these children; that there are 45,000 children in the state needing lip reading training. It was believed that clinics could not do all the work if that method was tried."

In the opinion of the committee the problem is a greater one than has been thought; that the profession of medicine has before it another problem of great importance; and that the profession should assume responsibility for working it out. The whole matter was placed in the hands of a. sub-committee made up of Dr. Hambrook of the Committee on Public Relations and Dr. H. M. Atkinson of Catskill representing the Committee on Public Health. This committee was asked to report at the next meeting of the Committee on Public Relations. W. H. Ross, Secretary.

COMMITTEE ON TEMPORARY EMERGENCY RELIEF ADMINISTRATION

At a contact meeting held July 14th, a number of very satisfactory reports were received from County Societies as to the working of this Law.

Where the County Contact Committee has met with the Welfare Officer, or Officers, of the County, in almost all instances a satisfactory agreement has been reached. In some cases the factor of allowed mileage has yet to be established, and some vouchers are being sent back by the Comptroller's office to the Welfare Officer because Section 4 of the Agreement has not been complied with. This Section reads as follows:

"Each bill shall be chronologically arranged and state the name, age, and address of the patient; the diagnosis; or (italics are editorial) the general indication of the entire illness; the nature of the treatment, i.e., in home, office, or special type of care; the dates on which service was rendered; and the status of the case at the end of the month (cured, sent to the Hospital, needs turther treatment, dead). Bills for medical care shall be accompanied by the original written authorization for such care."

It is absolutely necessary to have these facts, else the Contact Committee in your County Society—or higher up in your State Society—cannot pass satisfactorily on the bill and decide whether it is in ordinary routine or comes under the clause of special work.

It has been found that few of the County Society Contact Committees are supplied with:

1. The Public Welfare Law—issued by The State Department of Social Welfare—State Office Building, Albany, N. Y.

2. The Public Health Law—issued by The State Department of Health—State Office Build-

ing, Albany, N. Y.
3. The Emergency Unemployment Relief Laws in the State of New York, issued and published jointly by the Temporary Emergency Relief Administration, and the Attorney General's Office of the State of New York.

With these three pamphlets many grievances can be immediately settled by the County Society through its Contact Committee, in cooperation with the Welfare Officer.

Each month has recorded larger and larger sums of money being paid by Welfare Officers to the medical fraternity, general practitioners and specialists sharing in this outlay.

The doctors are doing their share and more at present; but are receiving more income as their work increases, where the agreement is in force.

Some Welfare Officers are paying much more for services than is allowed them on the percentage return from the TERA, thus showing their own and the community's desire to pay for services rendered.

Some Welfare Officers have tried to save money for their taxpayers by themselves giving orders for proprietary drugs, through the advice and suggestions of certain nurses. This type of medical practice immediately runs up against that clause in the agreement which forbids of such prescribing, save on the special order of the Welfare Officer to a physician; for the Welfare Officer cannot get his money back from the TERA for such an expenditure made under such conditions.

In cases of specialists being called, an increasing number of local consultations are being held by authorization of the local Welfare Officer, thus keeping the patient within the attending physician's hands. In most instances where a patient goes to a Hospital, (a) The Hospital loses money because of a reduced rate agreement "in the interest of charity"; (b) The physician "back home" receives nothing and his patient has been "lifted"; (c) while in most instances, at present, the hospital attendant, medical or surgical receives not even a thank you.

It would seem that the County Fee Bill is becoming the individual county basis at which the local county physicians evaluate their minimum (cost?) charges for services, and many Welfare Officers now are paying the physician in accordance with the fee schedule of the community

There are still some counties which must adjust their nuleage with the local Welfare Officers, as well as the question of multiple calls in one

family at the same visit

Home relief for Veterans is now under the TERA, thus simplifying this class of cases, orders for treatment coming from the Welfare Officer, and bills with vouchers being sent him for payment

Some counties have not yet used funds of the TERA, so your committee cannot tell if doctors in these counties are receiving their just recompense for services to the indigent

Many physicians are learning that a number of their charity cases on their books should be paid

for by the local Welfare Officer

There have been a few solitary instances where physicians have not been in agreement with their County Society, and with the Welfare Officer, and have charged more than the fees arranged between the Society and Welfare Officer some of these cases, it would appear that the doctor was entitled to his fee charge rendered and had made a sufficiently clear explanation, but the Welfare Officer had not had the benefit of dis cussion with the local County Society Contact Committee, or there was disagreement between them that needed enlightening of both sides

Statistics show that in February, 1933, of the total expenditure of TERA funds in the entire State, outside of Greater New York and the large cities, 49 per cent was paid under the head of medical services In May this proportion had

risen to 75 per cent

Your State Contact Committee now has the figures for amounts expended for each County

up to date for medical services

To determine the propriety of disputed bills, rendered under the 'Special Service' Clause of the Agreement, your Committee is still at a loss until each County Society files its fee bill with

your Contact Committee, with Dr H J Davis of the TERA, and with the County or Local Welfare Officer Most of the Welfare Officers do not yet know what the minimum charges are from their local County Medical Society, hence arise some of the controversies

The question of reimbursement for drugs should also be settled locally, for the TERA only reimburses the Welfare Officer up to 75 eents for a prescription, which should be of the simple drugs, unless authorized in writing to ex pend more, by the Welfare Officer or the local Contact Committee of the County Society

Attention is again called to Article "C" which is not being applied as extensively as it should

"1-The Medical Society of the State of New York has agreed to request each County Medical Society to appoint or designate a Committee to advise, at least monthly, with the Local Welfare Official"

'The Local Welfare Official shall consult this Committee concerning problems of medical care,

such as

(a) The reasonableness of any given bill for medical services

(b) To investigate complaints made with regard to medical care

(e) Any proposed change in policy with regard to provision of medical care

(d) Principles to be followed in the alloca-

tion of cases to physicians"

'In addition this Committee will be asked to communicate to the TERA failure of any local Welfare Official to authorize reasonably required medical care "

2-Local Welfare Officials are requested to re port to the Medical Director of the TERA failure of the local Committee of the County Medical Society to cooperate in the provision of reasonable niedical care to Welfare cases'

> JAMES N VANDLE VELE Chairman. HYZFR W JONES ALBERT G SWITT

FIREWORKS IN SYRACUSE

The passage of an ordinance forbidding the sale of fireworks in the City of Syracuse as reported in this Journal of August 15, 1932, page 982, has been effective in preventing accidents from Fourth of July fireworks Dr D T Gillette writes

We are fortunate in Syracuse in having an

ordinance passed banishing the sale and use of fireworks within the city limits. The police department has adequately enforced this law, with the result that there were no injuries due to the use of explosives on the Fourth of July This is a very excellent example for other communities '

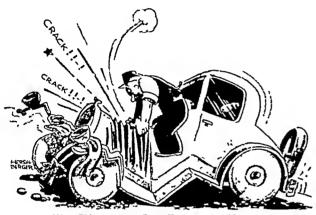


THE DAILY PRESS



HOME TELEPHONE RATES FOR CHIROPRACTORS

The New York Herald Tribune of July 13 contains an account of a plea made before the Public Service Commission by chiropractors and chiropodists that they be allowed home



The Chiropractor Gets Engine Trouble -From Judge, July, 1933.

rates for the telephones just as physicians are. The account says:

"Residential rates now apply to office telephones in the homes of physicians, surgeons,

dentists, osteopaths, Christian Science practioners, veterinarians and nurses, according to a schedule of the telephone company.

"The company called Arthur D. Welch assistant vice-president of the New York Telephone Company, who said that he had charge of rates, practices and commercial co-ordination in the city area. Mr. Welch said that the present rates had been in effect since 1910 and that the only reason the company had ever allowed a lower rate to professional men was that it had assumed that their possession of home telephones would be an inducement to other persons to buy telephone service.

"I see no reason why any profession should be accorded this preferential privilege," Mr. Welch kept repeating throughout the hearing.

"Mr. Welch said he believed that even the present rate schedule was discriminatory. He said that surveys showed that professional men with telephones in their homes made as many out-going calls as a small business firm and received a great many incoming calls. In his opinion these incoming calls were largely of a professional or business nature, yet the rate paid was based on residential use."

IS CANCER HEREDITARY?

The New Jork *Times* of July 18th asks the question "Is Cancer Hereditary?" and then presents the evidence of the nature of cancer in the following excellent editorial:

"A large and important school of European and American biologists has for years been collecting evidence from family histories and life insurance statistics to support the hypothesis that cancer is an inheritable disease, Much to be preferred are deductions from laboratory experiments under strict control. It is precisely this method that Dr. Maud Slye of the University of Chicago has been applying in cancer studies which are now regarded as classic here and abroad. For twentythree years she has been experimenting with mice of known strains. The number of her post-mortems (116,000) is so large that her results cannot be questioned on the score of inadequate material. Hence her view that susceptibility to cancer may be an inherited characteristic must be received with the utmost respect. We deal with genes—invisible units which are to the cells what atoms are to ordinary matter. If we could only control the manner in which genes are linked (the possible combinations are almost infinite in number), it would be possible to control not only cancer but the whole human organism. But Dr. Slye is careful to state in her article, which appears in *The American Journal* of Cancer, that more than an inherited susceptibility is probably involved. An external factor acting with internal factors upon susceptible soil is probably the cause of cancer.

"When we turn to the findings published earlier in the year by Drs. M. R. Curtis, W. F. Dunning and F. D. Bullock of Columbia we seem to reach a different conclusion. For twelve years they bred not mice but rats, white and colored, and infested them with a parasite known to produce cancer of the liver. All told, 52,000 animals were studied. Of these half were controls; of the treated remainder,

only 3,300 developed cancer. There was no evidence that liability to the disease is borne in the genes and is therefore hereditary. No matter how inbred the animals were, the liver was affected only when the parasite was introduced. Chance alone decided whether eancer was to result—the chance of long life. Cancer is chiefly a disease of the aged.

"Although two sets of experiments apparently lead to different conclusions, there is in reality no conflict. Dr. Slye deals with spontaneously generated tumors; Drs. Bullock, Curtis and Dunning with tumors that are the result of deliberate irritation. Moreover, mice

and rats differ in their susceptibilities. It is strange yet true that a parasite which will cause a sarcoma of the liver in a rat will not cause it in a mouse. In both sets of experiments it is Dr. Slye's external factor, whatever that may be, which is the direct cause of disease.

"The problem of cancer is the problem of life, because it is a problem of the cell. Some marked and constant difference between cancer and normal tissue must be discovered, and it is to the making of such a discovery that Dr. Slye and Drs. Curtis, Bullock and Dunning have contributed so notably by their experiments."

THERAPEUTICS OF MISCHIEF

It seems strange to hear mischievous fun prescribed as a help to success, but this advice was seriously given by an eminent authority, according to the following news item from Chicago in the New York Herald Tribune of July 13:

"Speaking tonight at the authors' dinner given by the National Federation of Business and Professional Women's Clubs in convention here, Miss Catherine Oglesby, associate editor of 'The Ladies Home Journal,' declared that the only real purpose of leisure was to use it unwisely, and that the true reason for working wisely from 9 to 5 is to enable people to play foolishly the rest of the time.' The right use of Leisure' was also discussed

by Mrs Frances Parkinson Keyes, of the staff of 'Goodhousekeeping,' and by Mary Synon, Chicago, writer and traveler.

"Wisc work and foolish play is a sure means of success," said Miss Oglesby. "Every business woman when making up her budget should have on it the item of extravagance and in making up her time schedule should allow a period of mischief, What goes for boys goes for girls, and the good things of life seldom fall to the lot of the dull Jills.

"In fact, psychologists who have studied women in business declare that most women fail to advance because they don't know how to play. For this reason I commend mischief to you."

DIGESTION BY MR. ROBOT

The New York Sun of July 13 describes some of the visual demonstrations of chemistry at the Chicago World's Fair, including the production of sulphur, oil refining, the manufacture of rubber, and the effects of liquid air. The article concludes:

"The final story is on the chemistry of food and nutrition. This exhibit is unique. A tenfoot robot will give a twenty-minute lecture on food chemistry and nutrition, illustrating it by demonstrations which he operates, a number of static exhibits to which he points, and finally the demonstration of the processes of digestion on himself by means of a moving picture projected from behind on his own front. The robot describes the constituents of food. He demonstrates the function of each and how they are broken down or digested in the body tissues. He also describes the functions of the hormones or chemical messengers."

BACTERIOPHAGES

Any person who reads the more serious parts of the daily papers will gain a knowledge of many points of medicine. The editorial columns of the New York Timec of July 7 discusses bacteriophages in a truthful, balanced way, taking as its text the reports that the New York Aquarium was besieged with applicants for bacteriophages for skin eruptions following a news item that worknen in the Aquarium were cured of sore lands by working in the water. After de-

scribing bacteriophages the editorial concludes:
"Medicine and bacteriology stand upon the
threshold of an advance as great as any ever
made. In the past a student of infections dealt
with what he could see. Now the world of the
unseen lures. Opportunity beckons to a new

with what he could see. Now the world of the unseen lines. Opportunity beckons to a new Pasteur who will reconcile conflicting theories and observations, even as the old pasteud did, and give us exact technical knowledge where now there is only surmising, regarding the causes.



BOOKS RECEIVED



- Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.
- DIET IN SINUS INFECTIONS AND COLDS. By Egon V. Ullmann, M.D. Octavo of 166 pages. New York, The Macmillan Company, 1933. Cloth, \$2.00.
- GASTRIC ANACIDITY. Its Relations to Disease. By ARTHUR L. BLOOMFIELD, M.D. and W. Scott POLLAND, M.D. Octavo of 188 pages. New York, The Macmillan Company, 1933. Cloth, \$2.50.
- ARTERIOSCLEROSIS. A Survey of the Problem. A publication of the Josiah Macy, Jr. Foundation. Edited by EDMUND V. COWDRY. Octavo of 617 pages, illustrated. New York, The Macmillan Company, 1933. Cloth, \$5.00.
- THE SCIENCE OF HUMAN REPRODUCTION. Biological Aspects of Sex. By H. M. Parshley, Sc.D. Octavo of 319 pages, illustrated. New York, W. W. Norton & Company, Inc., [c. 1933.] Cloth, \$3.50.
- SENILE CATARACT. Methods of Operating. Second Edition. By W. A. Fisher, M.D. 12mo. of 267 pages, illustrated. Chicago, Chicago, Eye, Ear, Nose and Throat College, [c. 1933.]
- URINE AND URINALYSIS. By Louis Gershenfeld, Ph.M. 12mo. of 272 pages, illustrated. Philadelphia, Lea & Febiger, 1933.
- MEDICAL STATE BOARD EXAMINATIONS. Topical Summaries and Answers. By Harold Rypins, M.D. Octavo of 448 pages. Philadelphia, J. B. Lippincott Company, [c. 1933.] Cloth, \$4.50.
- LE NYSTAGMUS VESTIBULAIRE ET LES REACTIONS DE MOUVEMENTS. By R. CLAOUÉ. 12mo. of 64 pages, illustrated. Paris, Norbert Maloine, 1933.
- THE CLINICAL ASPECT OF CHRONIC POISONING BY ALUMINUM AND ITS ALLOYS. By Leo Spira, M.D. Octavo of 28 pages, illustrated. London, John Bale, Sons & Danielsson, Ltd., 1933. Paper, 2/6.
- New and Non Official Remedies, 1933. Containing Descriptions of Articles Which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1933. 12mo. of 498 pages. Chicago, American Medical Association, 1933. Cloth, \$1,50.
- Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1932, with comments which have appeared in the Journal. 12mo. of 104 pages. Chicago, American Medical Association, 1933. Cloth, \$1.00.
- THE MODE OF ACTION OF DRUGS ON CELLS. By A. J. CLARK, M.D. Octavo of 298 pages. Baltimore, The Williams & Wilkins Company, 1933. Cloth, \$6.25.
- MINOR MALADIES AND THEIR TREATMENT. By LEONARD WILLIAMS. M.D. Sixth Edition. 12mo. of 420 pages. Baltimore, William Wood & Company, 1933. Cloth, \$3.75.
- MASSAGE AND REMEDIAL EXERCISES IN MEDICAL AND SURGICAL CONDITIONS. By NOEL M. TIDY. Octavo of

- 429 pages, illustrated. Baltimorc, William Wood & Company, 1933. Cloth, \$5.25.
- A LABORATORY MANUAL OF NEURO-ANATOMY. By C. L. DAVIS, M.D., and H. S. RUBINSTEIN, M.D. Part 2, Stereographic Plates. Octavo. 30 plates. Baltimore, William Wood & Company, 1933. \$3.00.
- SURGICAL ANATOMY. By C. LATIMER CALLANDER, M.D. Quarto of 1115 pages, illustrated. Philadelphia, W. B. Saunders Company, 1933. Cloth, \$12.50.
- COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION. Edited by Mrs. MAUD H. MELLISH-WILSON and RICHARD M. HEWITT, M.D. Vol. 24, 1932. Octavo of 1205 pages, illustrated. Philadelphia, W. B. Saunders, 1933. Cloth, \$11.50.
- MEDICAL CLINICS OF NORTH AMERICA. Vol. 16, No. 6. May, 1933. (Mayo Clinic Number.) Published every other month by the W. B. Saunders Company, Philadelphia and London. Per Clinic Year (6 issues). Cloth, \$16.00 net; paper, \$12.00 net.
- THE HEROIC AGE OF SCIENCE. The Conception, Ideals and Methods of Science Among the Ancient Greeks. By WILLIAM A. HEIDEL. Octavo of 203 pages. Baltimore, Williams & Wilkins Company, 1933. Cloth, \$2.50. (Published for Carnegie Institution of Washington.)
- FILTERABLE VIRUS DISEASES IN MAN. By JOSEPH FINE, M.D. 12mo. of 144 pages. Baltimore, William Wood & Company, 1932. Cloth, \$2.25.
- Modern Aspects of Gastro-Enterology. By M. A. Arafa, M.R.C.P. (London.) Octavo of 374 pages, illustrated. Baltimore, William Wood & Company, 1933. Cloth, \$8.25.
- THE OPERATIVE STORY OF CLEFT PALATE. By GEORGE M. DORRANCE, M.D. Octavo of 564 pages, illustrated. Philadelphia, W. B. Saunders Company, 1933. Cloth, \$6.50.
- SURGICAL CLINICS OF NORTH AMERICA. Vol. 13, No. 3, June, 1933. (Lahey Clinic Number.) Published every other month by the W. B. Saunders Company, Philadelphia and London. Per Clinic Year (6 issues). Cloth, \$16.00; Paper, \$12.00.
- THE MOTION PICTURE AS A PROFESSIONAL INSTRUMENT. By WILLIAM F. KRUSE. Quarto of 28 mimeographed pages. Chicago, Bell & Howell Company, [1933]. Paper.
- THE MEDICAL CLINICS OF NORTH AMERICA. Volume 17, No. 1, July, 1933. (New York Number.) Published every other month by the W. B. Saunders Company, Philadelphia and London. Per Clinic Year (6 issues). Cloth, \$16.00 net; Paper, \$12.00 net.
- HISTOPATHOLOGY OF THE PERIPHERAL AND CENTRAL NERVOUS SYSTEMS. By GEORGE B. HASSIN, M.D. Octavo of 491 pages, illustrated. Baltimore, William Wood & Company, 1933. Cloth, \$6.00.



BOOK REVIEWS



Some Factors in the Localisation of Disease in the Body. By Harold Burrows, C.D. Octavo of 299 pages, illustrated. Baltimore, Williams & Wilkins Company (William Wood & Company), 1932. Cloth, \$4.50.

This volume deals with an attempt to explain the mechanism of the localisation of disease processes, including those caused by foreign proteins, syphilis, bacteria, viruses and cancer. It includes alsn a discussion of the factors that influence localization as well as some therapeutic considerations. It is based almost entirely on the results of personal research in the field of localization of cancer. The book is written in a lucid style, and well worth reading.

MAX LEDERER.

THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Series 1932. Chicago, The Year Book Publishers, [c. 1933]. Pediatrics. Edited by Isaac A. Abr, M.D. 12mo. of 564 pages, illustrated. Cloth, \$2,25.

The practice of pediatrics as a specialty is but twenty-five years old and it is changing rapidly. New diagnostic and therapeutic procedures are being recorded constantly and the text books can scarcely keep pace with the progress. One must turn to the current pediatric journals for up-to-date information. It is expensive and time-consuming to wade through all the periodicals, but in this little volume one finds concise, meaty articles gleaned from the medical journals of 1932, boiled down for rapid assimilation. The Year Book Series lave always enjoyed popularity and this 1932 edition affords an easy and inexpensive method of brushing up on this specialty.

DAYID EDWARD OVERTON.

THE PRACTICAL MEDICINE SERIES, Comprising Eight Volumes on the Year's Progress in Medicine and Surgery, Series 1932. The Eye, Edited by E. V. L. BROWN, M.D., and LOUIS BOTHMAN, M.D. The Ear, Nose and Throat. Edited by George E. SHAMBAUGH, M.D., and ELMER W. HAGENS, M.D. 12mo. of 686 pages, illustrated, Chicago, The Year Book Publishers, [c. 1932]. Cloth, \$2.50.

Again this meaty little volume comes to hand for our permeal in leisure hours that we may keep abreast of the times with a minimum of effort. While every original bit of work put forth in the year is not summarized, the selections are in general well chosen. The editorial comments—with certain of the abstracts—are interesting, but the reviewer feels that it is not fair for the editors of such a work to sanction or disparage careful study with no more than a phrase or two. Such notes would better be omitted. While this work cannot be considered as a substitute for the abstract departments of the various journals, it is supplementary and is a very useful work.

John N. Evans.

THE 1932 YEAR BOOK OF RADIOLOGY, Diagnosis, Edited by CHARLES A. WATERS, M.D. Therapeutics, Edited by IRA I. KAPLAN, M.D. Octavo of 750 pages, illustrated. Chicago, The Year Book Publishers, [c. 1932]. Cloth, \$6.00.

This is the first attempt to present a Year Book of Radiology and Is of the same high quality as the other Year Books that have been issued of various branches of medicine. The well-known ability of Dr. Charles A. Waters of Baltimore and Dr. Ira I. Kaplan of New York in their specialties ensure the high standing of the

work. This is a presentation of the developments of the year 1932 in radiology—diagnostically and therapeutically.

The articles which have been selected for abstract are without exception of particular interest and value to the radiologist in keeping him abreast of the times in his specialty. The abstracting is extremely well done and the editorial comments on many of the subjects are very appropriate.

The section devoted to the Osseous System is extremely valuable. The authors have performed a useful function in selecting some articles which provide a timely word of warning. The articles on "lipiodol" are esperime. The clearness of the bedguards especially

make the bookwork especially most commendable for its

completeness.

This volume should be in the hands of everyone attempting radiology in any form, Charles Eastmono,

VARICOSE VEINS AND HAEMORRHOIDS AND THEIR TREAT-MENT. By V. MEISEN, M.D. Octavo of 149 pages, illustrated. New York, Oxford University Press, 1932.

This treatise is a monograph of 150 pages translated from the Danish into the English by Hans Andersen.

The author has had an extensive experience in the treatment of varicostics. He reports some 3,500 cases treated without fatalities.

He begins with the consideration of the anatomy and the physiology of the veins of the lower extremities. He next gives a complete description of the pathological aspects of varicose veins—then follows a careful consideration of the operative treatment and the injection treatment of the lesions.

The technique which he finally employs, as the result of his experience, has been repeated many times in American medical literature and does not need to be reviewed here. His conclusions are conservative and not too optimistic. His percentage of recurrences is rather low when compared with other figures.

Following the varicose therapy, the author considers the treatment of several allied conditions; such as, Angioma, Varicoccle, Hygroma, and finally Haemorrhoids.

Although this entire monograph contains nothing that is really new, its value lies in the fact that it gives the conclusions of a man who has had a vast experience in his chosen work.

ROBERT F. BARDER.

A LABORATORY MANUAL OF PHYSIOLOGICAL CHEMISTRY. By D. WRIGHT WILSON, M.S., Ph.D. Second Edition. Octavo of 284 pages. Baltimore, Williams & Wilkins Company, 1932. Cloth, \$2.50.

This book is designed for use with a class. It starts with a page of general instructions on the manner of handling the various reagents and then proceeds with carefully selected experiments calculated to illustrate the essential chemical characteristics of the various substances dealt with.

The first part takes up the inorganic substances of physiological interest such as phosphorus, calcium, magnesium, sulphur, chloride and nitrogen. Then follow experiments on electrolytic dissociation and on colloids. The proteins, carbohydrates and fats are next dealt with.

The second part of the hook is devoted to the body tissues and fluids, concluding with directions on the conduct of metabolism studies and on dietary deficiencies.

The directions are brief and to the point. The text is printed on only one side of the page, leaving the other side blank for notes.

BENJAMIN DAVIDSON.



OUR NEIGHBORS



EXAMINATIONS FOR LICENSURE IN PENNSYLVANIA

The Pennsylvania Medical Journal for March prints the following letter from Irvin D. Metzger, Chairman of the Pennsylvania State Board of Medical Education and Licensure, regarding the date of taking the state medical examinations:

"The attention of the State Board of Medical Education and Licensure has been called to the notation of an implied criticism of the Board because it delays licensure by requiring a completion of the internship before admitting the candidates to the licensing examination. The suggestion was made that the examinations might be held a month or two before the close of the intern year, and the grades withheld until satisfactory certifications had been made of the completion of the same; thus the licensee might be in position to enter practice immediately.

"The law specifically asserts that the fifth or intern year shall have been completed before a candidate is admitted to the licensing examination. To do otherwise would mean to violate the law as it now stands; hence the suggestion is im-

practicable.

"In this legal requirement, as in many others, the Act as it stands, may be more sensible than the changes suggested. While the Board would be loath to extend the day of licensure an hour

further than necessary, it is infinitely more concerned in the legalizing of physicians that are worthy than in hastening the time for their gainful employment.

"The intern year is the one in which the young physician secures real training in the art of medicine. A calendar year is scant enough in which to unscramble his theoretic ideas and formulate for himself a sane philosophy of professional life. His contacts with successful clinicians are apt to stamp upon him the labels which will vouchsafe for him a similar career. That sublime sense of responsibility which marks not only the conduct and attitude of a real physician but which sets the seal of divine selection upon his brow, cannot be developed in a few months, especially when licensure is the paramount mental concern.

"Better to have each candidate for licensure earnestly concerned with the seriousness of the profession he is entering than with the immediate return of dividends on money invested. Service rendered in this spirit will be sought early and be compensated well. Merit in medicine as elsewhere always assures its own reward but cannot be attained in a minimum of time and in half-hearted service."

PRELIMINARY MEDICAL EDUCATION IN MASSACHUSETTS

The New England Journal of Medicine of April 6, contains the following editorial on the lack of preliminary educational requirements for studying medicine in Massachusetts.

"In medical legislation for the protection of the health of the people by the control of medical practice, Massachusetts has the distinction of standing alone—in one respect. There is such a thing as progress in medical legislation, and it is clear also that a medical school should not be allowed to carry on medical education irresponsive to the demands of medical science and practice, irrespective of the opinion of other schools, in entire independence of what other schools think or do. Such independent individuality, with only internal control, tends to loss of balance, lack of symmetry, disintegration of personality and degradation in social responsibility.

"In the control or lack of control over the

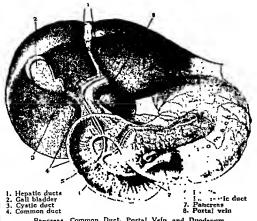
"In the control or lack of control over the medical education which the state requires of candidates who desire to enter the practice of medicine, Massachusetts stands—still—

and alone. All the other states have given their Boards of Registration in Medicine discretionary power of approval of medical schools from which they receive candidates for examination. In the course of years, the procession of other states and federal jurisdictions has filed by, some states many years ago. Colorado, the last of the other states, enacted this legislation six years ago; for the District of Columbia, the last of the Federal jurisdictions, it was enacted four years ago. But Massachusetts—there she stands—still—alone—refusing to enact this law for the protection of the health of the people of this Commonwealth.

"Justice Oliver Wendell Holmes has said: 'If I am in a minority of one, they send for a doctor or lock me up; and I am so far able to transcend the to me convincing testimony of my senses or my reason as to recognize that if I am alone probably something is wrong with my works."

(Continued on page 966-adv. x)

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(Continued from page 964)

An editorial in the New England Journal of April 20 comments on the possibility that an undue number of American students now in European medical schools may seek licenses to practice in Massachusetts, and says:

"If rejected in other states, it would be reasonable to expect that such disappointed doctors will regard this Commonwealth as a possible resource. Under such circumstances Massachusetts will be the choice, for most graduates wish, and some will need, to get into practice as soon a possible.

"Massachusetts will not be in a position to exercise discriminatory power unless her legislators have a change of heart. Her policy is to open her doors to many who cannot secure recognition in any other state,

"There is no doubt but that the future will see changes for the better but this is not likely until the general public shall have come to realize the great importance of a body of practitioners comparatively well equipped to deal with the health of the people.

"Our leaders are striving for this awakening but it will be deferred unless the nearly five thousand better equipped doctors unite in an educational campaign."

SOUTH CAROLINA JOURNAL FOR THE GENERAL PRACTITIONER

The Journal of the South Carolina Medical Association for April has the following editorial

"For the first time, so far as we know, a State Journal issue is being dedicated to the general practitioner. For the first time also, this special number of the Journal brings into action the full battery so to speak of its Associate Editors with the one aim that every editorial by them shall present to the general practitioners of South Carolina something worthwhile that they may utilize in their daily rounds of practice. Our able staff of Associate Editors deserve the highest commendation from the members of the South Carolina Medical Association. Special editorials by past Presidents of the South Carolina Medical Association appear also in this issue of the Jour-We are supported in our belief that a better day for the general practitioner is now on the way by many authorities."

The Journal prints three editorials on the General Practitioner, one saying:

"A woman of notable intellectual capacity and cultivation recently told the writer that the method of a certain nationally known institution having pathological details worked out by subordinates, and their findings (as if they could be relied upon) formulated and accepted by their chiefs as

(Continued on page 968-adv. xii)



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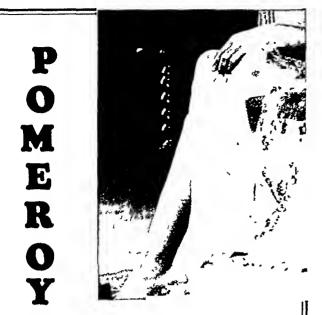
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BROOKLYN NEWARK SPRINGFIELD WILKES-BARRE DETROIT BOSTON (Continued from page 966—adv. x)

the basis of diagnosis and therapy, was intellectually a joke and morally a tragedy. Professionally speaking such methods can only mean slow, but certain suicide. This is the raison d'être of Christian Science, osteopathy, chiropractic, et id omne genus.

"The sick man or woman demands personal attention and if the regular and legitimate profession does not and will not render it, then he or she is going to turn to somebody who does. This is one reason, and a potent one, why the modern trend to so-called 'clinics' is doomed to fail. And this is why the recent report of The Committee on the Costs of Medical Care does and will lack the sympathy and endorsement of the large majority of high-toned and intelligent physicians of this country.

"There should be scant sympathy for the man who practices any branch of medicine on a basis of laboratory diagnosis. When the experienced clinical observer and the laboratory technician lock horns, it is the part of wisdom to trust the former every time, and this is the psychology of the situation that is invariably sensed by the alert patient."

DISPENSARY PATIENTS IN PENNSYLVANIA

The Medical Society of Allegheny County, Pennsylvania, has passed a resolution on dispensary treatments according to the June issue of the Pennsylvania Medical Journal. The plan recommended by the county society is as follows:

"1. That all social agencies and dispensaries will refer patients who at one time or another have been under the care of a private physician back to that physician. Persons who say they have no family physician but who might be self-sustaining are to be referred to a neighborhood physician.

"2. That the physician to whom such patients are referred will proceed in one of the

following ways:

"(a) To treat the patient for such fee as he and the patient agree is fair.

"(b) To treat the patient on a deferred payment basis.

(c) To treat the patient free.

"(d) To refer the patient to a dispensary in writing.

"3. In order to eliminate duplication of work by dispensaries, patients who have been under observation at a given dispensary shall continue to report to that dispensary unless adequate cause exists for a change.

"4. That the plan is not to apply to emergency cases nor to cases under treatment by dispensaries at the time of its inauguration."

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CARE OF RURAL INDIGENTS IN VIRGINIA

The May issue of the Virginia Medical Month In contains the following account of the care of the indigents in a rural county

"The amount of charity work demanded of the average physician in the country is beyond all reason, yet of course those absolutely unable to pay should not be allowed to suffer. The Board of Supervisors of some countes have been paying bills submitted to them for treatment of indigent cases, but no satisfactory system in this has been devised whereby all can be helped and the physicians receive anything like adequate compensation. The physicians should be paid a reasonable amount for caring for indigents, it is just as much the duty of the county to do this as it is to pay for sheep killed by dogs, or provide julks for the punishment of crime.

'Warren county is trying out a plan which we believe is fairly sitisfactory to all concerned and in a modified form, probably might be carried out successfully in any county

In March, 1932, the Warren County Board of Supervisors looked about for a way to economize and yet do justice to the physicians and the indigent sick. The following arrangement was agreed upon. Lach of the three physicians of the county is to be paid a stated

sum for the services rendered county dependents during 1932 1933, the physicians each serving a month at a time, making a total of four months per annum, per physician. The person needing medical aid must get an order to the effect from the county overseer of the poor

"The Board realized that medical treatment is often ineffectual because the doctor's orders are not carried out, so the public health nurse was instructed to visit the families receiving treatment and give them such instruction in hygienic matters as seemed most needed

"The County Medical Service to the Indigent and the County Public Health Association drew up the following list of requisites for free medical attention

'1 Families of patients must follow the instructions in hygiene given by the physician and the nurse in caring for the sick members

"2 Patients with communicable diseases must follow the directions given by the physician and the mirse, and obey the riles of quarantine and isolation.

"3 (a) Prenatal cases must report to the Health Center in their districts at least five months before the time of expected delivery

(Continued on page 970-adr vic)



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(Continued from page 969-adv. xii)

(b) Expectant mothers must attend the conference periods held in these places for their (c) Each mother must visit a instruction. physician for examination at least once before delivery, and take the baby with her for examination when it is six weeks old. (d) Each expectant mother must follow the nurse's instructions in preparing for delivery.

"Warren County has four physicians this year in active practice, and if the present plan continues in operation, it would seem that satisfactory results should be forthcoming."

THE INDIGENT IN CALIFORNIA

The June issue of California and Western Medicine contains an article on the plan of Fresno County for the care of the indigent. The county is situated in the south central part of the State and has a population of about 60,000, of whom over 50,000 are in the City of Fresno. The care centers around the County General Hospital. Its patients are divided into five groups:

1. Indigent,

2. Part Pay,

3. Pay,

4. Non-eligible,

5. Non-residents.

These groups are discussed as follows:

"The Part Pay Group comprises patients who can afford to pay very little for medical care but who desire to retain their self-respect by meeting The Social Service Departtheir obligations. ment, after a social service interview, determines what the patient can justly afford to pay. The medical society will furnish a list of physicians who have agreed to care for these patients at prices established by the Social Service Department. The charge may be as low as twenty-five cents."

The county has a scheme for hospital insur-

ance which is described as follows: "The Pay Group comprises patients who can afford to pay the physician for his medical attention at the regular or at somewhat below the isual rate. This group, however, cannot also afford hospitalization at the present time. To these patients, the physicians and other agencies should attempt to sell the Hospital Insurance. This insurance plan is similar to other hospital insurance plans. It provides patients with hospitalization for \$12.00 per year, payable on a monthly installment basis. This hospital insurance is to be under the supervision of the Fresno County Medical Society. If hospitalization is necessary, before elapsed period, as specified in the hospital plan, physician may refer the cases to Social Service Department for disposition. A Social Service worker will contact such patient

(Continued on page 971-adv. xv)

(Continued from page 970-adv. xw)

and determine whether or not he can meet hospital rates on the installment plan. Such patient will then be sent to a private hospital if such is willing to accept him on an installment plan; otherwise he will be referred to the General Hospital for care. Non-eligibles are referred to private physicians and receive no treatment in the General Hospital unless entered as an accident or emergency case. Non-residents are not eligible in the General Hospital unless the case is one of extreme emergency. Otherwise the patient will immediately be referred to the county where the residence has been established."

An advisory committee is described as follows:

"There was also created an Advisory Admission Committee to handle disputes and doubtful cases. The commission consists of six members, which are as follows: (a) Member of Board of Supervisors, chairman, Hospital Committee; (b) Director of Welfare Department; (c) Director of General Hospital; (d), (e) and (f) Members of Fresno County Medical Society. This commission will elect a chairman to landle minor disputes and receive reports on all cases handled through the Social Service Department. The decision of the commission shall be final as to the eligibility of a patient for county care."

The Fresno County Medical Society adopted

resolutions to put these plans into effect.

ANNUAL MEETING IN WYOMING

The Wyoming section of Colorado Medicine for July contains the following announcement:

"It is with a deep sense of disappointment that the officers of the Wyoming State Medical Society announce that there will be no meeting this year.

"Many hours have been given in arranging the program for the Yellowstone Park meeting, but the decision of the other state societies to postpone the Yellowstone Park meeting came too late to arrange a state meeting to take its place. Perhaps it is for the best. Who knows? But one thing is certain—that the abandonment was not the personal wish of our President, Dr. F. L. Beck.

"In the meantime allow a suggestion to sink m—so far as you can, plan to attend either the Colorado, Utah, Idaho or Montana meetings this year. See how they conduct their affairs and bring back the good points to your own

(Continued on toge 972-adv, xvi)



A "Junior" Model for the Petite Mother

I MPENDING motherhood requires a support properly proportioned to the particular figure type—suited to stature and other individual body requirements—as all Camp maternity garments are. For the slight young woman, the model illustrated (No. 3231), known as a "Junior," is specially designed. It is shown on an actual six-month pregnancy ease. Of course, it has the exclusive Camp Patented Adjustment feature which adapts it to the figure and to maternal development and regulates pressures. It provides needed sacro-iliae support and relieves undue pressures on organs. Incidentally, it has a smooth habit back, with lacings and adjustment on side; also elastic side sections over hips.



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-Adv.

FROM A LILLY BULLETIN

"The benefits derived from the use of local medicinal agents commonly prescribed in nasal therapy would appear to depend to a considerable extent upon the manner in which they are applied. Some physicians recommend the use of sprays, while others favor drops. Linn has called atten-tion to the value of double spraying; the first shrinks the exterior turbinate, allowing the second spraying to reach more readily the important middle turbinate area. According to Jackson and Coates, gravity will carry further into the recesses of the nose and sinuses than a spray or applicator. In applying drops by the gravity, or postural, method, the patient lies on a couch or table with the head well down over the end. The drops, usually about ten, are instilled into each nostril. The head is then rolled from side to side. After two or three minutes a normal recumbent position is resumed and should be maintained for from three to five minutes. During this procedure the patient is instructed to breathe through the mouth and not to 'sniff.' Gentle tapping over the forehead may facilitate the spread and penetration of the drops."—Adv..

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NEW YORK STATE JOURNAL of MEDICINE

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August 15, 1933

THE CARE OF THE CANCER PATIENT

By DOUGLAS QUICK, M.B. (Tor.), NEW YORK, N. Y.

The Bulkley Lecture before the New York Academy of Medicine, March 31, 1933.

THERE are many and varied problems confronting the family physician charged with the family health and management relative to the caucer problem. His responsibilities extend all the way from cancer prevention and early diagnosis to decisions on treatment measures. All too frequently it embraces the very trying terminal care of the case in which those measures have failed. Many attendant medical problems arise. Not only the patient but the entire family requires guidance and management.

The physician in general practice sees, on the average, three to four cases of malignant neoplastic disease per year. It is too much to expect that he be at once familiar with all the varied phases of the vast group of allied diseases coming under the general heading of cancer.

One of the trying difficulties centers round the term "cancer" itself. At mention of cancer all too many physicians assume an attitude of resignation. Such being the case, what are we to expect of the patient and the family. Their reaction is one of terror. The term "cancer" covers the entire field of malignant neoplasms. It is probably necessary—indicating a group of diseases allied by virtue of a common characteristic.

That group of diseases is the largest in the entire field of medicine. The common characteristic—the development of malignant new growth—varies tremendously between groups and even within those groups. Such distinction, however, is not usually made within our minds when the word "cancer" is mentioned. Therein lies the damage to the morale of the average individual. The classic popular picture of cancer—pain, distressing ulcers, inanition, the well-blanketed armchair and opiates—arises as a mental spectre. A calm, well-blanced appraisal of the actual condition is not made. The fact that some groups of malignant diseases are curable in percentages ranging from 70% to 90% or 95% is lost sight

of. The gradual improvements in clinical therapeutic measures of the past decade are forgotten. Even the improved palliative measures for the ultimately incurable are overlooked. The use of the actual term "caucer" carries with it today the same distressing mental reaction that it has for generations. The only conceivable value in its popular usage may be as an urge to careful periodic health examinations by the public and thereby the recognition of pre-cancerous and early malignant manifestations.

In established cancer no useful purpose is served by unrestricted reference to it as such. The fancied cooperation gained through a knowledge of the seriousness of the disease, by the patient, is a cooperation of fear. A few strong-minded individuals may be able to profit by participation in a knowledge of actual conditions. It is questionable, however, if even this is justifiable unless to permit of caring for responsibilities to dependents.

PRE-CANCEROUS MANIFESTATIONS

In the light of our present knowledge of neoplastic diseases it is not enough to accept responsibility only for the care of fully developed cancer. Many of these may be and can be avoided. It is true that we do not know the cause, or causes, of cancer-and more than probable that this generation will be denied the secret, if such there be. We are familiar, however, with many "contributory" causes: We recognize certain "precancerous" The removal or care of these is usually simple; and while not as spectacular as the cure of an established malignant growth, is, in many respects, more important because of the relative numbers involved. The prevention of cancer by removal of a contributory exciting cause or removal of a tissue bed, the seat of chronic inflammatory changes suitable for the devolopment of new growth, is as much to be commended as the control of the lesion once it is fully developed. It is by

such measures that true cancer control will become effective. It is only through a very substantial grasp of the entire problem by the profession as a whole that such warning signs and preventive measures will be recognized and acted upon.

Chronic irritation of tissues is recognized as a definite contributory factor in the development of malignant disease. In its simplest form it may be noted on the skin surface, and in many instances either relieved entirely or so reduced in severity that growth stimulus will be lacking. The various senile changes in the skin are well recognized, and are prone to malignant degeneration. In those exposed to the elements, such changes may be more marked at an earlier period in life. Some individuals have peculiarly sensitive skins which are prone to become irritated over a period and remain so. This is particularly true with respect to sun and wind burns. Occupational irritations of the skin may assume a great variety of forms, and certain of these occupational dermatoses, some of which ultimately become malignant, appear to be more specific than others, notably, the mule-spinner's or chimney-sweep's cancer. Prolonged irritations may ultimately provide a suitable soil for the development of new growth. Recognition of the earlier changes in these conditions will naturally forestall the ultimate and posmore serious side. Certain notably arsenic, which after prolonged administration produce a chronic dermatitis, in certain instances, are apt to be followed by the development of skin growths. The same is true of direct contact with arsenic in industrial work.

I doubt if in any of these conditions there is anything specific in the sequence of events ending ultimately in the appearance of the neoplastic process; usually rodent ulcer. seems most probable that the changes in the accompanying and resulting in chronic dermatitis merely furnish a suitable set of conditions for the subsequent develop-ment of the neoplasm. The same is true of growths developing on the basis of old x-ray and radium burns. The statement is often made that these agents produce skin cancer, after a time. Such is not the case. There is nothing specific in the reaction to radiation in the skin, so far demonstrated, to lend the least support to this idea. The atrophic changes furnish a suitable set of conditions for the development of new growth. If the original skin damage from radiation be relatively superficial and non-ulcerative in character, basal cell carcinoma, similar to that found in connection with other superficial irritants, is to be anticipated in a certain percentage of cases.

On the other hand, if the destructive process is deeper, influencing more profoundly the entire thickness of the skin, squamous cell carcinoma is usually the type of growth, if a malignant process supervenes. The great number of small congenital abnormalities of the skin, warts and moles, are liable to degenerative changes later in life or in certain locations to chronic irritation. Their removal should almose invariably be advised.

Contributory Factors in the Mouth-Of all known contributory factors, those incident to poor oral hygiene are most definite and most These may be briefly enumerpronounced. ated as rough and irregular teeth presenting sharp corners and cavities in which food debris may be lodged; poorly placed fillings and neglected dentures; particularly fixed dentures which do not lend themselves well to cleansing. Ill-fitting dental plates should be particularly emphasized, since after a time they not only present rough surfaces about the teeth to irritate the membrane of the tongue and cheek, but they are very apt to damage the alveolar borders without being noticed for some time. Over a period of years the contour of the bones of the face changes, but the dentures remain the same shape. The wearing, therefore, of the same plates without readjustment for many years is a very frequent source of chronic irritation which ultimately develops into adult growth.

Dentists, as a group, are usually keen to recognize many of the early changes which may ultimately have a bearing on the development of new growths within the mouth, but they are often singularly negligent of the various factors which may be producing these early changes. Too many of them confine their activities to the direct repair of the teeth without taking sufficient cognizance of their patient's oral hygiene in general.

Excessive smoking undoubtedly plays a part as a contributory factor. The relative sensitivity of the mucous membrane varies to a considerable degree in different individuals. It is, therefore, smoking in excess of one's individual tolerance which does the damage. Within moderate limits, it apparently does no appreciable harm.

In connection with the tongue in particular, the persistence of heavy coating, which may be due either to accumulated debris or actual fungus growth, is capable of having far-reaching effects, over a period of time. As a bacterial culture-medium it excels, and as such contributes toward the infection and reinfection of the lymphoid tissue about the pharyngeal ring.

Syphilitic manifestations within the mouth contribute, to a certain degree, toward the

ultimate development of cancer-not because of any specific relationship between the two diseases but by furnishing a suitable tissue bed in which a new growth is prone to develop, just as in the case of the x-ray dermatitis of the skin. This is true in connection with either luctic leukoplakia or luctic glossitis, or both, since the latter is almost invariably accompanied by the former. True luctic leukoplakia is not uncommon, yet leukoplakia of luetic origin within the mouth accounts for only a small percentage of all intra-oral leukoplakias. It is fallacy to assume that all leukoplakia of the intra-oral mucosa is at once suggestive of luctic infection. Poor oral liygiene in general, points or irritation on neglected teeth or dentures, and excessive smoking, account for the major portion of True luetic leukoplakia is these changes. usually more marked, involves the mueosa more deeply, and is probably more prone to malignant change than leukoplakia incident to other causes.

The influence of oral sepsis as a contributory factor in the subsequent development of cancer is probably not limited to the oral cavity. Its influence on the upper digestive tract particularly is probably far underestimated. All of these many simple factors attendant upon the proper daily and routine care of the mouth come constantly under the eye of the family physician and dentist. Unfortunately, in the routine course of events, they are too frequently overlooked or neglected. There is no doubt that a tremendous amount of intra-oral cancer could be avoided by proper attention to these simple details. is the duty of the family physician and dentist to take seriously, and insist upon a proper recognition on the part of their patients, of this phase of preventive medicinc. It is not too much to say that with proper attention and cooperation intra-oral cancer could be largely avoided.

Breast—Precancerous lesions and factors contributing toward subsequent development of new growths in the breast are less clearly defined than those just referred to. Certain outstanding features, however, are worthy of mention. It is only reasonable to look upon the frequent irritation of the areola and nipple as contributing something by way of changes which may ultimately terminate in Paget's disease, even though the actual development of growth may be deep to the areola. While the bleeding nipple has long been mentioned in textbooks as one of the cardinal signs of breast cancer, it is probably overdone on this score. On the other hand, it does call attention very frequently to the duct papilloma which, while in itself benign, does not always

remain of the same structure—another example of the tissue in which change in structure is apt to take place as time goes on.

The subject of chronic mastitis is debatable and cannot here be discussed at length, since we are concerned, for the moment, only with those changes which may ultimately contribute in some measure to the development of a malignant process. Since it produces mild yet persistent symptoms, and since it produces gross histological changes throughout the breast, it at least deserves the treatment which would be accorded a low-grade chronic inflammatory process elsewhere.

While the relationship between a single direct injury and the subsequent development of cancer is extremely debatable and undoubtedly rare, it is true in connecton with the breast that an indirect hazard, at least, may be associated with such injuries as the scarring from the opening of abscesses and the careless introduction of hypodermoclysis needles. Definite instances of a relationship between the results of these injuries and the subsequent development of cancer occur from time to time. There is ample evidence, both experimental and clinical, at present to regard faulty drainage of breast secretion as another source of chronic inflammatory change which may contribute, in some degree at least, a suitable tissue bed for the ultimate development of growth. All forms of chronic breast inflammation, no matter what the source, should be regarded as dangerous to some extent at least and should be treated, in so far as practicable, with the object of reducing or relieving this inflammation on account of its ultimate potential possibilities. If chronic inflammatory changes on a simple skin surface are capable of providing a suitable tissue bed in which a new growth may develop, it is only reasonable to assume that similar changes in a complex structure, such as the mammary gland, may be all the more dangerous.

Uterus-Unusual uterine bleeding, and particularly any bleeding beyond the menopause, ought to be too well recognized, as to its possible significance, to call for comment, yet it is surprising how frequently it is ignored for a few weeks or even for a few months until malignant disease is well established, often beyond the possibility of cure. The conditions which so very frequently preeede the cardinal evidence of new growth in this organ are, to a very large degree, overlooked entirely. Old lacerations of the cervix uteri, with the attendant tissue changes about these scars and with inflammatory exudates from them irritating surrounding tissues, are usually ignored. This is merely another example of a condition, which if corrected would eliminate a considerable number of one of the commonest types of malignant disease.

Another source of chronic irritation and chronic inflammation which should be watched for and given proper treatment when recognized, is the faulty drainage of secretion from the fundus uteri. Instances of the development of adenocarcinoma of the corpus uteri, associated with and incident upon this condition, are accumulating. Observations on different races and classes of people whose habits differ point clearly to the fact that personal cleanliness in the habits of every-day life have considerable bearing on the relative percentages of carcinoma of the cervix in the different groups. The inference is self-evident.

Gastro-intestinal Tract-In connection with the upper gastro-intestinal tract, that is, from the esophagus to the small bowel, we have little specific information as to definite contributory causes in the development of cancer which may be watched for on the part of the physician, or avoided. The varying degrees of sensitivity of the mucous membrane in different individuals make the matter of irritation, from different types of food, a relative matter. It is doubtful if any practical, worth-while conclusions can be drawn. suggestion that oral sepsis may be of greater importance in these organs than the character and temperature of the food taken is worthy of consideration and further investigation. In the colon and lower bowel certain anatomical abnormalities are of practical significance.

Polypi and diverticula are recognized as potential points of irritation and inflammation. Malignant disease may subsequently develop in either. Unfortunately, both are apt to be multiple, so that it is usually impractical to remove all of the potential danger points. On the other hand, recognition of the condition plus careful routine watching will at once draw attention to any unusual change and thereby permit of proper treatment of the suspicious area before unrecognized growth extends out of bounds.

Rectal bleeding should always be taken seriously. Whatever the source of bleeding may be, it should be corrected immediately. A diagnosis of hemorrhoids should never be accepted as such without eliminating the possibility of early new growth, and a diagnosis of hemorrhoids should never, under any circumstances, be made across the corner of an office desk.

In following the gastro-intestinal tract from the standpoint of cancer prevention, the clinician should be advised against placing too much reliance on negative x-ray findings in the lower bowel. The relative value of this diagnostic method is much greater in the upper tract than in the lower.

Diagnosis—The factor of vital importance in the care of fully developed cancer lies in its early recognition. This fact is stressed by every cancer agency but its repetition can scarcely be overdone. The efforts put forth to make this a matter of household knowledge are not being wasted. The apparent increase in cancer is, to some degree at least, an increase in the frequency of its recognition—in other words, more accurate diagnosis. Unfortunately, too many of these diagnoses are still made entirely too late.

The facilities for diagnosis are, for the most part, reasonably adequate. The unfortunate point is that the advantages of these facilities are too often neglected until the favorable time for treatment has passed. It is on this point in diagnosis that stress should be laid most forcibly.

If the clinician would regard cancer as a large group of closely allied diseases rather than as a single entity, a considerable advance would at once be made from the standpoint of diagnosis. The notion that anemia, cachexia, pain and foul discharges must be present before cancer is to be suspected is the greatest fallacy. At this stage a diagnosis of cancer is usually of value only to the department of vital statistics. Routine health examinations, if carefully and seriously done, will contribute tremendously toward the early diagnosis of many malignant growths. Unfortunately, most of these neoplastic processes are insidious in their onset and many may be practically symptomless. More careful and complete examinations of the patient and less consultations, beyond a reasonable point, will advance and simplify the general problem of cancer diagnosis.

With the present development of x-ray and laboratory aids to diagnosis, there is little excuse for overlooking most early new growths in a routine examination. The intra-abdominal group comes nearest to being an exception.

While a great deal has been said for and against the advisability of the taking of tissue from a questionable area for diagnosis, the practical fact remains that whenever in doubt, biopsy, where reasonably practical, will do far less harm than the leaving of a malignant growth to develop to the point where it establishes its own diagnosis. The resort to biopsy should, of course, always be determined upon reasonably. The piece of tissue removed for section need not be large. Trauma of surrounding tissues should be avoided with the utmost care. The opening into normal tissues, either for access to the

tumor-bearing area or by extending through the growth into normal tissues of the tumor bed, should be avoided wherever possible. If it is necessary, in obtaining tissue for histological examination, to gain access by surgical exposure, the wound should be closed very carefully by approximating the various layers of tissues incised, separately, in order that subsequent fungation of tumor tissue may be avoided.

Within certain limits, external irradiaton as a therapeutic test may be of value in aiding confirmation of a tentative clinical diagnosis where the tumor suspected is particularly radiosensitive. On the other hand, one should not be deluded by placing too much dependence upon this type of verification. It is of value within very narrow limits only, and only then in the hands of an experienced can-

cer clinician.

In the differential diagnosis of many tumors, particularly those presenting an ulcerating surface, tertiary syphilis must be considered. A positive Wassermann, however, must not be taken as conclusive that the lesion in question is undoubtedly luctic. Biopsy should also be resorted to if the clinical picture is at all questionable from a luetic standpoint. Antiluetic treatment should only be persisted in for a brief period in the absence of clinical improvement before reconsideration is given the diagnosis. A positive Wassermann or Kalın reaction, with or without a luetic history, does not preclude the possibility of other Too frequently the possibility of cancer is ignored because of the positive blood reaction.

TREATMENT

The treatment of any malignant growth might well be considered under one of the following headings: Curative, palliative or

psychological.

If, after giving due consideration to the type of growth, and its degree of advancement, there seems to be a reasonable opportunity for its complete eradication, then the measures decided upon for the treatment of that particular case ought to be exerted to the limit, whatever those measures may be. On the other hand, if palliation only is possible, every consideration ought to be given the patient's comfort from day to day and no therapeutic measures resorted to which will unduly upset the patient when nothing definite may be anticipated in return.

Considering the entire field of malignant diseases, from the simple rodent ulcer, probably 95 per cent of which are curable, to the osteogenic sarcoma and the active melanoma, in which the expectancy of cure is very slight, the average of actual curability for the entire

group of malignant neoplastic diseases is probably not more than 30 per cent. This leaves a very large group in which palliative treatment, sooner or later, comes to be the only resort. The degree of actual physical palliation, of course, varies with different types of the disease and is dependent upon many varied factors. In these cases, the manner in which they are handled from a psychological standpoint is most important and those who assume the responsibility of caring for these unfortunate people would do well to study most seriously the various psychological problems present in the individual case.

Specific Therapeutic Measures-As far as the active and direct treatment of new growth is concerned, it is almost entirely surgical, operative or otherwise. The only agents at our disposal at the present time for direct treatment are surgery, x-rays and radium. It is in the proper selection and application of these measures, or in their various combinations, that the chief advances have been made in the treatment of cancer during the last decade. Surgical technic has reached a high state of perfection. The technical procedures incident to the application of x-rays and radium are improving, yet the use of these physical agents is of such recent date that much more can be reasonably expected in the future than has been accomplished in the past. The value of these agents should not be appraised today on impressions or experiences gained from the manner in which they were employed a few years ago. It is in the development of proper usage of these physical agents, combined wherever advantageous with the benefits of conservative surgery, that most may be expected in the future treatment of cancer.

The physical agents should be regarded as just so much valuable additional equipment to add to the strictly surgical equipment which the surgical experiences of the past have brought to such a high state of perfection. It is no longer necessary to attempt an operative procedure on the inoperable case, simply because some effort at relief must be made. Furthermore, in the otherwise technically operable case, radiation in some of its various forms is likely to be of assistance, either by way of rendering the surgical procedure safer or by limiting the necessity for some of the spectacular, yet extensive, operative proced-ures which have been attempted as heroic efforts toward controlling certain of the more malignant or more advanced types of disease. In other words, through the assistance of radiation, the character of presentday cancer surgery has been very decidedly altered. Some of the most extensive operative surgical procedures have been entirely replaced or modified by the physical agents. Of this, carcinoma of the cervix furnishes probably the most outstanding example. the other hand, carcinoma of the fundus uteri remains a problem for operative surgery, with The disor without associated irradiation. ease is of a different type both histologically and anatomically, and, as such, lends itself much better, in the present state of our knowledge and advancement in therapy, to surgical removal than to treatment by irradiation alone, in the uncomplicated case. However, if the disease be advanced to such extent that complete surgical removal is not assured or, if for any reason the general physical condition of the patient does not warrant an extensive operative procedure, the benefits to be derived from radiation are such that the surgical steps may well be replaced by the other methods.

In some cases, preliminary irradiation, followed by surgical removal of the growth, affords the patient a better chance for ultimate cure than would be the case if the surgical procedure alone were carried out. This is well exemplified in cancer of the breast. not infrequently happens that an operative surgical procedure is undertaken with the expectation of being able to do a complete removal of the tumor, only to find as the operation proceeds that this is impossible. Through the advantages to be gained by implantation of radium emanation, an otherwise unsuccessful operation may be turned into a successful procedure by resorting to implantation of radon to care for that portion of the growth which cannot be safely or successfully ex-The implantation of radium or radon, as an extra safeguard, as the final step in an otherwise clean surgical dissection, is in certain instances dependent upon a general routine procedure, as in the treatment of operable metastatic epidermoid carcinoma in the neck and inguinal regions.

Certain of the surgically inoperable tumors may, in addition to heavy external irradiation, be handled best by following this external treatment by surgical exposure of the tumor for the purpose of accurate radium implantation throughout the tumor-bearing area. this connection, many new surgical procedures for the purpose of exposure and approach to tumor-bearing areas must be devised to meet the requirements of the individual case. It becomes apparent, therefore, that while some of the older surgical measures have been replaced by radiation, other surgical procedures have had to be devised to meet the ever changing conditions, as our knowledge of the application and value of the physical agents progresses. In other words, the

character of cancer surgery today has changed to such an extent that it may well be considered one of the special fields of general surgery.

There should be no confusion as to the relative place of x-rays and radium in the treatment of cancer. X-radiation may be employed only for external application and for the most part over large areas. From an economic standpoint there are several advantages to be considered and there is no limitation on the supply. Additional x-ray equipment is always available. Radium, on the other hand, lends itself best to application within body cavities, over localized surface areas, and, most important of all, for direct implantation within the tissues. There is some difference in the quality of radiation between the gamma rays of radium and the hardest x-rays obtainable with our present-day equipment. However, this need not be given particular consideration here. It is true that if adequate quantities of the radiation from both sources are available for comparison, the gamma rays of radium are more effective and more efficient than the best that can be produced through an x-ray tube at this time. The supply of radium, however, is limited and the advantages which it affords must, of necessity, be limited to a relatively few patients. X-radiation must be depended upon to furnish the major portion of the external radiation in routine work throughout the country. A good dose of x-radiation is always better than a poor dose of radium radiation. The treatment of larger tumors, particularly at depth, or the treatment of large surface areas by external applications of radium, should never be attempted unless a very large radium supply is available.

The advances made in x-ray therapy and equipment for x-irradiation during the past year or two warrant a substantial degree of optimism in that direction. The possibilities and probabilities for the future development of x-ray therapy strongly suggest that the surface has only been scratched in the ultimate development of this type of radiation.

Quite apart from the relative position which radiation may hold in the treatment of the various types and groups of malignant disease, it is a fact that the use of these physical agents has changed very considerably the outlook on cancer in general. Its use has stimulated a tremendous amount of histological study, without which reasonable and intelligent application of the physical agents would be impossible. Through this intensive study, new conceptions of the general problems of cancer have been gained, and several new types of the disease have been recognized as definite clinical entities.

The work in histological grading of tumors bears a relationship to the relative radiosensitivity of tumors to irradiation. The two are not in parallel. However, they serve, collectively, as a very valuable guide in the selection of treatment method or combination of methods. The fully differentiated tumors are relatively slower in growth, less liable to widespread secondary dissemination, more resistant to a given quantity of radiation. It is in these that surgery offers most. Anaplastic growths tend to metastasize early and at distance, hence the likelihood of control by extirpation is slight. Fortunately, they are much more radiosensitive and consequently are more dependent on irradiation as the treatment of choice.

It would be impossible, here, to go into a discussion of the effects of radiation on tumor tissues. It might be well, however, to point out that the beneficial effect of radiation from a therapeutic standpoint is not limited to its effect on the tumor tissue alone. It is quite possible that the effect on the surrounding normal tissues or, as it has been very aptly termed, the tumor bed, is quite as important as the direct effect upon the neoplasm itself. This has a very considerable bearing not only on the technical methods of irradiation, but also upon the manner in which irradiation is combined with operative surgical procedures. The problems incident to the proper combination of these various methods and their application in the individual case, call not only for special facilities, but for special training as well. Special facilities with special training, and the cancer service in the general hospital is the least that can be considered consistent with the present needs of dealing adequately with the cancer problem. This is not meant to suggest that the cancer patient be taken away from the family physician, but rather that the special equipment and special training necessary to assist the latter in meeting the peculiar problems incident to the individual case be made accessible to the man who, after all, must carry a very considerable portion of the burden in connection with the treatment of any case of malignant disease.

Constitutional Measures—The general medical care of a cancer patient is too often overlooked or, for the moment, forgotten under the stress of the immediate problem. Malignant disease may and does exist in conjunction with many other grave medical conditions. This is particularly true since the so-called cancer age is also the period of life during which the system begins to show the effects of wear and tear in general. Cardiorenal disease, diabetes, and tuberculosis must be cared for just as carefully or more so in

the presence of cancer as at any other time. No strenuous therapeutic procedure, operative or otherwise, for cancer should be undertaken without a eareful, unbiased appraisal of the patient's general physical condition quite apart from the immediate problems incident to the malignant condition itself. Acute symptoms referable to the chest should not be assumed always to represent an inflammatory process and that only. It may indicate secondary involvement by metastatic malignant disease. The implantation of blood stream tumor emboli in the lungs is always a shock which may manifest itself by acute symptoms for a brief period and which might well pass unrecognized, as being of bacterial origin rather than associated directly with the growth. General medical supportive treatment should ever be kept in mind and carried on vigorously in conjunction with the specific treatment of the tumor-bearing area itself.

The opinions of the internists will naturally vary as to the relative values of various types of supporting medication, but whether it be the administration by mouth of stimulants to digestion, inframuscular medication with iron and arsenic or stimulation of body surfaces by means of the quartz lamp, all measures that will aid in the slightest to maintain the patient's general-physical condition at the highest level should be resorted to.

Anaemia is almost constantly associated with malignant disease except in the early stages of growth. It may be increased under the influence of very heavy irradiation. If the irradiation be prolonged, or repeated at intervals, the character of the anaemia changes. The advances in the therapy of anaemias during very recent times may well be taken advantage of. Liver extract and iron are almost as much of a blessing to the medical side of cancer therapy as in pernicious anaemia itself.

There is another reason, and a very legitimate one, for the vigorous use of these aids with detailed attention given therefor. The cancer patient is hanging for support on every possible bit of encouragement. It may be that a great deal of the value to be derived from some of these various measures is a psychological one. It does not matter whether the benefit is physical or mental—the result obtained is justification for the means. This brings us to consideration of another phase of medical treatment which may be opened to some question, yet one which I believe has its advantages if honestly employed.

Specific Medication—Each year brings forth its group of cancer "cures," each supported by its own cancer quack. They all have something to show for their claims, although the

evidence, unfortunately, is always magnified to a very marked degree. An analysis of the many general medical "cures" advocated during the past several years suggests strongly an underlying foreign protein reaction as being common to nearly all of them. Experience with the unusual effects sometimes obtained through the employment of foreign proteins, by virtue of the peculiar systematic reactions which they excite, might lead to interesting speculation as to their value in certain cases of malignant disease.

There are instances in which the systemic reaction of the patient may be stimulated to carry over, when resistance is practically at a standstill, through the intramuscular injection of some one of the simple proteins. It affords, furthermore, in some of the more advanced cases, where palliative relief and moral support only can be given, a reasonable means of carrying the patient along. This might be regarded in some quarters as dishonest practice. It is legitimate to maintain the patient's morale and hope by any such measures, providing the patient's family understands the exact situation and shares in the delusion, if such it be. This must not be interpreted as advising or advocating the intramuscular injection of foreign proteins as an established or approved form of cancer therapy. merely suggested as a possible means of definite aid in certain selected cases and as a legitimate means of aiding, in certain instances, the very trying ordeal of carrying through the last stages the otherwise hopeless case in whom, but for some such resort, the last days would be made very unhappy because treatment had been abandoned.

Some work has been done and a good deal has been written by those who believe that growth is stimulated by an imbalance in body chemistry. Correction has been attempted by direct medication and by alterations in diet to restrict certain salts and increase others. The value of such endeavor is still lacking in confirmation.

Antiluetic Treatment in Cancer.—It has been stated at times that antiluetic treatment of the patient suffering from both syphilis and cancer is contra-indicated, if treatment by irradiation is employed for the malignant growth. This is incorrect. It is true that aggressive treatment by irradiation is a very severe strain on the constitution of any patient. It is likewise true that aggressive antiluetic treatment is a very considerable strain on certain organs. In moderation, on the other hand, it will be found to enhance rather than damage the response to irradiation. The error is often made of carrying on intensive antiluetic treatment first and following this

by treatment of the neoplasm. It is much better to save all possible time by treating the malignant growth as promptly as recognized supporting this by a moderate course of antiluetic treatment and, after the patient has recovered from the effects of the treatment of the new growth, to complete the antiluetic treatment by proper measures consistent with the patient's physical ability to stand the strain. With many new growths, particularly those presenting an ulcerating surface, antiluetic treatment alone is very apt to show an initial improvement in the tumor-bearing This is due to reabsorption, under the stimulus of this treatment, of inflammatory exudates in the tumor bed, and is very apt to be misinterpreted as definite improvement in the growth itself. It will, perhaps, do no harm to emphasize again the possible misleading effects of a positive Wassermann or Kahn reaction. The two diseases may very well coexist. It is always wise, if there is the least uncertainty from the clinical standpoint, to go beyond the positive blood reaction and substantiate the diagnosis of granuloma or neoplasm by histological examination of tissue. The general impression that biopsy may be harmful is unfortunate. The damage incident to the taking of a small piece of tissue is negligible. The time saved in beginning adequate treatment is of inestimable value.

THE FAMILY PHYSICIAN

It is easy enough for the physician who devotes himself largely or entirely to the care of malignant diseases to criticize the family physician's errors, particularly in establishing the diagnosis and getting the treatment under Apart from the special knowledge which his greater experience ought to give him the specialist has the added advantage of viewing the case in retrospect. It would be much better for the specialist to give more time in an effort to further the family physician's knowledge of the many and various problems associated with the large group of malignant diseases. After all, this is the responsibility of any physician who assumes to treat cancer as a special problem. The family physician, on the other hand, must be familiar in a general way with a great number of medical problems and cannot be expected to be intimately acquainted with the many detailed matters incident to new growths in particular. He is too often ignored in the handling of his cancer patient and too frequently the patient is removed from his association. This is not only an injustice to the general practitioner, but reacts, in many instances, to the disadvantage of the patient. The family physician should be kept thoroughly advised throughout

the period of active specific treatment of his patient. All general medical measures, in so far as possible, should be left to him, with proper suggestion and advice. In the first place, he is better acquainted with the patient and with the patient's family and is therefore in a better position to maintain the morale of both. His active participation in this capacity, in the care of the case, permits of his maintaining the proper relation and dignity which is the right of the general practitioner. If the specialist and the family physician keep each other thoroughly advised throughout the period of treatment, each will be able to accomplish his particular part of the work to better advantage and the patient and family will benefit accordingly.

PSYCHOLOGY OF THE CANCER PATIENT

Reference has already been made to the unrestricted use of the term "cancer" and to the advisability of refraining from a too frank statement to the patient. It is difficult to decide just how much should be told the cancer sufferer about his actual condition. Determination of this rests upon many factors. patient who is able to maintain his balance and with whom everything can be discussed frankly and fully at all times is by far the most satisfactory patient to treat. Unfortunately, patients of this type are rare. Usually the manner in which facts are presented to the patient is of greater importance than how much or how little is actually told them. is usually possible to give the patient a fairly clear insight into his condition without bluntly and crudely stating the actual facts in so many words. With a little caution and care he may be left with a rather clear visualization of what the situation is so that he may prepare him-self in various ways and fortify himself to meet the situation without having his morale entirely shattered through severance of that last thread of hope to which all of these patients cling. By the exertion of a little tact. after appraising the situation, one may give a very honest impression to the patient, without disturbing him mentally to the degree that a simple, blunt statement of facts would perhaps do, even in the case of the most stoical,

The term "cancer" should be avoided most carefully at all times. The impression it conveys and the mental picture it promptly brings up are always startling and frequently are most misleading. The cancer patient is inherently an optimist, whether admittedly so or not. Unless his morale can be maintained, therapeutic measures are bound to fail.

Relations with the Family.—In dealing with the patient's family, on the other hand, the confidences should be frank at all times, and never more optimistic than the actual facts of the situation warrant. It is, of course, frequently and perhaps usually necessary, for the mental satisfaction of those concerned, to discuss the patient's problems with several members of the family. It is best, however, whenever possible, to carry on one's relations as physician or surgeon in charge, only with the most responsible member of the family, letting him, or her as the case may be, relay the information to other members of the family and their immediate friends.

In dealing with the family, one must insist upon an appearance, at least, of cheerfulness and optimism, even in the face of adversity, for the sake of its influence on the patient's morale. Reasonable consultations should be welcomed at all times. One is never in a position to guarantee anything in the treatment of any case of malignant disease. Not only for the purpose of safeguarding one's own position in the responsibility assumed, but for the satisfaction of the family as well, consultation should be ample, bearing in mind that too many consultations are apt to confuse the issue and to create an atmosphere of both suspicion and apprehension on the part of the patient.

In dealing with the more advanced stages of the disease, where a limited degree of palliative treatment, only, can be resorted to, it becomes the duty of the physician in charge to safeguard the family against doing many things which they might ultimately regret. There is a very strong tendency at times. under such circumstances, to resort to various questionable measures, some of which may be none too honestly presented to them. must remember that if we are unable to do the patients any good, we are charged with the responsibility of protecting them from harm. Nothing is more deplorable than to take an advanced case of malignant disease from one consultant to another. Adequate nursing care under the general medical supervision of the physician saves the patient a tremendous amount of physical and mental strain.

Palliative Treatment.—Palliative treatment may be variously defined. It may be regarded simply as those measures incident to carrying the patient along to the end. It would be better, however, to consider it as treatment actively and seriously carried out and tending toward the relief and control of symptoms in so far as possible, even while recognizing the inevitable termination of the case. Prolongation of life alone, by various measures, is rarely justifiable unless it is attended by a reasonable degree of relief from symptoms; foremost among these symptoms being pain and the unpleasantness of irritating discharges and foul

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Fortunately, in connection with controlling ulcerating, discharging and bleeding surfaces, radiation may well be considered a blessing indeed to the cancer sufferer. While opinions may differ as to the relative values of radiation as a curative agent, there is little room for debate as to its value as a most efficient aid in the control of these symptoms. Throughout a period of palliative treatment, most careful attention to constitutional measures and specific therapy, as previously mentioned, should be given, not only on account of its actual value but because of its influence in maintaining the morale of the patient. Palliative operations are too frequently avoided on the assertion that since they are not curative they are not justified. Any reasonable and worth-while procedure to relieve symptoms and add to the physical and mental wellbeing of the patient is justifiable, even though it is in no way curative and even though it does not prolong life. Even the simple use of a post-nasal catheter has saved many a mouth or neck case from the acute distress of dehydration.

Transfusion.—In the treatment of malignant diseases in general, the indications for transfusion are rather clear-cut. As an aid in carrying many patients through serious operative procedures or in maintaining their strength throughout prolonged periods of irradiation where ultimate control of the disease may be reasonably hoped for, the value of a transfusion cannot be overestimated and should be resorted to frequently and liberally. On the other hand, it is very questionable if such a measure should be employed simply to carry on and prolong a course of palliative treatment. There are, of course, exceptions which must be decided upon their individual merits, but as a general rule the value of transfusion in the latter instance is decidedly questionable. Infusions of glucose play an excellent second place to transfusions of whole blood.

Use of Drugs.—In the use of sedatives, the utmost caution should always be exercised. The cancer case usually is of long duration and once started on opiates, it is difficult to withdraw or reduce the amount given. Pain, of course, must be relieved, but a very sharp distinction should be drawn between actual pain and that restlessness which may follow a period of pain during which opiates have been used for its relief. With many ulcerating lesions where pain is dependent more upon the pressure of inflammatory exudates round about the tumor-bearing area than upon the actual pressure of the tumor itself, vigorous

cleansing measures will do a great deal to lessen the need for sedatives. Frequent and careful irrigations with warm, mild, antiseptic solutions are of inestimable value as substitutes for sedatives under such circumstances. The use of heat, especially moist heat, should be employed wherever possible. In fact, al physical measures, such as hydrotherapy, phototherapy and chemotherapy should be used wherever possible to avoid drugs. type of pain experienced in many malignant cases is relieved better by salicylates than by opiates, and it is almost invariably true that the combination of salicylates with codein is far more advantageous than the use of codein or morphine alone. If the medications in the beginning of any of these cases is started properly, there are few patients in whom ½-grain of codein with 10 grains of aspirin will not give relief, even under adverse circumstances, for a period of several hours, and a proper management of such sedative medication will frequently suffice throughout the average case even though the disease itself is not being controlled.

Apart from the immediate period attendant upon a major surgical procedure, and frequently even then, morphine should be carefully avoided and employed only as a last resort for relief in the terminal stages of the disease. If one is extremely cautious in the beginning, there are very few of the terminal cases which require any appreciable amount of morphine. It is much better to increase very considerably the amount of codein given than to change to morphine. The depression and the degree of gastro-intestinal disturbance are less. For the restlessness and nervousness attendant upon a long course of cancer therapy the same sedatives obtain as for other of the chronic diseases. Dependence, however, should be placed more on physical therapy than upon drugs.

There is great temptation, at times, to use cocain regularly on painful surfaces. This is extremely dangerous because the amount of absorption, even over a short period of time, has a deleterious effect on the patient; and if the local benefit is to be maintained, the amount must be increased rather rapidly. It is best to avoid it by not initiating its use. Moist heat will very often accomplish much more satisfactorily that for which cocain is employed.

In the selection of measures to relieve pain and discomfort the simplest are always best. Drugs which depress the patient's morale are to be avoided as carefully as possible.

ENDOCRINOLOGICAL PROBLEMS IN THE GENERAL PRACTICE OF MEDICINE

By M. A. GOLDZIEHER, M.D., BROOKLYN, N. Y.

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NDOCRINE discases, as a rule, elicite in the mind of the general practicing physician a recollection of a few striking, but rather rare clinical pictures. He remembers acromegaly, Addison's disease, myxcdema, diabetes insipidus, Fröhlich's adiposo-genital distrophy and, perhaps, a few more syndromes he has read about in textbooks and seen oceasionally. He is familiar with Graves' disease and diabetes mellitus, but because he is so impressed with the general medical aspects of these conditions, he is inclined to overlook the fact that he is dealing with essentially endocrine disturbances. Beyond these two common diseases and the rarer syndromes mentioned before, endoctinology appears to the practitioner as a rather misty chapter of medicine, in which diagnosis is mainly guess work and therapeutic results are usually unsatisfactory. Scepticism about endocrinology is a rather general attitude and there are physicians who do not hesitate to compare endocrinology with astrology or mythology.

Such scepticism was justified in the era following the early discoveries of the function of the various endocrine glands. The results obtained by physiologists in their experimental studies were rather contradictory and if applied for practical purposes most often lead to dismal failure. Yet it is not difficult to see the cause of these apparent contradictions and subsequent clinical disappointment. Our knowledge of the endocrine glands was based upon experiments, done under artificial circumstances and hardly comparable to the conditions which prevail in the healthy and even less in the diseased human body. The progress and recognition of endocrinology was handicapped even more by the lack of active preparations of endocrine glands with the exception of thyroxin and adrenalin. But even the potent extracts obtained were impure and we could not know if the effects recorded were due to one or several hormones or to the presence of biochemically active impurities.

It is only since the discovery of insulin that endocrinology has been making great strides. More recently the active principles of the anterior and posterior lobe of the pituitary, of the ovary, the parathyroid gland and the adrenal cortex, have been isolated. Some of these hormones have been purified to that extent that they are available now in crystalline form. The improvement of experimental surgical technique has also materially added to our knowledge; it became possible to study the behavior and reaction of animals after re-

moval of these glands, not excluding even the pineal and pituitary which are so well hidden in the skull. By comparing the changes observed in operated animals and the effects obtained by administration of the various hormones with clinical observations, practical information was gained and the whole aspect of endocrinology completely changed. Endo-crinology today is one of the most exact branches of medicine and we diagnose endocrine disturbances and localize the diseased gland just as definitely as, for instance, we ascertain disturbances of renal function. The general practitioner has little difficulty in the diagnosis of renal insufficiency either in acute or chronic kidney lesions. The type of kidney lesion, the state of retention, and concomitant metabolic disturbances, however, cannot be identified in the office of the doctor or at the patient's home. Such studies require the facilities of a hospital, and particularly of a competent laboratory. The exact determination of the nature and severity of an endocrine disturbance also requires similar facilities and the efforts of special training. Yet it is up to the general practitioner with his necessarily more limited armament, to detect those cases, the true nature of which can be ascertained only by exact and often painstaking studies.

When should the practicing physician suspect that the underlying disturbance in his patient's ailment is of endocrine nature? It is impossible, of course, to answer such a question with a general statement, although there are some fundamental rules well worth to be borne in mind. Every physician knows that the urine should be examined for the presence of sugar in case his patient reacts too severely to an otherwise common or minor cause, or if improvement is unduly delayed in spite of what seems appropriate therapy. In other words, diabetes mellitus should be considered to account for the unwarranted aggravation of symptoms or the lack of healing tendencies. It seems logical to assume that other metabolic disturbances based upon disfunction or insufficiency of some endocrine gland may also account for similarly striking observations. This is borne out by actual clinical experience and illustrated by the following few examples.

The first case is that of a physician, a powerfully built, very active man, who was suffering from an annoying skin lesion. He was in the care of a good dermatologist and also seen by other physicians. His condition persisted for almost a year in spite of varied local treatment, including Array. He finally submitted to an endocrine examination which revealed a rather

marked state of hypothyroidism. His skin condition cleared up rapidly upon administration of thyroid, combined with the same treatment which had been previously unsuccessful.

Another instance, is that of a woman in the early forties who was ailing with a fairly severe anemia of the hyperchrome type with numerous megalocytes, yet no other evidence of pernicious anemia. She also suffered from a spastic colon and chronic constipation. She has been seen by many prominent men, both in this country and Iron, arsenic, copper, liver and ventriculin were given in large amounts and in every possible way, with unsatisfactory results. treatment of her intestinal condition was equally unsuccessful. Diagnosis of hypothyroidism was made on the basis of a low basal metabolism; thyroid treatment was instituted with the result that the anemia cleared up completely without any additional medication and the patient is spared the ordeal of daily enemas and physics.

It would be easy to enumerate similar cases, which all prove but one point: that patients whose ailments are refractory to usually successful medication, may do well on administration of the proper endocrine therapy, the nature of which depends upon the type of underlying endocrine disturbance. I want to emphasize, however, that although the incidence of endocrinopathy in obstinate or refractory conditions is great, we do encounter such cases without any demonstrable endocrine lesion.

A second guiding thought which may prove helpful in the discovery of veiled endocrine conditions is also better illustrated by a specific case. A young girl, who happened to be one of our laboratory technicians, complained for quite some time of gastric symptoms and particularly of pains in the epigastrium. These pains set in usually after meals, occasionally as late as three hours after ingestion. She was losweight and showed increasing anemia and nervous tension. Thorough gastroenterological studies including analysis of gastric juices, x-ray pictures and G. I. series were perfectly negative. Symptomatic treatment was of no The fact that gastro-intestinal symptoms persisted without any demonstrable anatomical lesions made us suspect an endocrine disturbance. A sugar tolerance test was done and revealed a normal fasting sugar of 95 mg. which increased 30 minutes after the intake of 100 gms. of sugar to 100 mg. One hour after the test meal, there was a drop to 80 and after the second hour a further drop to 70 mgs., instead of the expected rise. This paradoxical behavior of the blood sugar curve ceases to be mysterious if we remember the physiological relations of the endocrine glands instrumental in the regulation of carbohydrate metabolism. The intake of sugar is followed by an early rise in blood sugar which seems to depend upon a liberation of sugar from the liver. This reflex phenomenon is soon followed by the appearance of the resorbed sugar in the blood. A rising blood sugar acts as the physiological stimulus of the pancreas and elicits a discharge of insulin. If this would occur without any further regulation, the blood sugar would fall to a level which is not compatible with life. The regulation provided for to counterbalance the effect of insulin, consists of the discharge of adrenalin from the adrenal glands. This has been shown conclusively in experiments in which the susceptibility of experimental animals towards insulin increased by ligature of the adrenal veins or any other procedure that prevents discharge of adrenalin. The insulin-hypersusceptibility after adrenalectomy or other comparable procedures is such that the animal dies in hypoglycemic shock from a dose of insulin which was previously tolerated without untoward effects. In view of these considerations the phenomenon observed in our patient indicates one of two conditions: Hyperfunction of the pancreatic islands and subsequent excess of insulin production or hypofunction of the adrenal, with lack of adrenalin discharge. Hyperinsulinemia is accompanied by symptoms of faintness, dizziness, perspiration, or in other words, those of a mild insulin shock. In the absence of these symptoms the diagnosis of hypoadrenalism was made. The patient is now doing well on administration of ephedrin 3/8 gr. t.i.d. This case illustrates the thought that symptoms which are not substantiated by anatomical changes must be looked upon as functional disturbances caused either by neurological or endocrine conditions.

It is impossible to survey even in a most abbreviated form all those ailments which the general practitioner encounters in his daily work and in which endocrine lesions should be considered. I want to sketch only some of the most important points: most important because they are so common and yet so infrequently recognized.

I have already illustrated the question of anemia with a few examples. It is known since Kocher's time that the thyroid gland influences the formation of red cells. Kunde, Green and Burns, stated in their recent study on experimental hypothyroidism, that the red blood cells appear larger than normal, yet their number decreased, hence the hyperchrome type of t hypothyroid anemia. These authors also obserthe development of polycythemia with incre' hemoglobin in the early stage of experim hyperthyroidism. In the later stages, they the development of a progressive sec anemia with smaller red blood cells and ; stronger decrease in hemoglobin content and consequently a color index of less than one. Anemia occurs also in other endocrine conditions, particularly in hypofunction of the adrenal glands, for

instance in Addison's disease. Pituitary cachexia is also accompanied by sever anemia; but other clinical symptoms of these conditions are so much more significant that the concomitant anemia does not present particular diagnostic difficulties.

Gastro-intestinal disturbances are among the most common symptoms of endocrine disorder. Pain in the stomach, flatulency, diarrhea or constipation and poor appetite are complained of by most patients suffering from Addison's disease. I mentioned before a mild case of adrenal hypofunction with symptoms suggestive of peptic ulcer and also referred to the hunger pains occuring in hyperinsulinism. Constipation is perhaps one of the most common observations in endocrine patients. Of course, there are many other factors responsible for constipation, but if symptomatic treatment fails to relieve an obstinate case, veiled thyroid or pituitary failure ought to be considered. The opposite of this ailment: loose bowels are frequently observed in Graves' discase. They are also conspicuous in some of the more involved neurovascular conditions in which disturbance of the sympathetic or vagic innervation is often demonstrable. Vonuting or nausea is frequently produced by adrenal failure, yet it assumes really menacing proportions in acute hyperfunction of the pituitary in pregnaney. Hyperfunction of the posterior lobe with subsequent water retention and oliguria is often successfully counteracted by administration of thyroid, while acetonemia and acidosis due to anterior pituitary overactivity call for intravenous glucose therapy and alkalis.

The sphere of genital function, both in males and females is another fertile field for discussion. It has been shown that the sperma of a healthy male remains motile over a period of from 8 to 10 hours if kept at body temperature in a moist medium. Untimely decay of the sperma with loss of motility is not rare in cases of sterility. Some of these patients are hypothyroids, others hypopituitaries. Adequate therapy increases the viability of their sperma and restores the possibility of fertilization. Disturbances of the sex sphere dependent upon diseases of endocrine glands are particularly common in women. Without going into details which pertain to the field of the gynecologist, we can say that amenorrhea, if not due to pregnancy, is usually due to failure of the anterior pituitary lobe, and can be cured by organotherapy. Dysmenorrhea is also quite often the result of pituitary failure and if this is the case, administration of anterior pituitary proves to be successful. In patients who do not show evidence of pituitary disfunction, administration of follicular hormone should be resorted to in order to bring about menstruation at its proper time and prevent the premenstrual disorder which in young females is so often followed by psychoneurotic troubles. Excessive menstruation or abbreviated intervals are sometimes successfully eoped with by the administration of corpus luteum. Oral administration of these substances is not always effective and therapy by hypodermic injection is preferable. These statements sound rather commonplace, yet it seems that organo-therapy of menstrual disturbances is still a considerably misunderstood and neglected field. There is another group of less common but theoretically more interesting cases that are not relieved by organotherapy because organic changes, such as large or multiple follicular cysts, lutein cysts or granulosa cell growths are present in the ovaries. Persistent excessive production of follicular hormone by follicular cysts elicits glandular hyperplasia of the endometrium. This condition is likely to recur even after surgical removal of the spongy hyperplastic endometrium and in spite of copious lutein body therapy. Much better results are obtained by radiation or surgical correction of the ovaries. Another interesting symptom complex is produced by the granulosa cell tumors of the ovary in women past the menopause. Such tumors, although often too small to be recognized by normal examination, elicit diffuse hyperplasia of the uterine body. Not a few of these women have been subjected to hysterectomy for suspected uterine eareinoma. X-ray therapy of the ovaries or removal of the comparatively benign neoplasm, radically disposes of the alarming symptoms.

We have discussed sterility before from the point of view of male endocrine disorders. Obviously, thyroid or pituitary failure of the woman ought to be suspected in eases of sterility in which anatomical changes of the female genitalia are not demonstrable and the male partner is not to be blamed. Organotherapy, supplying the deficient hormones is apt to remedy the situation. My own limited observations are corroborated by Rowe's experience which is the largest in this field and whose results are quite encouraging.

We shall discuss now the relationship of metabolic disturbances to endocrine disorders. Let us take first obesity. Obesity unquestionably is often due merely to overindulgence in food and lack of sufficient physical exercise. Yet in many other cases it seems to be constitutional and familial. In the majority of the latter disturbances of metabolism, based upon disfunction of one or several endocrine glands are revealed by sufficiently thorough examination. We need not discuss hypothyroidism, as the relation of this condition to obesity is too-well known. I am sure, however, that all of you have seen obese patients who did not lose weight in spite of a rigid diet and liberal thyroid medication. Thyroid treatment could not be given, or had to be interrupted in other eases due to cardiac symptoms. Most of these patients were suffering either from failure of the pituitary gland or excessive function of the

adrenal cortex. The latter condition is rare, occurs mostly in females and is characterized by simultaneous amenorrhea and hirsutism. cause is either a tumor or bilateral hyperplasia of the adrenal cortex. We reported some time ago on such a case in which the diagnosis of cortical hyperplasia was subsequently verified at operation. Removal of one of the tremendously enlarged adrenals was followed by a loss of 145 lbs., decreasing the patients weight from 330 to 185 lbs., in the course of 8 months without any diet or medication. Another similar case came recently under our observation and surgery accounted for practically identical results. In pituitary obesity deficiency of the anterior lobe and bilobar failure must be distinguished. The anterior lobe according to recent investigations produces several hormones, one of which is active in the oxidation of fats whereas the other stimulates the thyroid and simultaneously increases the specific dynamic action of proteins (Anselmino & Hoffman, Paul, Crow, Janssen). Excessive deposit of fat due to insufficient function of the anterior lobe may be combined with failure of the posterior lobe resulting in the retention of salt and Such patients do not lose much weight even upon administration of enormous doses of anterior pituitary. Results are obtained only by restriction of salt and water intake, administration of both anterior and posterior pituitary products combined with intermittent thyroid medication.

The counterpart of endocrine obesity is endocrine leanness. There are patients which remain constantly underweight and do not respond to high caloric diet. Organically there is nothing the matter with them. Functionally, however, they are nervous, irritable, asthenic and easily fatigued. This condition is not properly clarified as yet, probably because of its variegated pathogenesis. Recent work, carried out by Jahn in v. Romberg's clinic has added materially to our knowledge of asthenia and illustrated the variety and extent of disturbances in intermediary metabolism characteristic of these cases. Rapid and extreme changes in the acidbase equilibrium are particularly outstanding. Loss of acid by hyperventilation of the lungs, urinary elimination of acid phosphates, and gastric hypersecretion occasionally produce alarming states of alkalosis which manifest themselves in the form of headache, dizziness, nausea and vomiting. patients are frequently subject to asthmatic attacks and various allergic manifestations. During such attacks increased formation of keton bodies has been observed and interpreted as a compensatory process against the alkalosis. Massive elimination of alkaline phosphates with the urine in this stage seems to serve the same purpose. The result of these processes, however, is often overcompensation into a stage of acidosis with its well-known symptoms. These are rapidly disposed of by administration of glucose, the effect of which can be biochemically gauged by the disappearance of the excessive keton bodies of the blood and their substitution by increasing lactic acid.

Disturbances of the peripheral circulation such as cold, clammy, bluish hands and feet are often met with in these patients. They are apparently due to dilation of the small venules (Kroetz), although lability of the capillary system and arterioles also plays its part. The low carbondioxide content of the blood seems to be one of the main responsible factors in this peripheral circulatory disturbance (Gollwitzer-Meyer). Palpitation of the heart, moist skin, tremor, and occasionally stare are often present and likely to suggest a thyrotoxic condition which we are able to rule out on the strength of a normal or low basal metabolic rate.

A better understanding of the asthenic conditions can be arrived at if we compare these cases with some of the extreme types of endocrinopathies, in which the symptoms of asthenia and loss of weight dominate. I have reference to Simmond's pituitary cachexia and Addison's disease. Milder degrees of pituitary and particularly of adrenal failure are likely to produce a much less striking picture, which however, is characterized by marked fatigue and leanness. According to Rowe, 93% of cases with adrenal lesions show such symptoms, while they are in evidence only in 48% of pituitary disease. An even higher percentage, that is 59%, of Rowe's thyroid patients gave similar complaints. Some of these were hypothyroids with low basal metabolism, yet they were definitely underweight and did not show any of the mental sluggishness which is thought to be typical of thyroid failure. It stands to reason that sensible treatment cannot be instituted before the cause of the disorder has been ascertained. This is the more important because these cases lend themselves particularly well to endocrine therapy. Pituitary failure is combated by administration of anterior pituitary substance; adrenal cases and those with a high basal metabolism by the administration of interrenin, the adrenal cortical hormone and hypothyroid cases by thyroid medication. Some of these patients respond well to stimulation by radiation, and particularly to treatment with Bucky's Grenz rays.

Disturbances of water metabolism, expressed by polyuria and polydipsia are particularly annoying to the patient. They are tortured by thirst and their sleep is often interfered with by nocturia. Most of these cases are obese and may or may not show retention of salt. The controversy is still going on whether the underlying pathology is a hypofunction of the posterior lobe of the pituitary as I have stated first in 1913, or some cerebral lesion in the subthalamic or in-

fundibular region. From our purely clinicotherapeutic viewpoint, however, the different concepts of pathogenesis do not matter because the only effective treatment of these cases is unquestionably that with posterior pituitary extracts. Oral application is also efficacious, but too large amounts of the expensive substance are required. Subcutaneous administration may cause excessive peristalsis and abdominal cramps. The method of choice is the intranasal application. Instillation of a few drops or a spray with surgical pituitrin produces the desired effect. We had quite a number of these patients in our endocrine clinic and we were successful in decreasing both the daily intake and output of water by this method. Thus in one of our patients, a woman aged 40, the daily intake averaged 140 oz. with commensurate output; after two weeks treatment the intake and output decreased to from 50 to 60 oz, a day. This case was the more interesting because the patient had been in the care of our diabetic clinie with her diabetes well under control. She was referred to our clinic because polyuria still persisted. Several other patients who came with similar complaints, were markedly obese and suffered from severe headaches. Since their disturbance of water metabolism has been controlled by pituitary treatment, and salt poor diet, their headaches disappeared and they sleep well again. Their weight has been also materially reduced during the same period.

Disturbances of salt and water metabolism sometimes account for rather queer symptoms. Thus a young girl who came under our observation for amenorrhea, complained about fainting spells which occurred whenever she attempted to bathe in the ocean. She also mentioned swelling of her lips in case she ate ice cream, and swelling of hands when she touched cold water. These angioneurotic symptoms disappeared after six weeks of salt restriction and pituitary therapy. Her menstruation also returned.

In another middle aged woman with mild menstrual disturbances there was an 8 months history of migrating swelling of the joints, and adjacent soft parts. After all other therapeutic means had been unsuccessfully attempted, patient came under our care. She proved to be another bilobar pituitary failure and was given the same pituitary treatment and salt poor diet. She had only one more attack on one finger, lasting a single day which ceased without migrating. Patient is symptom free ever since.

In another large group of endocrine disorders nervous irritability and asthenia are coupled with disturbances of psychic nature. It has been my fortune to see among other cases that of a physician, 40 years of age and quite powerfully built. He used to be a football player at college. He complained of fatigue, sluggishness, irritability and admitted inferiority complexes. He had seen

quite a number of physicians and specialists of neurology, who concurred in the opinion that his was a case of neurasthenia. Endocrinological investigation showed an anterior lobe failure with some apparently secondary hypothyroidism. His "neurasthenia" improved rapidly under organotherapy and administration of Bucky's Grenz rays.

The occurrence of psychoneurotic symptoms is much more frequent in endocrine cases than in patients suffering from other conditions. Rowe reports upon a series of 500 endocrine cases, out of which 102 that is 20.8% showed psychoneurotic disorders. In a control series of 500 nonendocrine patients only 14.2% showed comparable symptoms. Out of the 500 endocrinopathies, 185 were pitnitary cases with 22 psychoneurotics, that is 10.9%. The thyroid group of 116 had only 15 psychoneurotics equalling 9.3%. The gonadal group of 125 cases gave the largest number in this series of 38 which is 30.4%. There were also 15 adrenal and 15 polyglandular cases out of which 13 and 14 respectively were psychoneurotic, making a percentage of 86.7 and 93.3 respectively.

After reviewing some of the more common endoerine disorders, we have to face a crucial question: how to diagnose these conditions and on what basis are certain symptoms ascribed to the failure or excessive function of one particular gland?

Endocrinology is but a special line of clinical medicine in which the same methods are practiced that prove successful in the diagnosis of other medical conditions. The general appearance of the patient, his type of fat distribution, inspection of the skin, hair and teeth, and first of all a carefully taken history often give sufficient reasons to suspect an endocrinopathy. After such a tentative diagnosis has been arrived at, there are two ways open to follow. One is the oldfashioned empirical way of alternatingly administering to the patient various glandular products in order to determine the cause of the disease by the effect of therapy. This procedure may work sometimes, but more often fails and certainly cannot be considered to be scientifically exact. It is so much safer for the patient to approach his condition by a thorough endocrine workup which usually identifies the gland responsible for the elinical symptoms. I would like to briefly present the systematic procedure which we have instituted for the study of these cases in our endocrine clinic.

Determination of disorders of the thyroid gland is based largely upon the basel metabolic readings. We feel that hyperfunction of the thyroid cannot be diagnosed in the absence of an increased basal metabolic rate, nor ean hypothyroidism be claimed without low basal metabolic readings. The rate of blood cholesterol usually de-

creases with accentuated thyroid functions and increases in hypothyroid conditions. Diagnosis of anterior pituitary failure is made as a rule on the basis of high blood uric acid, decreased or absent specific dynamic action and marked lymphocytosis. The significance of increased uric acid in the blood has been stressed first by Rowe. In our experience which at present covers several hundred thoroughly studied cases, the average uric acid in pituitary disease is well over 4 mgs., whereas the normal figure is below 3. The increase in uric acid is sometimes quite remarkable and seems to be rather constant. Most important is the lack of specific dynamic action of proteins which according to Plaut, Artundo, Bernhard, Anselmino and Hoffman and others is an almost constant symptom of pituitary failure. The significance of this sign is borne out by increase of the special dynamic action following pituitary medication. The technique of the test is very simple. The patient, after completion of the basal metabolic test, is given a test breakfast, which consists of the white of three eggs, a thin slice of toast and a cup of plain tea. Two hours later a second metabolism test is done; the difference between the two readings expresses the specific dynamic action, that is the increase in the rate of metabolism, due to the stimulating effect of proteins. Other authors have used large amounts of meat as a test meal, but I believe that the test is finer and more reliable if a comparatively small amount of protein is given. The specific dynamic action of normal persons ranges anywhere between 15 and 35% after ingestion of the test meal mentioned above. In most of our several hundred pituitary cases the figures were well below the lower limit of 15. I would like to call attention, however, to two cases, in which a high specific dynamic action was obtained, and which proved to be pituitary neoplasm. It might be in place to emphasize in this connection that diagnosis is facilitated by ophthalmological and x-ray pictures of the skull only in case the pituitary disorder is due to enlargement of the gland. Another valuable test in pituitary failure has been described by Schellong: examination of blood pressure before and after exertion. A fall of pressure on exertion is always demonstrable in Simmonds cachexia and is also noticeable in and suggestive of minor degrees of anterior pituitary

failure. The drop does not always appear immediately, but becomes apparent only after a few minutes. The fall in pressure after exertion manifests itself as a rule only in patients with normal or slightly lower blood pressure. Schellong's test is negative in cases of pituitary disease associated with hypertension.

The determination of posterior pituitary failure is based mainly upon the outcome of the salt test. We measure the water and salt output on a standard diet over a period of 24 hours. On the next day, after breakfast, patient is given 10 grams of salt with half a pint of water. Water and salt excretion in the next 24 hours is again determined while patient is repeating the same food and water intake as on the previous day. The majority of our pituitary cases thus examined showed a retention of salt while diuresis and salt elimination was increased only in a few of the cases.

The sugar tolerance test gives information primarily as to the function of the pancreas and adrenals, although the outcome of the test might be influenced also by disorders of the posterior pituitary and thyroid. I readily admit that diagnosis of adrenal cases with the exception of true Addison's disease is quite complicated and requires, particularly thorough study of the case history and physical symptoms as well as numerous laboratory tests. Among the latter I would not like to miss study of blood pressure under varying conditions and particularly after administration of adrenalin. Adrenal insufficiency must be thought of in cases of chronic fatigue, coupled with lymphocytosis, low blood sugar, somewhat increased blood nitrogen, low blood pressure, sluggish response to adrenalin and high sugar tolerance. Paradoxical blood sugar curves with alimentary hypoglycemia are of particular significance. Real adynamia, loss of weight, anemia, gastric symptoms and pigmentation complete the picture of true Addison's disease, but while the latter is rather rare, mild cases of adrenal hypofunction are much more common and go_about unrecognized and untreated.

If, however, the possibility of glandular disease receives consideration, guided by the principles discussed in this paper, systematic investigation is likely to establish the cause of the ail-

ment and remedy its symptoms.

TOXIC ACTION OF METALS IN ALOPECIA AREATA

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FOR many decades bald spots have been the source of much concern to men, women and children. These spots are more technically known as alopecia or alopecia areata; or, under more distressing eircumstances, the condition is spoken of as alopecia totalis. This disturbing, but not serious clinical symptom has been the subject of continued research on the part of endoerinologists, internists, and dermatologists for many years, and has led many beauty specialists and quacks to prey upon the unfortunate victims.

It is not our purpose to discuss the various theories in regard to the etiology of alopecia areata. On the other hand, it is our intention to give a short discussion of our findings from the biochemical point of view and its relation to metal retention. The elinical factors will be found in a later article. Much detailed study has been carried out in connection with the medical aspects of this subject, but they will not be included in this article for the reason that effort is being made to present the data physiologically.

present the data physiologicany

In presenting this data at this time, endeavor is made to call attention to the disease and give adequate information so that an intelligent approach to the proper diagnosis may be obtained.

Alopecia areata is a disorder characterized by sharply circumscribed areas of total baldness. The affection occasionally involves regions other than the scalp, and in rare instances gives rise to an alopecia universalis. The bald patelies suddenly develop on apparently normal skin, and there is a very marked variation in the size, shape and locality. The scalp, the eyebrows, the bearded region, and even the body may show areas in which the hair has completely fallen out. falling out of the hair sometimes is gradual lasting over several days and, occasionally, the spots come out within apparently a very few hours. At the margin of the alopecia lesions the shafts may exhibit atrophic changes. Near the mouth of the follicles so-called "exclamation point" hairs may become loosened and painlessly extracted. The patches occur in all ages of individuals and in both sexes.

The exact eause of alopecia areata has been unknown, although it seems to be more prevalent in the earlier decades of life and occurs with about equal frequency in both sexes. The neurotic and the parasitic origins have received consideration but, etiologically, no evidence has been evolved.

A sudden fright or falling from an unusual height are instances which have caused marked shock symptoms. It is our belief that shock symptoms, of whatever nature they may be, produce the necessary stimuli to complete a diseased

process which has already been initiated. It is from this angle that consideration has been given to the fulminating influence associated with metaholic disturbances.

The long series of studies which have been carried out by us in relation to the action of metals on certain clinical symptoms, have led us to believe that our attack has been directed in the right direction.

From the medical point of view, it has not been denied that endocrine disturbances may even be associated with the presence of metals in the system. For twenty-five years or more, theories have been advanced indicating that pituitary disturbances may play a part, but no satisfactory elinical study has been made showing definitely that endocrine disturbance is a factor concerned with the appearance of alopecia areata in all cases.

On an emperical basis, various types of pituitary extracts have been employed. In so far as information has been ascertained by us, there is no available evidence appearing in these articles showing by laboratory examination that the pituitary is involved. Every elinician is aware of the promiscuous use of glandular therapy. However, proof of the necessity for its use is quite regularly the situation concerned in many of these eases. In our investigations, sufficient glandular therapy has been used, but in most instances with negative results. In the three patients that have failed to respond in our studies, no definite glandular disturbance was associated with their condition, as shown by the results of months of careful laboratory examinations under controlled con-

Our earlier therapeutic approach consisted in the application of anterior pituitary. Our observations had led us to believe that a very small number of cases fall in this group; whereas our present studies have shown us that a great majority of patients have been associated with a metallic retention.

From the point of view of endocrinology, and through the contesy of Dr. Allen Winter Rowe, of Boston, many very painstaking examinations have been made. In this relation there have been three cases which were very resistant to all types of treatment. Our facilities were insufficient for further study of these ambulatory patients and Dr. Rowe very kindly consented to study the patients who were placed in the hospital for continuous observation. His experiments indicated that it was correct in assuming that pituitary disturbances were not involved. Before having come to us these individuals had submitted to pituitary treatment with no success. Mention is made of

these three cases to indicate that pituitary deficiencies are comparatively rare as far as alopecia areata is concerned. Without adequate information of the presence of either hypo or hyperpituitrism, it is readily understood that such glandular therapy would be of very little value.

In the group of patients which have been studied, a small boy, six years of age, fell out of a second story window, with the result that a total alopecia developed within one week. It should be pointed out at this time that our experiences have not indicated that this shock alone was the cause of the alopecia. Further examination of this child showed the presence of unusual amounts of arsenic and lead. The child was checked for other physical abnormalities such as eye strain, diseased tonsils, and endocrine disturbances. It is our belief that this case represented an accumulation of toxic reactions. The sudden disappearance of hair was brought on by the shock, which served as a fulminating influence.

Our previous investigations have shown the rapidity with which metals accumulate in the reticulo-endothelial system. This influence is then transferred to the vegetative nervous system, which in turn may produce very marked reactions of various kinds. These abnormal stimuli may then cause disturbances of the various glands and result in the abnormal basal rates which have been observed by us. It has been our belief that a damaged reticulo endothelial system produces very marked physiological changes upon the various functions of the body.

In Germany there have been several instances in which either girls or boys have developed alopecia areata in somewhat epidemic form. This is easily explained on the basis of new construction of the water supply, or the new buildings. Until recently lead pipe had been a very ordinary mode of conducting water supply into institutions and even into private dwellings. It has been shown that water with a high carbondioxide content, flowing through even 20 feet of lead pipe, may dissolve sufficient lead to produce chronic plumbism. This last situation is mentioned to indicate the importance of environment in its relation to this disease.

Foods, drugs, and water supply offer very easily accessible sources of metals. The prevailing methods of spraying fruits, dusting vegetation, and destroying mosquitoes, readily explain why arsenic and lead should be looked for in association with unusual and obscure clinical symptoms.

Alopecia areata does not confine itself to any one strata of civilization. With this factor in mind, it was decided that a careful study of the patients should be carried out from the point of view of blood chemistry and metallic retention.

In recent years thallium acetate, in spite of its very toxic action, has been employed to a very considerable extent in the treatment of ringworm infections of the scalp. In the employment of thallium epilation it has been noted that the hair of the patient being treated completely falls out, and that the individual hairs conform to the "exclamation point" appearance. This would indicate that possibly metals may play some part in the production of the clinical symptoms in alopecia areata, and in turn it suggests the possibility that some of the common metals may have a role in the causation of this disease. In previous reports by us it has been shown that metals have a marked effect upon the reticulo endothelial system, the vegetative nervous system, and the general blood picture of individuals. Also, there is a distinct deposition of these metals in the reticulo endothelial system.

In confirmation of the suggested ideas, it is important to report the investigations of Pardo Castello, who believed that the alopecia produced by thallium compounds, corresponded to the experimental production of alopecia areata in man.

The presence of "exclamation point" hairs in alopecia areata has been known for a long time, and Abramowitz has stated that they are also found following the administration of thallium acetate.

It has been shown by us, in a great many instances, that arsenic has a strong predilection for the keratin tissues and, accordingly, Wilcox, and Althausen have pointed out that arsenic exists in considerable quantity in the hair, skin and nails. More recently a very extensive investigation has been carried out by Schwartz, who has examined the hair and nails of a great many individuals. He finds that there is a variation in the hair depending upon the part of the body from which it is taken. The same is true in respect to the nails.

If arsenic and lead are deposited in the bone marrow, or any other part of the reticulo endothelial system, it is very probable that this passive distribution of the metals will produce a marked effect upon the general vegetative reaction, the peripheral organs in particular.

The influence of such drugs as suprarenin, pilocarpine and atropine, although different in their vegetative action, have been studied by Myers and Müller in their relation to the deposition of arsenic in the various tissues of the body; and these investigations show that there finally results a physiological action, such that the endothelium will show a decrease of cellular perme-The selection of these drugs was made because of the marked effect which they can produce upon the distribution of arsenic in the entire involuntary nervous system. Pilocarpine increases cellular activity and cellular permeability. renaline produces the reverse action. Consequently, it can be assumed that an injection of pilocarpine would change the vascular system and probably the tonus of all organs and tissues into a state of increased activity.

It would be expected that a larger amount of arsenic would pass from the blood into the organs because of the higher permeability of the vascular endothelium and all cells and tissues of vessels and capillaries through which arsenic naturally finds its way from the circulation into the organs Consequently, it was decided to employ the capillary microscope for examination of these areas of alopecia areata, and it was found that these capil-

been included in our abnormal metabolic group As indicated, a clinical examination alone is not regarded as adequate to fix the metabolic value

As a result of these tests being carried out in the entire group of patients, abnormal basal meta bolism was found in 24% of the males and 37 09% of the females, and there were twice as many abnormal minus findings as there were plus findings. See Table 1

	D. 1	MALES			
Age Limit	Basal Metobolism Determinations	Positive Normal	Negotue Normal	Positive Abnamal	Negatu e Abnormal
-20 20-30	42 28	19 15	10 12	7 0	6
30-40	27	3	i4	Ĭ	ģ
40 plus	3	_0	3	0	_0
TOTAL	100	37	39	8	16
		FEMALES			
-20	15	2	6	2	5
20-30	24	4	12	2	6
30-40	15	3	5	3	4
40 plus	8	2	5	0	1
TOTAL	62	11	28	7	16
GRANO TOTAL	162	48	67	15	32

Abnarmal basal metabolism determinations in all males
Abnarmal basal metabolism determinations in all females
Tatal abnarmal basal metabolism determinations
. 24%
37 C9%

TABLE 1 Basal Metabolism Rates in Alopecia Patients

laries were either markedly contracted or were not visible at all

Inasmuch as there had been a permeability of the metals into the slim and hair, it was decided to employ suprarenin in 1 1000 solution and to stroke the mucosa of the lower concha with a probe. In cases of sympathicotomia a red line will develop which stands out prominently on the contracted buckground. The reaction is considerably prolonged, the blanched area being present as long as forty minutes.

In order to determine by vasoconstrictor action the relation of the tonicity of the arterioles of the alopecia areata, and the arterioles of other parts of the body, a drop of one-tenth per cent solution of histamine was applied to the scalp on the hairless area and on the flexor surface of the forearm, which resulted in the production of a wheal. The wheal of the scalp was only about one-fourth the size of the wheal on the forearm, while the fire was more extensive on the scalp and less extensive on the flexor surface. In normal individuals the size of the wheal is the same in each location

Basal metabolism tests were carried out according to the methods of Benedict and DuBois The results used have been selected on the basis of the general trend of the basil rate rather than upon specific values Values above +5 and -5 have

Basal metabolism examinations were employed because of the fact that it is our opinion, based on extensive studies of tests in skin diseases in general, that abnormal results may be expected when pathological amounts of metal have been observed in these patients. The effect of metal will produce a toxic reaction and, therefore, this action will manifest itself in the metabolic rate of such patients.

In studying patients who have received injections of metals, it has been found that there is a marked reduction in the basal state. This is demonstrated quite readily when neurosyphilities are subjected to these tests. It is understood that this type of patient has undoubtedly received arsenic, bismuth, or mercury, sometime during the period of their treatment. Our experiments dealing with this subject are still unpublished.

Blood counts were carried out on all of the individuals reported in our preliminary discussion, and it was determined that there was a relative lymphocytosis in 71 83% of all the cases studied at that time. In making the differential white blood cell count, a value below 60 for the polyneuclear cells was considered as showing lymphocytosis, and also was indicative of an intoxicating influence. In every case a complete blood count was made with results which are indicated in table 2.

MAL	ES	
Age Limit	No. of Cases	Lymphocytosis
-20	. 17	16
20–30	. 11	4
30-40		10
40 plus	. 4	1
Total	43	31
FEMA	LES	
-20		8
20-30		7
30–40		4 1
TOTAL		20
GRAND TOTAL	. 71	51

Counts done in	71 cases
Lymphocytosis in	51 cases
Percentage showing lymphocytosis in males	72.09%
Percentage showing lymphocytosis in females	71.42%
Percentage of all cases showing lymphocytosis.	71.83%

TABLE 2. Differential White Cell Count in Alopecia Patients.

Investigations of Müller and Myers have shown that metals produce a distinct reaction upon the lymphocytic mechanism. This indicates that a disturbance of the vegetative nervous system has taken place. Our results in connection with alopecia areata confirm their findings.

During the course of our research extensive studies showed that there was a decrease of leukocytes in the peripheric vessels which corresponded to an increase of leukocytes more particularly of the neutrophil polyneuclear type in the splanchic area. These changes, in the distribution of leukocytes, were observed following the intravenous administration of arsenic. In many instances the involuntary nervous system caused not only the acute blood changes but also the manifestation known as symptoms of angioneurotic shock.

Chemical examination of the blood for sugar, chloride, urea and uric acid was carried out in 454 cases. The so-called metallic blood picture, previously described by Myers and Throne, was found in 21% of the original cases reported.

A study of the urine was made for the reason that it shows the elements which are being excreted. If these elements appear in abnormally large quantities, it is evident that they must have been circulated throughout the tissues and the blood stream previous to excretion. It is our belief that, in making a study of the marked retention, examination of the urine and blood will give the most satisfactory results. In some instances there may be an absence of metal in the blood and urine indicating that there has been a tissue retention. It is for this reason that we have employed eliminative treatment according to the diagnostic procedures previously described by us.

In carrying out the examination for arsenic and

lead in the urine, the patient was requested to bring a quart specimen from which sufficient material was taken for the arsenic determination. To the measured remainder 50 c.c. of concentrated ammonia were added and then allowed to stand. The lead determinations were made essentially in accordance with the methods of Fairhall. The chemical examination of the urine was carried out routinely, and the results for arsenic expressed in micromilligrams of arsenic per 100 grams of dried specimen, and micromilligrams of lead per liter of urine.

The purpose of separating them into these groups is of value in presenting a statistical incidence of the disease for the various decades studied. The number of patients, together with the metal findings is found in the various tables. However, it will be observed that in some instances arsenic was found while in others lead only was observed. The number of patients who showed no metals at all is presented in the last column. For instance, in table No. 1, 300 patients were studied, and of this group. 198 were carefully examined showing that there was 44.94% with arsenic, 19.19% with lead, and 11.62% with both of the metals present. The total percentage of specimens showing metals is 75.75%. The detailed analytical findings are given in table No. 3.

		MALI	ES	······································	
Age Limit -20 20-30 30-40 40 plus	Number Patients 49 33 24 8 — 114	As. 23 19 7 5	Pb. 12 5 0	As. and Pb. 4 6 2 1	Metals Absent 10 3 10 2
-20 20-30 30-40 40 plus	30 23 22 9	FEMAL 17 11 5 2 —		2 2 3 3 —	5 5 10 3 —
GRAND TOTAL		35 89	38	23	48

Urine examined in	198
Arsenic found in	89 or 44.94%
Lead found in	38 or 19.19%
Arsenic and lead found in	23 or 11.62%
Total urines showing metals	150 or 75.75%
Total urines not showing metals	48 or 24.25%

TABLE 3. Urine Determinations for Lead and Arsenic.

Everyone familiar with the subject of spray residues and other metallic contaminations, is aware that there are seasonal variations; e.g., one may expect that the retention of metal will be much greater during the colder periods of the year when general metabolism is somewhat diminished. Exposure to metals, and their retention, is closely related to meteorlogical conditions.

Likewise, the effect of alcoholism, bacterial infection, focal infection, and a great variety of factors of this character markedly influences the excretion and retention of metals.

To avoid any possibility that our original group of patients may have been selected without any consideration of seasonal variation, several additional groups were set aside for examination at different periods of the year, and also at different years. In the original report by Feit, Throne and Myers, the patients were studied from the point of view of basal metabolism, metal content, blood chemistry and the effect of metals on the vegetative nervous system.

Table 4. Table No. 4 shows the same data as found in table No. 3 except that it was taken at another season of the year. It would appear that possibly there is a slight diminution of cases showing metals in this group. These patients represent warm weather examinations.

Very frequently clinicians have been concerned about the amount of metals which may be ex-

		MALI	ES		
Age Limit	Number Patients	Pb. Det.	Pb. Found	As. Det.	As. Found
-20 20-30 30-40	7 40 29	2 15 12	2 9 8	18 16	! 8 9
40 plus Total	12 88	5 34	4 23	6 44	$\frac{4}{22}$
		FEMAI	ES		
-20 20-30 30-40 40 plus	7 17 9 5	3 4 2 2	3 3 2 0	3 5 5 2	1 3 4 0
TOTAL GRAND TOTAL	38 126	11 45	8 31	15 59	8 30

Total Patients	126
Total average leads	67.9%
Total average arsenics	51.0%
Total urines showing metals	58.65%

TABLE 4. Urine Determinations for Lead and Arsenic.

MALES		FEMALES	
Mgms. Arsenic per 100 Gms [,] Solid	Mgms, Lead	Mgms. Arsenic per	Agms. Lead
.043	Per 1000 c.c.	100 Gms. Solids I	er 1000 c.c.
.127	7.0	.159	.08
.059	.09	.104	0.0
.084	.055	.34	.922
0.004	.13	.05	.06
0.0	.09	0.0	.19
0.0	0.0	} 0.0	2.34
1.2	.385	0.0	0.0
.286	.01	1 .2	.11
.037	i.63	:08	.45
.037	.094	37	0.0
.053	.01	.29	.15 .23
.0375	1.06	.074	0.0
0.0	.14	.16	.05
0.0	.49	1	.03
.217	0.0	1	
. 106	.099	l	
.108	.18		
.328	.15	ļ	
.087 .051	.11		
.239	.17	ļ	
0.0	.04	(
.248	0.0 .01 <i>6</i>		
0.0	0.0	{	
.9 68	.09	Į.	
.149	.11	1	
0.0	.06		
.05	0.0		
.037	.075		
.08	.08		
0.0	.14		
0.0	.09	,	
.180	0.0		
.05	.08		
.04 .155	.08		
Catal Dationtal at 123	:14	Mark that a second	
	37	Total Patients having Urine Examination	ns 14
•	10 or 27.1%	Negative Leads	4 or 28.60
Investors America	27 or 72.9%	Negative Leads	10 or 71.49
Negative Arsenics	10 or 27.1%		
ositive Arsenics	27 or 72.9%	Positive Arsenics	10 or 71.4%

TABLE 5. Uring Determinations for Arsenic and Lead.

pected in patients suffering with some forms of

alonecia

Table No. 5 shows the arsenic and lead in each patient from whom a specimen was taken. It will be noted that there is practically little difference between the males and females in this group. The ratio of males to females having alopecia is about three to one in this particular instance. An unusually close value is found for the percentages of arsenic and lead in each of these groups. Our tabulation has not included the classification in this group by decades. In some instances the table indicates that a patient showing no arsenic rarely shows no lead, and vice versa

In the succeeding year an additional group of

arsenic in the case of males and 72% in the case of females.

In going over the entire group of patients, almost 800 in number, it is quite apparent that variations of seasonal nature are indicated in each group. The most minutely studied group of patients is found in tables No. 5 and No. 6.

DISCUSSION

The discussion and the results of the study of alopecia areata in its various forms, have indicated that our investigations add additional factors which are associated with the so-called toxic theory. The data presented indicate that the effect of common metals on the reticulo endo-

MALES		FEMALES	
Mgms. Arsenic per Mg	gms. Lead 1000 c.c. 0.10 0.13 1.03 0.77 .207 .11 0.0 .36 .14 .809 .15 .16 .13 .165 .11 .18 .465 0.0 .1 .16 .11	Mgms. Arsenic per M	Igms. Lead or 1000 c.c. 0.13 1.48 .19 .431 0.0 .07 .492 .09 0.0 .13 .27 .12 .12 .13 1.08 .431 .15
Total Patients having Arsenic Examinations	21	Total Patients having Urine Examination	ns 17
Negative Arsenics	4 or 19.1% 17 or 80.9%	Negative ArsenicPositive Arsenic	1 or 5.9% 16 or 94.1%
Total Patients having Lead Examinations	23		
Negative Leads	2 or 9% 21 or 91%	Negative LeadsPositive Leads	. 2 or 11.8% . 15 or 88.2%

Table 6. Urine Determinations for Arsenic and Lead.

patients were collected, as indicated in table No. 6. This table again shows the presence of arsenic and lead in the specimens of urine taken from males and females of this group. Here, however, the percentages having arsenic and lead are very much the same, the percentages being unusually high; e. g., in the case of males 80.9% show arsenic and 91% show lead. In the case of the females 94.1% show arsenic and 88.2% show lead.

Proceeding to a more recent group, taken during the past year, it is indicated that 80% show

thelial system plays a very distinct part in the production of this clinical symptom. Examinations of the hair, blood, urine, and the alopecia areas have been made, and it is our belief that definite evidence is offered in connection with these examinations. The analogy of the action of thallium in epilation closely simulates symptoms observed in alopecia areata, and through this suggestion our attention was directed to the estimation of arsenic and lead. The wide-spread prevalence of these two elements in foods, drugs, and liquids, due to contamination and spray resi-

MALES	FEMALES
Mgms. Arsenic per . 100 Gms. Solids 0.0 0.015 0.0 .015 0.0 .04 0.067 .49 1.178 .8 .360 0.0 0.8 .05 .05 .05 .15 .15 .15 .15 .15 .15 .17 .109 0.0 0.0714 .743 .045 .05 .05 .05 .06 .09 .0714 .743 .045 .05 .05 .06 .09 .09 .0714 .743 .045 .05 .05 .06 .09 .09 .00 .0714 .743 .045 .05 .05 .05 .06 .09 .06 .29 .06 .29 .06 .29 .06 .21 .06 .62 .73 .06	Mgms. Arsenic per 100 Gms. Salids .36 .07 .02 .54 .154 .13 .076 0.0 .04 0.0 1.59 .6 .14 .31 .11 .06 .049 .192 .19 .15 .137 0.0 0.0 0.0
Arsenic Examinations 40	Arsenic Examinations 2

Arsenic Examinations 40		Arsenic Exam	inations 25
Negative	8 or 20%	Negative	7 or 28%
Positive	32 or 80%		18 or 72%

TABLE 7. Urine Determinations for Arsenic.

dues, easily accounts for their presence in the body, fluids, and tissues. Furthermore, it has been shown that metals definitely disturb the basal metabolic rate, and also the blood count on these alopecia cases, indicated by a relative lymphocytosis. Histopathological and microchemical examinations are earried out on specimens obtained from the various groups of individuals.

The treatment of alopecia areata has consisted

in cheeking the patients for focal infections, and the administration of freshly prepared sodium thiosulphate. Sterile crystals are readily available for this purpose. Only the purest material should be used. The treatment consisted in the use of doses of 1.0 and 3.0 grams three times each week. Diseased teeth, tonsils, sinuses, or other toxic possibilities should always be eliminated previous to the treatment.

The authors believe that these investigations offer additional confirmation of the so-called toxic theory. The use of spray residues, and lead pipe for conducting purposes should be avoided for the reason that they offer adequate sources for contamination. The investigations on these patients have shown definitely that with the proper treatment the majority of the individuals have their hair restored. The use of sodium thiosulphate in the form of pure crystals (Sulfactol) has promoted the increase in the elimination of the metals. Any patients with a lowered basal metabolism had glandular therapy added to their treatment. In the entire series of patients only three have failed to respond.

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WHAT THE ORTHOPEDIST CAN DO FOR THE ARTHRITIC

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In this talk I intend to call to your attention the various orthepedic considerations which are important in the treatment of arthritis. I hope when I have finished that I will have left with you firmly fixed in your minds the all-important problem of the prevention of deformities.

I. EARLY STAGE WITHOUT DEFORMITY GENERAL CONSIDERATIONS

- (1) Painful joints should be put to rest in the position of election, or in a position to prevent deformities. When the knee is involved, avoid flexion of the knee and the accompanying abduction and external rotation of the hip. If ankylosis is impending, get the joint into the position of election—for example, in an elbow put it in the position best suited for the individual. An inactive woman would be most benefited with her elbow at 70 degrees flexion; she could arrange her hair, feed herself and perform similar personal actions. A doctor would want a relatively straight elbow, probably 30 degrees flexion.
- (2) When joints are swollen, tense, and painful, withdrawal of the fluid should be employed and the injection of air into the joint affords a cushion upon which the patient can walk. Air is injected at 30 mm. pressure.
- (3) In pyogenic infections the suppurating joints should be drained, washed out and protected by immobilization.

DEFORMITIES

Deformities are caused by painful and spastic muscles demanding relaxation and aided by gravity. In the early stages our orthopedic problem is concerned with the prevention of deformities. This problem is best approached by first considering what are:

The Common Deformities.

Feet—Equino-valgus.

Knee—Flexion with abduction and external rotation of the hip.

Hip—Adduction and Flexion.

Fingers—Flexion—claw hand.

Wrist-Flexion.

Elbow-Flexion 30°-45° with pronation.

Shoulder—Adduction.

Jaw-Fixed closed.

Spine—Flexion generally with rotation.

BED PATIENTS

The doctor and nurse must be taught to recognize beginning deformity; and when patients are in bed, it is most important that they be on the alert for the earliest signs of deformity and pre-

vent this unfortunate complication. The bed should have a firm mattress which will not allow the body to sink into a bad position, as for example to allow the back to go into a position of flexion for hours at a time. The weight of the bed clothes should be kept off the painful joints. Frequently the pressure of the bed clothes will cause a foot drop. A cradle should be used; and if necessary a posterior molded splint can be employed to hold the foot in the physiological position. In the same manner a molded splint or cast can be employed to prevent flexion of the knee; a spica for the hip; and a spica or abduction splint for the shoulder. Remember to teach your interns and nurses to spot deformities at their inception.

AMBULATORY CASES

The first consideration in the prevention of deformities in ambulatory cases is posture. When you make a diagnosis of arthritis or you fear the onset of the arthritic state, immediately give thought to your patient's posture. Deformities are insidious in onset and their progress slow; and if you relent in your watchfulness for the shortest period, you are apt to find yourself confronted with a serious deformity which might

have been prevented.

The primary consideration in posture is that in the lower extremities. The legs and feet are so constructed that the weight bearing line is a straight line from the anterior superior spine of the ilium, through the center of the patella, along the tibial ridge, and passing out of the foot through the second toe. The weight should be carried on the front of the foot, the terminal ends of the first and fifth metatarsals being used for weight bearing, and the os calcis being used only to steady or balance in walking and standing. In order to preserve this correct weight bearing attitude it is necessary to instruct your ambulatory cases to walk with the weight on the front of their feet and not to jolt down on their heels each time they put their feet on the ground. The position of moderate valgus in which most people walk should be corrected so that the imaginary line described above falls as it should through the second toe. This correct posture, accompanied by exercises and proper shoes, may be sufficient to overcome deformity in the feet; if not, it is necessary to use a malleable metal plate in the shoe which is not a true support but in fact a guide which causes the foot to take its proper position.

It has been my observation that physicians will seek the aid of orthopedists and skilled brace makers when their patients need some support such as a spinal brace or walking caliper; but when they are suffering from so-called "flat foot." the doctor very lightly suggests that the patient get arch built shoes or Dr. Scholl's arch supports. It is not possible to get the proper education of the feet with shoes alone; exercises are essential and inserts in the shoes are imperative in more than 80 per cent of patients suffering from foot strain. The inserts should be made of metal strong enough to withstand the patient's weight, and malleable enough to be repeatedly adjusted to the progressive changes in the foot as improvement is gradually obtained. The metal insert should have the definite form and size of the patient's foot, and this can be obtained only by building it over an exact model of the foot.

If the true importance of the feet in the treatment of arthritis is to be obtained the term "flat foot" must be abandoned, and weak feet used in its stead. Weak feet are feet which are rotated out of the weight-bearing line, hence causing unnecessary muscle strain which promotes fatigue, and in an arthritic further depletes an already weakened constitution. Furthermore, muscle strain actually weakens the resistance of the bony supports and causes improper points of weight-bearing in the joints, thus producing in the lower extremities, pelvis, and spine a most fertile field in which arthritis may flourish.

In the knees deformity is prevented by physiotherapy, which promotes motion and increases circulation. By physiotherapy I mean primarily diathermy and massage. In extreme cases braces will be needed to prevent flexion deformity.

Deformity in the hip in ambulatory patients immediately calls for consideration of the foundation as described when considering the feet. One thing always to be remembered is that deformity of the hip, that is flexion and adduction, causes a tilting of the pelvis, which in turn promotes curvature and rotation of the spine, putting strain on that structure and decreasing its resistance to arthritis. The prevention of hip deformity is obtained by physiotherapy and, when necessary, braces. Deformity in the shoulders, elbows, wrists, and fingers is prevented by physiotherapy and by braces. If fixation of the joints cannot be prevented, then employ casts and braces to hold the joints in the positions of optimum flexion for the patient.

Prevention of deformity in the spine should be one of our first considerations, because once a patient has a fixed, flexed, and rotated spine, medicine and surgery are helpless. Watch for the early flexions and fixations of the spine, prevent them by employing a support such as a Taylor spinal brace, and in selected cases use bony fixation.

One consideration frequently lost sight of is that children and sick adults spend many of their hours asleep when they are off guard, and this affords an excellent opportunity for the development of deformity. This danger is overcome by the employment of night braces.

II. LATE STAGE WITH DEFORMITY

Now we must consider what surgery can offer a person who has had the misfortune to allow fixed deformity to occur. In the equino-valgus deformity of the feet an effort should be made to manipulate the feet under anesthesia, and hold them in position in casts. If this fails or is impractical a cuneiform osteotomy, followed by casts, should be performed. When there is fixed bony deformity of the knees, hips, shoulders, or elbows, the treatment indicated is an osteotomy or arthroplasty. The fingers should be fixed in position best suited for the patient. In the wrist bony fixation is treated by an osteotomy because an arthroplasty is difficult and the results are not satisfactory.

Surgery offers absolutely no aid to a fixed, bony deformity of the spine and that is the first reason why every effort should be made to prevent spinal deformity. If any fixation is fibrous and not true bony ankylosis, the deformity might be overcome by manipulation under anesthesia; but if this is attempted it must be remembered that the bones have probably suffered severe atrophy of disuse, and that manipulation under anesthesia is likely to cause fracture or destruction of the bones.

In some cases of atrophic arthritis of the knee the synovial membrane may be the focus of infection; and a pansynovectomy removes the cause and provides a cure.

Spurs, joint mice, damaged synovia and cartilages may be removed, but in all operative procedures it must be remembered that in treating arthrities we are dealing with people who are constitutionally weakened and are not good operative risks.

Let me impress upon you the necessity of adopting the same attitude in treating orthopedic patients as the physician who treats pulmonary tuberculosis. Don't expect to cure your orthopedic patients in days or weeks—be prepared to wait months and years for results.

SUMMARY

We have considered that, from the orthopedic view, in the acute stage of arthritis rest is the important treatment; that the treatment of severe deformities offers only limited benefit; and finally that the important and first object of the treatment of arthritis is to remember the typical deformities and he on the alert to prevent them,

SULFARSPHENAMINE IN VINCENT'S ANGINA

By H. J. HARRIS, M.D., WESTPORT, N. Y.

OUR HUNDRED cases of Vincent's Angina in Essex County, N. Y., occurring during the year 1931, were reported by me in the New YORK STATE JOURNAL OF MEDICINE OF February 1, 1932, treated with one of the arsphenamines given in three doses, a week apart. While that surprisingly large incidence of Vincent's angina in Essex County, N. Y., has rapidly decreased, there still occurs in this region many sporadic cases of a less severe and less infectious, but yet stubborn, nature. As these often fail to respond to local measures such as potassium chlorate, sodium perborate and their flavored proprietary preparations, and since the disease may be so serious in some of its manifestations, I have continued to use the intravenous sulfarsphenamine mentioned in my original communications, realizing full well the possible reactions that might occur.

Peculiarly, in about five hundred injections of sulfarsphenamine, of various brands, given to patients with Vincent's angina, during the epidemic in question, no noticeable reactions occured except for an occasional patient who was actively nauseated or vomited during or immediately after the injection. Since reporting this series I have had five experiences which forcefully brought the question of toxi-

city and reactions to my attention.

The cases listed below are especially impressive since they occurred within a few months, with the same technic and with various brands of sulfarsphenamine:

Case 1-A young married woman with ulceration of gums and lips, getting steadily worse under local treatment, was given 0.3 gm. of sulfarsphenamine but failed to improve within the usual forty-eight-hour period. Five days later she was given a second dose of 0.3 gm. which was followed not only by prompt healing of all lesions but also by a mild arsenical rash on the ventral surface of both wrists, around the nipples and the labia minora. One intravenous dose of 15 grains of sodium thiosulphate (sulfactol) in 10 c.c. of distilled water was given intravenously and the rash disappeared. The usual third dose of sulfarsphenamine was omitted.

Case 2—A young vigorous man of 23, with ulceration of gums and tonsils due to Vincent's angina, not improving under local therapy, was sent to me for sulfarsphenamine. He improved markedly after the first dose of sulfarsphenamine (0.4 gms.). A second dose was given a week later, all lesions healing rapidly. A mild arseni-cal rash of the wrists developed and disappeared spon-

taneously.

Case 3-A boy of 12 consulted me complaining of a mild sore throat, obviously Vincent's angina of the tonsils, and was given 0.3 gm. sulfarsphenamine intravenously with no apparent improvement. Five days later a second dose of 0.3 gm. was given intramuscularly. This was followed in two days by a rapidly developing, very heavy, measles-like arsenical rash covering his entire body, apparently of the exfoliative type. Sod. thiosulfate by mouth and by vein daily was followed by improvement in 24 hours and complete disappearance of the rash in 4 days, with no ill effects. No exfoliation

Case 4—A man of 42 had tried numerous local methods of treatment of a mild but long persistent Vincent's of the gums and hard palate and was finally given 0.3 gm. of sulfarsphenamine intravenuosly. Within an hour he was vomiting freely and having copious watery diarrhea which was attended by shock and ultimate collapse within four hours. Improvement began soon after an intravenous dose of 15 grains of sodium thiosulphate (sulfactol) although death had seemed too imminent for any treatment to be effective. Undoubtedly this should have been given carlier. He recovered completely in three days.

Case 5-I myself was the fifth patient. Having developed an often-recurring patch of obvious Vincent's of the gum which only partly healed with local drugs, quartz light, etc., flaring up at intervals, I was given 0.3 gm. of sulfarsphenamine intravenously and felt no ill effects. Since I was well within two days, further treatment was neglected. Perhaps six months later, a similar patch recurred and a second dose was given me. This precipitated an immediate nitritoid crisis with flushing of the skin, nausea and generalized urticaria which was promptly relieved by adrenalin. The patch of Vincent's disappeared within two or three days. About four months later, because of a similar patch, all manner of local therapy was tried without avail before deciding to risk another reaction. A similar reaction again occurred within thirty seconds after this dose was administered and was relieved rather tardily by intramuscular ephe-

Comment: I cannot enter into controversy as to the relative safety of sulfarsphenamine as compared with the other arsphenamines. I can state, however, that reactions can occur with greater frequency than would ordinarily be anticipated and that they may be negligible or fatal. One may be lulled into a false sense of security by previous freedom from ill effects. Obviously, i' is unsafe to use this drug unless one is prepare to administer sodium thiosulphate intravenousl promptly at the first sign of severe reaction or advancing arsenical dermatitis.

With proper precautions, sulfarsphenamine can be used with reasonable safety in intractable cases of Vincent's angina, as in syphilis. It is essential to keep the patient under observation for at least fifteen minutes after the injection; to give sodium thiosulphate promptly when indicated; and to be prepared for late reactions, such as dermatitis, which are successfully treatable if seen promptly. There seems no reason to abandon the use of so specific a drug.

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MEDICAL INSURANCE IN CUBA

There are three principal systems for delivering medical service to the people:

- 1. Private practice.
- State Medicine.
- 3. Insurance by Voluntary Groups.

The people of the United States are so accustomed to the system of private practice that they are scarcely aware that millions of people in England and Germany are recipients of medical treatment administered by the State; while other countries have experimented with sickness insurance given by voluntary groups conducted by the same commercial methods that are used in insurance against accidents and fire,

The Island of Cuba offers an extensive examplc of sickness insurance, for approximately onehalf of its medical service is given by means of insurance groups organized for the purpose of giving treatment to their sick members. An excellent description of the Cuban system is contained in a four-page article in the American Association Bulletin of June, 1933, by Dr. R. G.

Leland, Director of the Bureau of Economics of the American Medical Association.

Cuba has an area of about 45,000 square miles, and a population of about 3,500,000, of whom about 500,000 live in the metropolitan area of Habana. There are about 3,000 practising physicians in Cuba, or about one to every 1,200 people. One may visualize Cuban conditions by comparing them with those of New Jersey. While New Jersey has only one-fifth of the area of Cuba, it has about the same population, the same number of physicians, and the same grouping of a large part of its population in a metropolitan area.

Dr. Leland brings out four striking points in connection with the group-insurance service:

1. Origin and Development: The insurance system was organized in the decade of the seventies, when the Spaniards introduced the paternalistic system of giving medical care to the workmen on their great plantations which sprang up with modern industrial conditions. Health and happiness of the workmen were essential to financial prosperity; and so the plantation owners provided not only medical service, but theaters and art instruction suited to the peculiar needs of the workmen. Private provision for these services grew naturally into the formation of insurance societies which gave both medical service and entertainment for a membership fee of two dollars a month. This fee produced enough income to build and support hospitals and run the An elaborate system of super salesmanship kept the membership filled and left but few people who paid fees. The salaries paid to the society physicians were ridiculously small, and were below living wages; and yet the doctor could not secure private cases for they could not compete with the salesmen of the societies.

2. Universality of the Service: A commendable spirit of social service was shown by both the physicians and the societies toward those who could not pay the insurance dues. If a non-member was taken sick, he was put upon the membership list and given free treatments, even though he immediately dropped his membership when he recovered. The insurance organizations capitalized the value of a good reputation for

giving service.

3. Abuse of the System: The insurance system was used by all classes of people. The plantation owners and superintendents paid the same

fees as the poor members, and used the facilities of the hospitals and other forms of medical service without paying a fee except their membership dues. This is the most pernicious element in the insurance system, for it leaves few pay patients for the independent doctors. It is estimated that one quarter of the members of the insurance societies are abundantly able to pay ordinary medical fees to private physicians. Everybody is in the societies, but there is a great inequality in the service that is given, the upper classes of course receiving the best.

4. Organization of Physicians: The physicians of Cuba have not been organized except through the insurance societies. There has been no such thing as a medical society of the nation, or the district, or the county, until recent years. The Medical Federation of Cuba was organized in 1925, and has formed district branches. It has been active in promoting reforms which will make practice like that in the United States. Among the changes which its members have advocated are the following:

1. Making the minimum full time salary of an insurance doctor \$1,200 a year, a living wage.

2. The elevation of standards of practice, espe-

cially in the hospitals.

3. The requirement that the insurance doctors should give an average of fifteen minutes to each patient, instead of treating forty per hour, which has been the usual average.

4. The elimination of unnecessary calls, for the members make inordinate demands on the doctors.

5. A change in the methods of employing and paying the salesmen of the insurance companies.

Progress: The Federation has conducted a campaign of education among both the people and the doctors, and is making considerable progress in securing the cooperation of the physicians of the insurance societies. There are, for example, thirty-four medical insurance societies in Habana, of which twenty-one are Cuban, and friendly to the Federation; twelve are Spanish, five being cooperative and seven unfriendly; and one is Chinese and friendly.

Political considerations may hinder the adoption of the progressive reforms, for candidates use the societies for their own ends. Yet there are bright prospects that the National Medical Society will be able to accomplish much in the

next five years.



MEDICAL PROGRESS



Pneumothorax Treatment in Dry Pleurisy. -Eberhard Regenbogen states that by making use of pneumothorax in dry pleurisy it is possible both to control the pain and apparently to prevent formation of adhesions. On a basis of 6 case histories he demonstrates that the introduction of gas produces such a complete separation of the diseased leaves of the pleura that the pain ceases and its return is made almost impos-No other measure so quickly and comsible. To produce an pletely accomplishes this end. equivalent result it would be necessary to have recourse to strong anodyne remedies of the morphine group, from the use of which for many reasons it is better to refrain. Pneumothorax has the advantage over these and similar measures that the effect of a single inflation lasts a long time, and commonly results in a complete cure of the pleuritie process. Unlike certain authors who use 600-1000 c.e. at the first inflation for pleurisy, Regenbogen uses only 300-500 e.e. It is his experience that when 300 e.e. have been reached the pains already disappear. When so small an amount as 300 e.e. has been introduced, fluoroscopy fails to reveal the slight separation of the lung from the thoracie wall; it requires a good roentgenogram to reveal satisfactorily the degree and site of the inflation. The use of a relatively small amount of gas has the advantage of redueing to a minimum the mechanical irritation caused by the gas, which in the opinion of many authors, is at least in part responsible for the formation of an exudate. It is debatable, however, whether the appearance of the exudate is really due to the pneumothorax, or to the natural transformation of a dry pleurisy into an exudative one. In any event, the formation of such an exudate is searcely to be feared when small amounts of gas are employed. In Regenbogen's opinion, the introduction of air with the resultant cessation of the frietion of the inflamed leaves of the pleura serves rather to prevent the formation of such an exudate and by placing the pleura at rest considerably shortens the duration of the illness .--Deutsche medizinische Wochenschrift, June 2, 1933.

A Method for Obtaining Blood Pressure by Arterial Compression and Simultaneous Capillary Observation.—J. Q. Griffith, Jr., and Leon H. Collins, Jr., describe a method for obtaining blood pressure in the brachial artery by brachial compression with a blood pressure cuff and simultaneous observation of the blood flow in the digital capillaries of the nail bed. As the method does not require pulsation, it is especially valuable in cases in which this is not perceptible. For

observation of the nail bed a microscope lamp with a 500-watt bulb is set up so that its rays fall on the stage of a microscope at an angle of 45°. A spherical liter-flask filled with distilled water is interposed between the lamp and the stage. On the side of the microscope opposite the lamp pillows are placed to support the patient's arm. One of the patient's fingers, usually the fourth, is placed in a small trough-shaped wooden box and gently supported on the sides by plasticine and then placed directly on the stage. A drop of immersion oil is then applied to the selected finger just back of the nail. To take the reading, the blood pressure euff is quickly pumped up to a point above the systolic pressure and clamped while the capillaries are watched. flow will continue for about a minute, and then eertain of the capillaries will appear to be filled with stagnant granules. If the flow does not stop, it means that a point above systolic pressure has not been reached. There may be slight to and fro movements of the granules, but no definite The pressure in the cuff is now slowly lowered, and the point where the flow first definitely returns is read on the manometer. This is taken as the systolic pressure, or in a case without pulsation, as mean pressure. The results obtained by this procedure were compared with those of ansculation in normal persons and varied between five and twelve millimeters lower than that obtained immediately afterward by auscultation. A patient without pulsation in the brachial arteries was studied and the capillary reading was confirmed by a direct pressure reading after arterial puneture. This indicates that the results obtained by the capillary reading are fairly accurate.-The American Heart Journal, June, 1933, viii, 5.

The Sphygmomanometer in the Diagnosis of Cardiac Irregularities.-Maurice E. Shaw, writing in the British Medical Journal, June 3, 1933, i, 3778, draws attention to a method which has proved of value to him in the routine investigation of blood pressure in patients with car-diac irregularities. The fact that pulsus alternans may often be recognized while one is taking the blood pressure deserves to be more widely appreciated by medical men. Other factors remaining constant, the maximum arterial pressure achieved by any beat will depend upon the strength of the ventricular contraction. Where such contractions alternate in strength there will be alternation of maximum (systolie) pressure. This, as a rule, is quite easily recognized with the manometer. A variation of 5 mm. of mercury can be recognized with ease, and smaller variations might be distinguished if the possibility of alternation were borne in mind when the blood pressure was being taken. If alternate beats reach a different systolic pressure the audible number of beats will be halved as soon as the pressure in the cuff exceeds the lower of the two maximum pressures. It must be remembered that alternate strong and weak beats may be due to extrasystoles alternating with normal beats. In such cases there will be a disturbance of rhythm which will not, as a rule, be difficult to recognize, though the halving of the pulse rate will be observed as soon as the pressure in the cuff of the sphygmomanometer is sufficient to obliterate the beats due to the extrasystoles. In auricular fibrillation it is impossible to estimate the systolic blood pressure in the ordinary way; the first beat that is heard on deflating the cuff is usually an isolated one, and it may be necessary to reduce the pressure in the cuff by 20 or 30 mm. before the number of beats heard bears any relation to the charted pulse rate. If the cuff is held inflated at the pressure at which the first beat is heard only two or three beats a minute may be heard. As the cuff is slowly deflated the number gradually increases, and it is possible to get some idea of the variations in systolic pressure between the largest and smallest beats. The complete disorganization of ventricular rhythm is suggested by the fact that the sound of each beat varies, even though the pressure in the cuff is constant. Ectopic beats of ventricular origin do not, as a rule, disturb the dominant rhythm of the heart. These beats can be excluded by raising the pressure in the cuff to a point just below the pressure generated by the normal beats. Where the ectopic beats are of auricular origin there is usually interference with the dominant rhythm, and the distinction is less easy if the abnormal beats are very frequent, but in many cases the extrasystoles seem to generate a fairly constant pressure. If careful attention is paid both to the rhythm and to the actual pressures of abnormal beats valuable information may be obtained without employing elaborate appa-

An Appraisal of the Value of Vaccine Therapy in Chronic Arthritis.—In an attempt to obtain a cross-section of opinion in regard to the value of vaccines in chronic arthritis, Sydney R. Miller sent a questionnaire to a number of internists in the leading medical centers of the country and to a group of preeminent immunologists and bacteriologists. An analysis of the replies shows that approximately two-thirds concur in the opinion that vaccines are of value when used at the proper time and in the\proper manner, whatever that may be. Autogenous vaccines are preferable in the majority of patients. In a minority stock vaccines are equally good. Just what the specific indications are for the use of vac-

cines, their dosage, their method of administration, etc., must still be left as open questions. At the moment it would appear that vaccine therapy in chronic arthritis is appropriately limited to the atrophic form, and has little, if any, application in the hypertrophic type. The consensus of opinion inclines to the view that the mechanism whereby improvement occurs under vaccine treatment is in some way related to a desensitization process rather than to the formation of specific antibodies. In harmony with such a concept, small doses of vaccine are most advocated, given preferably intravenously, and continued over a long period of time, avoiding pronounced constitutional reactions. It would seem apparent that, in the light of more recent bacteriological studies, greater attention should be paid to the process of vaccine preparation, chiefly in terms of attempting to secure virulent strains of the autogenous Recent imdisease-provoking organisms. munological studies lead to the conclusion that a vaccine, to be of probable value, should contain the whole bacterial antigen. All call attention to the fact that the nucleoprotein and carbohydrate fractions which constitute the whole bacterial antigen are bound together in a very loose way and are easily broken up by solution, by autolysis, and in some instances by heat sterilization. With these and other considerations in mind, several voice the belief that we do not yet know the best method of preparing vaccines. It is probably essential that the organism in question be shown or known to be an antigenically potent strain and that antigenic dissociation must be The whole status of vaccines and avoided. their therapeutic use in arthritis is in a most unsettled and empirical state.-Southern Medical Journal, July, 1933, xxvi, 7.

The So-Called Acute Febrile Perniciosiform Anemias.—On the basis of a personal case studied accurately over a long period, D. Campanacci says that Italy also has cases resembling those recently described by American authors (Brill, Lederer) under the name of "acute hemolytic anemia" and "acute febrile anemia," with acute febrile onset, moderate hepato-splenomegaly, oligocythemia and oligochromemia, hemoglobin index in excess of 1, normoblasts, megaloblasts and occasional myelocytes in the circulation, urobilinuria and bilirubinemia with indirect diazo-reaction, running a rapid and benign course. He would, however, partly modify the American conclusions by affirming that such forms of anemia may present, as did his own case, achylia and polynuclear leucopenia, so that what have been regarded as fundamental criteria for differentiating acute hemolytic anemia from Biermer's pernicious anemia become, instead, imThe absence of microcytosis and of modifications in the globular resistance, together with the merely moderate character of the splenomegaly made it appear that the hemolysis in these acute cases should not be regarded as of splenic origin. These findings, taken in eonnection with the presence of signs of myelopathic involvement (megaloblasts, myelocytes) constitute one more argument for considering such cases forms of the classical Biermer's anemia, of which they scemingly represent one clinical variety. Notwithstanding the obscure ctiology of these forms of anemia, Campanacci believes that their genesis must rest on the threefold foundation of organic soil, achylia, and acute toxinfection. This last component, indeed would seem rather to be capable of upsetting an equilibrium already unstable than of creating ex novo an entire disease picture, while on the basis of the criterion ex adjuvantibus the achylia would always be expected to play a fundamental role. Such a criterion even confirms the close relation of these forms to Biermer's anemia, since it is well known that in the latter the results of early hematological examinations in certain cases point to the primary existence of a disequilibrium of hematopoiesis and also of achylia, upon which were superimposed at a later time signs of morbid hyperhemolyses. In the author's case the only variations from those forms which in their clinical physiognomy meet the test for Biermer's anemia were the irregular high fever with chills, of septicemic type, with which the case began, and the spontaneous remission of the disease. In view of these considerations it seems that the affection should not be considered a new entity, but rather a elinical variety of pernicious anemia.-Riforma medica, May 20, 1933. Protection of the Peritoneum Against Infection.-Bernhard Steinberg and Harry Goldblatt describe experiments on dogs which formed the basis of the method which they have applied clinically. Briefly, dogs were injected intraperitoneally with 50 c.c. of a 1 per cent, solution of gum tragacanth in physio-

portant sigus for bringing these two forms together under a single nosological heading,

at least from the hematological point of view.

Protection of the Pertoneum Against Infection.—Bernhard Steinberg and Harry Gold-blatt describe experiments on dogs which formed the basis of the method which they have applied clinically. Briefly, dogs were injected intraperitoneally with 50 c.c. of a 1 per cent. solution of gum tragacanth in physiological saline in which were suspended 200,-000,000 killed Bacilli coli per cubic centimeter. At varying intervals thereafter the animals were infected by injections of living B. coli and other microorganisms in a suspension of 2.5 per cent. gum tragacanth. Hourly white cell counts of the peritoneal exudate were then made. It was found that in dogs a single intraperitoneal injection was effective in twelve hours against infection with B. coli and other intestinal microorganisms. Control

animals which were infected, but did not receive the protective injection, succumbed. The procedure was applied clinically in 100 patients. From twelve to forty-eight hours prior to surgical operation, they were given an intraperitoneal injection of 30 c.c. of a suspension of B. coli (200,000,000 per cubic centimeter) in 1 per cent. gum tragacanth in physiological saline. The injection was made in the midline, a little below the umbilicus, with a No. 15 gauge needle, 2 inches long. One-half hour before the injection 1/6 to 1/4 of a grain of morphine sulphate was administered and repeated at four hour intervals for sixteen hours, as the reactions are those of peritoneal irritation and can be controlled with morphine. The method was employed in cases in which there was danger of peritoneal soiling, as in intesti-nal resection, "interval" appendectomy, and chronic pelvic conditions with adhesions requiring removal of pelvic organs. A definite contraindication to the use of this method is the presence of general peritonitis. None of the patients receiving the injection developed peritonitis. The factor responsible for the protection against infection is apparently predominantly polymorphonuclear leucocytes, since the protective substance in the peritoneal cavity evokes the exudation of a large number of polymorphonuclears which are available for phagocytic action at the time of infection. The protection must be regarded as nonspecifie since the protective material was effective not only against B. coli, but also against B. pyocyaneus, Streptococcus facalis, B. welchii, and other organisms found in the feces.—Surgery. Gynecology and Obstetrics, July, 1933, lvii, 1.

Two Cases of Bacillus Alcaligenes Infection. -W. K. Anderson says that Bacillus facalis alcaligenes infection is sufficiently uncommon to justify the record of two cases of it. This bacillus usually occurs in the intestinal tract and is regarded frequently as a saprophyte. An inflammatory condition of the intestines appears to favor the growth of the organism The cases here reported occurred in men 25 and 20 years of age. From the history and clinical appearances these two cases would have passed for rheumatic fever. patients both had cardiac valvular and myocardial lesions with painful and swollen joints. As the symptoms did not respond to the salicylates, some other form of infection was sought after and the Bacillus facalis alcaligenes was found. In both cases treatment with mercurochrome resulted in improvement. A tablespoonful of 1 per cent mercurochrome in water was administered once daily in the first case and twice daily in the second. The author brings up the question as to whether the cardiac lesions with recurrent rheumatism were

the direct result of the Bacillus alcaligenes infection supplied from the gut over a long period of time, or whether these severe attacks described were new infections in previously rheumatic subjects.—Practitioner, July. 1933, exxxi, 871.

Congestive Heart Failure and Angina Pectoris.—Herrman L. Blumgart, Samuel Levine, and David D. Berlin present a report on the favorable effect of thyroidectomy in three cases of congestive heart failure and one of angina pectoris, in which there was no clinical or pathological evidence of thyroid toxicity. They were led to try this measure because of the favorable effects of a reduction in the metabolic rate seen in certain thyrotoxic patients with congestive heart failure whose circulation becomes compensated after subtotal thyroidectomy. The hearts of such patients are evidently equal to the demands of a normal metabolic rate, though not to the demands of the elevated metabolic rate of thyrotoxicosis. This suggested the possibility that persons with normal metabolism who suffer from congestive heart failure might show striking improvement if the metabolic rate were significantly lowered. In the patients studied the signs and symptoms of circulatory insufficiency and of angina pectoris had persisted for a considerable time in spite of all known medical procedures. In two of the three patients with severe congestive heart failure tubtotal thyroidectomy caused a fall in the metabolic rate which reached its maximum about three weeks after the operation. Clinical improvement paralleled the lowered metabolism and was evidenced by the disappearance of edema, the increased vital capacity of the lungs and the ability to be up and about the ward without discomfort. During the next two weeks, the metabolic rates in these two patients again rose toward the preoperative normal level, and their clinical condition became less favorable. The patient with angina pectoris had shown no recurrence of the attacks of angina pectoris since subtotal thyroidectomy, although he had returned to work and active life. In one patient with congestive heart failure complete ablation of all thyroid tissue was done, the parathyroid glands being spared. This patient has maintained his conspicuous clinical improvement and the metabolic rate has remained persistently lowered for more than six weeks. Further studies are being made in order to appraise the value of thyroidectomy roentgen irradiation. The authors suggest that at the present time the procedure should be employed only in cases in which all known therapeutic measures have proved ineffectual.—Archives of Internal Medicine, June, 1933, li, 6.

Recurrent or Intermittent Jaundice in Youth.—After reviewing the main points in the differential diagnosis of hemolytic jaundice and hypertrophic biliary cirrhosis, Willis E. Hartshorn describes an atypical case of biliary cirrhosis. The patient, a girl a little over 8 years of age, had a first attack of jaundice which lasted about ten days and then cleared up. There was a second attack a year later, and a third attack when the patient was 11 years of age. After the jaundice had persisted for three months she was admitted to the hospital. The laboratory findings at this time were as follows: Red blood cells, 4,410,000; hemoglobin, 90 per cent; white cells, 11,350; polymorphonuclear leucocytes, 51 per cent. The icterus index was 50, whereas, normally, it should be from 4 to 6. The analysis of the case suggested more a jaundice due to obstruction than a familial, cirrhotic or hemolytic jaundice. After the patient had been in the hospital for a month with little improvement, an exploratory laparotomy was advised. This was refused and the child was taken to her home. She died two years later from septicemia due to a throat infection, having been constantly jaundiced during this period. At autopsy the spleen was found enlarged about six times. The liver presented a condition in which both hypertrophic and atrophic cirrhosis were found, but not Hanot's This disease is characterized by chronic jaundice and marked enlargement of the liver and spleen in the absence of ascites. From time to time exacerbations occur, with fever, pain over the liver and spleen and increased jaundice. In the case described there was very moderate enlargement of the liver with no ascites until it appeared as a complication of the secondary septicemia, when the spleen, not markedly enlarged before, rapidly increased in size. There was no fever at any time; neither was there an increase in the number of reticulocytes or fragility of the red cells, such as is found in chronic hemolytic The laboratory findings did not iaundice. point to a medical solution of the problem and, therefore, to save the life of the child, surgical intervention would have been justified. In persistent cases of jaundice before the age of twenty the blood picture must be thoroughly investigated before suggesting surgical interference. In hemolytic jaundice with large splenic tumor, splenectomy is indicated. In the case here described it would have been of doubtful value. If jaundice continues over a period of years without relief, liver necrosis and death are sure. Exploratory operation is therefore indicated in atypical cases of the nature above described. - New England Journal of . Medicine, June 22, 1933, ccviii, 25.



LEGAL



CRIMINAL LAW-STATUTE PROVIDING FOR ALTERNATE JURORS

By LORENZ J BROSNAN, ESQ.

Counsel Medical Society of the State of New York

From time to time public attention is directed to the waste of time and money in the trial of criminal cases. These trials are very often protracted and at times instrials have resulted through illness, death or insunity of one of the jurors. It should be borne in mind that where a juror becomes incapacitated or dies, it is mandatory upon the trial judge to declare a mistrial which, of course means that the case must be retried from its beginning.

For some years those interested in the proper administration of our law have suggested a simple way to remedy this situation, viz, by legislation providing for an alternate juror who should be sworn as any other juror, hear all the evidence and thus be prepared to take the place of any regular juror who became incapacitated or died

during the trial of the case

An extremely desirable piece of legislation was passed by the legislature at its recent session and became a law with the approval of Governor Lehman the purpose of which is to prevent as far as possible unnecessary retrials. The law referred to adds a new section to our Code of Criminal Procedure providing for alternate juriors in felony trials. The new section reads as follows.

'Sec. 358 a Alternate jurors, know chosen, rights and duties of alternate jurors. Whenever, in the opinion of a judge of a court of criminal jurisdiction about to try with a jury a defendant against whom has been filed any indictinent or information for a felony the trial is likely to be a protracted one the court may cause an entry to that effect to be made in the munites of the court and thereupon immediately after the jury is impaneled and sworn the court may direct the calling of one or two additional jurors in its direction, to be known as alternate jurors'. Such jurors must be drawn from the same source, and in the same manner, and have the same qualifications as the jurors already sworn and be subject to the same examination and challenges. Such alternate jurors shall be seated with the jurors, with equal power and facilities for seeing and hearing the proceedings in the case and shall take the same outh as the jurors already selected, and must attend at all times upon the trial of the cause in company with the other jurors, and for a failure so to do ore holde to be punished for contempt. They shall obey the orders of and be bound by the admonition of the court upon each adjournment of the court, and if the regular jurors are ordered to be kept in the custody of the sheriff during the trial of the cause, such alternate jurors, and except, in confinement with the other jurors, and except, in confinement with the other jurors, and except heps in confinement with the other jurors, and except heps in confinement with the other jurors all also be kept in confinement with the other jurors are ordered to be kept in the custody of the sheriff during the trial of the cause, such alternate jurors shall also be kept in confinement with the other jurors, and except, or part of the cause to the jury. If before the final submission of the case to the jury if before the final submission of the case to the jury or become the final submission of the case to the jury if before the name of an afternate, who shall then tak

discharged juror in the jury box, and be subject to the same rules and regulations as though he had been selected as one of the original jurors.

List year an almost identical section was adopted by Congress and is at present in operation in our Federal Courts. It has already demon strated its usefulness. At the time of this writing a protracted criminal trial is in progress before a Federal Judge that has been under way for several months. In that case one of the jurors died, and his place was taken by an alternate, thereby accomplishing a great saving of time and expense

In connection with this statutory modification of the jury system that is being put into effect it is appropriate to consider some of the features of the jury system generally In the trial of criminal eases trial by jury is one of the most basic fundamentals of our system of government The Tederal Constitution in Article III which deals with the Judicial Power of the United States guarantees that the trial of all erimes in rederal Courts, except in cases of impeachment, shall be by jury, and the Sixth amendment assures to the accused in all criminal prosecutions the right to a speedy and public trial by an impartial jury The State Constitution likewise contains a provision that "trial by jury in all cases in which it has been heretofore used shall remain inviolate forever" The courts of this State have adopted the general attitude that in felony cases trial by a jury of twelve is a practice that is not to be altered. It has been stated as fundamental that in the trial of a felony the jury trial cannot be waived so as to permit the court alone to hear and determine the matter

Some years ago in an appeal from a conviction of first degree murder, the Court of Appeals voiced an excellent summary of the background of our twelve man jury system, as follows

'From tune immemorial a common law jury has con sisted of twelve men When or how that number ac quired its historic sacredness no one can tell for the origin of the institution itself has been lost in the darkness of antiquity Much less does history inform us with exactness as to the ancient qualifications required of these twelve. There seems to have been a time when they were witnesses who decided cases upon their personal knowledge of the matters in controversy. In the feudal days they were required to be freemen and from this circumstance it may be surmised that some, if not all were owners of property. With the development of evilication and the gradual establishment of property rights there came a period when the ownership of property was probably regarded as something of an index

to the intelligence, character and standing of men in their communities, and as a convenient basis for the arbitrary fixing of a class from which the ultimate selection of jurors was to be made. In England this qualification seems to have been at first confined to such capital eases as treason, misprison of treason and murder: * * * and we know that later it was extended by statute so that when the common law took root in American soil we engrafted upon the jury system the property qualification which to some extent, and in one form or another, has survived to this day. From this short and imperfect reference to the history of the subject we perceive that although the jury as an institution reaches backward beyond the memory or knowledge of man, it has had to be adapted to the ever-changing conditions brought about by the progress of the centuries. Through it all, only two things have remained fixed and The common-law jury must have twelve immovable. men, and these twelve, although taken from a class whose general qualifications may be arbitrarily fixed by law, are chosen by a selective process which, although constantly changing in form, is always designed to secure the service of intelligent and impartial citizens who will be alike the conservators of the obligations of the state and the rights of the individual."

These principles have been so strictly adhered to in New York that where by consent of the parties during a murder trial the withdrawal of a juror was consented to, and the trial proceeded with the remaining eleven, a conviction was reversed solely on the grounds of that irregularity.

The strict manner in which the courts have adhered to the old common law conception of jury trials in felony cases has been relaxed in some other states and within a few years a case was carried to the United States Supreme Court involving the propriety of a trial with less than twelve jurors. In that case the court said:

"In affirming the power of the defendant in any criminal case to waive a trial by a constitutional jury and submit to trial by a jury of less than twelve persons, or by the court, we do not mean to hold that the waiver must be put into effect at all events. * * * Trial by jury is the normal, and, with occasional exceptions,

the preferable mode of disposing of issues of fact in criminal eases above the grade of petty offense. In such cases the value and appropriateness of jury trial have been established by long experience and are not now to be denied. Not only must the right of an accused to a trial by a constitutional jury be jealously preserved, but the maintenance of the jury as a fact finding body in criminal eases is of such importance and has such a place in our traditions, that, before any waiver can beeome effective, the eonsent of government counsel, and the sanction of the court must be had, in addition to the express and intelligent consent of the defendant. And the duty of the trial court in that regard is not to be regarded as a mere matter of rote, but with sound and advised discretion, with an eye to avoid unreasonable or undue departure from that mode of trial or from any of the essential elements thereof, and with a caution increasing in degree as the offenses dealt with increase in gravity."

In a case decided in a Pacific coast state subsequent to the ruling of the Supreme Court, it was well illustrated how strictly the courts construe any ruling which changes the old common law jury system. In a murder trial two alternates had been chosen pursuant to a statute similar to that just enacted in New York. The law provided for them to substitute for a juror who dies or becomes ill. A juror in the course of the trial was excused for other reasons, and the respective counsel stipulated in open court to proceed with the substitute The highest court of that state reversed a conviction obtained under such circumstances, holding that proceeding with the trial with eleven regular jurors and one alternate was improper in the absence of an express agreement made by the defendant himself.

The statutes under discussion are a step in the right direction. It would seem that a similar statute should be enacted giving a judge the discretion to swear an alternate juror in a civil case where it appears to the satisfaction of the court that the trial will be a lengthy one.

CLAIMED INCORRECT DIAGNOSIS OF MASTOIDITIS

A doctor who specializes in ear, nose and throat work was asked by a general practitioner to see a child about three and a half years of age. He called at the boy's home and his diagnosis after examination was infection of the middle ear. He incised the drum of the ear and drained pus, then leaving the child in charge of the family doctor.

About three weeks later the physician who had been called in as a specialist received a call from the parents of the child, complaining that the patient's condition had become worse. He found that the boy had a tenderness and swelling over the mastoids and so, at his suggestion, the child was sent to a hospital for observation. After his condition had been watched for a few days, the doctor had the

boy's head shaved preparatory to an operation, and when the doctor made his final examination preliminary to operating for the child's condition he found that the child had developed on the preceding night a condition of chicken-pox. He, therefore, did not perform the operation but made arrangements for the patient to be removed to a hospital for contagious diseases. That was the last time the doctor ever saw the child.

Repeated attempts to collect his bill for professional services were of no avail, and the doctor instituted suit in the Municipal Court to recover his fee. A counterclaim was interposed by the child's parents claiming that the doctor's treatment had been negligent. The

particular charge was that the doctor had incorrectly diagnosed the child's ailment as mastoiditis, whereas the child was suffering from chicken-pox. As a result of this alleged incorrect diagnosis damages were claimed to have been caused. At the trial the doctor proved the amount of his bill. No competent evidence was introduced to support the malpractice counter claim, and the court therefore directed judgment in favor of the doctor, awarding him the full amount of his bill and dismissing the counterclaim.

CLAIMED FAILURE TO DIAGNOSE PELVIC CONDITION

In this case the plaintiff, a married woman about 28 years of age, came to the office of the defendant doctor, complaining of pain in the region of the lower abdomen. She told the doctor that about three days prior to the visit she felt a pain in this region and that the pain had been continuous since that time. The doctor examined her bimanually, palpated the abdomen and found it very tender in the lower right quadrant. He then fluoroscoped the young lady and at the conclusion of his examination, diagnosed her condition as a subacute appendix with pelvic inflammation. He thercupon explained to the patient the necessity of an operation for the removal of the appendix and she consented to such operation. That very day the patient was operated on by the doctor under general anesthesia. The doctor made a right rectus incision and excised the appendix, which was about two and one-half inches long and filled with feeal matter. This he turned over to the pathologist, who made a microscopic diagnosis of subacute appendix. Before the doctor sewed up the wound he explored the region of the ovaries and tubes and found them inflamed and enlarged. However, because of the age of the young woman and because of the fact that there was no pus in the region of the inflammation the doctor decided to adopt the expectant form of treatment for this condition. He thereupon closed the wound without drains and the patient was returned to her bed. The doctor saw and treated her daily during the two weeks she remained in the hospital. The pain, however, continued and after two weeks the patient left the hospital for her home, where the doctor saw her at frequent intervals. The doctor on these occasions examined her vaginally and instituted tampon treatment and prescribed douches. About a week after the patient had been at home the doctor noticed a slight swelling in the lower right abdomen and advised that she return to the hospital. He had told the patient at the time she left the hospital that if the pain in the pelvic region persisted it might be necessary for her to have a subsequent operation. The doctor was ealled a week later and found her condition to be a little worse, her temperature high and the abdominal swelling more pronounced. At this time the doctor urged hospitalization. The patient refused, and the husband of the patient informed him that he need not return.

Some time later the doctor learned that the woman had been operated on by another physician who removed the right ovary.

An action was instituted by the patient and her husband against the first doctor, alleging negligence on his part in that he failed to diagnose her condition and that he further failed to properly treat her condition.

The plaintiffs failed to demand a jury in this case and the case came on for trial before a Judge sitting as a court and a jury. At the termination of the case the Judge decided that the plaintiffs had failed to prove any charge of malpractice against the defendant surgeon and accordingly directed judgment in favor of the doctor, thus terminating the case.



NOTES NEWS



COMMITTEE ON PUBLIC RELATIONS

The Committee on Public Relations of the Medical Society of the State of New York met at the Albany office on July 29th, 1933. There were present Drs. Sadlier, Mitchell, Johnson, and Ross; also President Flaherty, and Executive Officer Lawrence.

Sectional Meetings: The Committee discussed plans of work for the coming year. It approved the plan of sectional meetings that was adopted last year when representatives of the county societies of each district met and reported on local conditions. It was decided to ask the Public Relations Committee of each county society to report on the following questions:

1. Years organized and in active service.

2. Number of meetings held and the subjects discussed.

3. Copies of reports of the committee to the county society, and the action taken on the

4. Reports made by the county representatives on the conferences with the State Committee.

Relation to local health officers.

6. Relation to welfare officers and to other public officials.

7. Relation to voluntary health organizations, such as the Tuberculosis Association and the Red Cross.

8. School health activities.

9. County department of health.

Bulletins: It was decided to send out bulletins this year more frequently and try to arouse the interest of the Committees on Public Relations of the County Societies of the State. These bulletins are to be short, concise, each one driving home some fact in relationships.

Lectures to Medical Students: A report of the lecture given to the students of each of the nine medical schools of the State was made by Dr. Ross who has given the lecture for each of two years. Dr. Ross was selected to give the lecture again next year, and arrangements as to the time it should be given are to be made with the deans of the schools of the State.

Doctor Ross reported that the lecture had been well received this year, that it met with approval of the deans of the schools, and that about fifteen hundred medical students had heard the lecture. In the discussion it was characterized as a definite effort of the practicing physicians of the State to make a contribution to medical education in the student days.

It was developed in the discussion that Syracuse University was carrying on a teaching activity consisting of bringing senior students in contact with actual cases of illness under conditions similar to those of private practice.

Future Work Program: The result of the planning for next year's work of the State Committee on Public Relations may be summarized as follows:

1. Sectional meetings will be held again this

2. The health work in schools will receive increased attention, first, as to efficiency, and then such things as better facilities and other details.

3. Limiting outside activities of full time State This problem largely consists of employees. physicians now employed by the State of New York on a full time basis engaging in the private practice of medicine.

4. The management of state-aided county

hospitals.

5. The leadership of the profession of medicine in planning for the medical care of the hard of hearing.

6. The state orthopedic program.

7. Public health education programs.

8. The profession's relation to public welfare.

9. Preparing the public to oppose unlimited extension of welfare programs beyond the period of depression.

The Com-Examination of School Children: mittee adopted the following outline on the Medical Examination of School Children:

I. From the point of view of the physician:

 Difference between inspection and examination.
 Lack of time for the contraction. Lack of time for thorough examination: Poor cooperation from school authorities. Inadequate compensation. Substitution of nurses' services.

3. Lack of facilities: Room.

Instruments. Family history.

Child's medical record.

4. Inadequate facilities for corrections: Nurse makes contact instead of physician. Report to family:

Negative—value.
Positive—to be checked by family physicians and may or may not be confirmed. Economic condition of family. Handicapped children law.

II. From the point of view of the child:

 Immunization.
 Discovery of defects: Obvious.

Unsuspected. 3. Mental attitude:

Serious. Indifferent. Antagonistic. Dependence upon society. III. From the point of view of the family:

Transfer of responsibility.
 Critical of family physician.
 Objection to financial burden.

4. Inability to appreciate broad scope.

5. Lack of confidence in examining physician.

IV. From the point of view of the school:

Public service to indigent.
 Protection of all.

3. Education toward conservation of health: By example.

By didactic program. 4. Financial outlay:

Cost per discovered defect. Standard routine work. Special investigation: Tuberculosis. Mental hygiene

W. H. Ross, Secretary.

ROCKLAND COUNTY

The Medical Society of the County of Rockland held its regular Summer Meeting on Wednesday, June 28th, at the San Remo Gardens, Stony Point, with thirty-three members present. The President, Dr. S. R. Monteith, of Nyack, presided.

The Chairman of the Committee on Medical Economies presented a minimum fee schedule to

the Society for its consideration.

The president appointed one physician from each township in the county to meet the town welfare officers for the purpose of establishing a standard fee for services rendered to public welfare cases.

The Society voted to hold a clambake the first week in September and to continue the annual post-graduate course in the Fall.

Scientific Session

Dr. Louis C. Kress of Buffalo, Assistant Director-Division of Caneer Control, New York State Department of Health, delivered a concise yet comprehensive address on "Five Year Cures in Cancer," illustrating his discourse with many lantern slides depicting various types of eancer before and after treatment, and also apparatus used in their treatment. The following is the summary made after a recent presentation of a study of 38 eases of five-year cancer eures:

"In the past many members of our profession have had the erroneous idea that eancer is incurable, and it is the aim of the demonstration presented by means of the lantern and slides to correct this impression by showing eancer occurring in different parts of the body, as being cured and remaining so for a period of 5 years ot more.

"Each tumor presented had a biopsy performed, and was definitely proven to be a cancerous neoplasm. Among the different types of cancer shown were lesions on the skin of the face, corners of the mouth, and inner and outer eanthi

Clinical experience has definitely of the eyes. proved that lesions in these locations are very difficult to cure, as are the epitheliomata which involve cartilage; yet these eases have been suceessfully treated and have remained well for five

years or more.

"Caneer of the oral cavity, namely the tongue, floor of the mouth and tonsil, have responded, although they are usually of the pearl cell type and very malignant. Five-year cures of cancer of the breast were shown which were effected by means of the combination of surgery and radiation therapy (high voltage x-rays or radium, both pre- and post-operative). These were not early cases; in fact some of them were far advanced.

"Cancer of the uterus, including the eervix, eervical canal and corpus, were successfully treated by means of radon seeds, radium element pack and high voltage x-rays. Surgery was not employed in any of the cancerous growths of the uterus. Epitheliomata of the vulva, which were usually preceeded by leucoplacie areas, were suceessfully treated and remained well for 5 years or longer by means of electro-endothermy and diathermy, followed by high voltage x-ray.

"Cases of cancer of the rectum, hopeless as far as surgery was concerned, have been cured by means of interstitial radiation with gold radon seeds, radium element tubes and high voltage xrays; although the patients had stricture following this therapy, a colostomy was not performed, but the stricture dilated by means of a rubber bougie.

"We have a eure for cancer, namely surgery, x-ray, and radium. If we were able to see the disease in its early stages and make an early diagnosis, the number of five-year cures would be far greater. Needless to say, the far-advanced eases are incurable, but the same also holds true for diseases other than cancer."

A delightful dinner was served after the scien-

tific session.

WILLIAM J. RYAN, Secretary.



THE DAILY PRESS



MILK CONTROL IN NEW YORK STATE

The newspapers have been carrying news of a milk strike conducted by the dairy farmers of New York State who are dissatisfied with their financial returns. The prices to be paid to the farmers have been set by the official State Milk Board, which apparently doubled the price to be paid to the producer, so that the farmer was getting about four cents per quart instead of about two cents before the board acted. The points at issue in the strike are well set forth in an editorial in the New York Herald Tribune of August 8, which explained that the farmer gets the increased price for only that proportion of milk which is sold for fresh milk consumption; meaning that which goes to market in bottles or cans to be used as fluid milk, while the former low prices prevail for milk used in making butter, cheese and other manufactured products. editorial says:

"The farmer is paid not in accordance with the cost of his milk but in accordance with the uses to which it is put, and he has no control over these uses. In effect, the distributing half of the industry, because of its superior organization, has been able to impose a price structure upon the farmer which makes him carry the whole burden of the surplus. The Milk Board has eliminated some of the more obviously unfair advantages which this gave the distributors-'pooling' arrangements under which the farmer would get surplus prices for milk later actually sold as the fluid-milk retail price are one example—but all this was done at the price of confirming the basic system under which the distributor held his ascendancy over the farmer.

"Since the surplus, in spite of the drought, continues to be large, the farmer continues to suffer.

Toward the end of July Mr. Woodhead returned to Albany with the demand that the whole system of 'blended' prices be abolished and the farmer guaranteed a flat 45 per cent of the total selling price on all his milk. What this amounted to was a demand for a reorganization of the industry to the end that the distributor, as well as the farmer, should share the surplus burden.

"The contrast between salary increases and continued dividends for distributors, and bankruptcy on the farms, lent point to the demand; but the bitter war between the agrarian and industrial halves of the business which it brought to a head was something which the Milk Board evidently had little stomach for. With reason it argued that it was getting increased farm prices, that the Woodhead idea had never been tried anywhere in the country, that many farmers were content to go on with the present system and that it could not yield to a threat. It could also point to its own plans for controlling the surplus, which is the real trouble. But the strike was called.

"It is not really a strike; it is a rebellion. It has to be, until an overwhelming majority of farmers join, because only by violent interference can the milk of non-striking farmers be kept off the market. Governor Lehman has declared that he will maintain order and has called for a special investigation to find out whether the farmers want the Milk Board or not. But investigation will not meet the problem of the strikers. Either the Governor will have to put them down by force or else he will have to organize the structure of the milk industry. It is another case of the truth appearing in the Federal government's efforts at regulation. There is no half-way governmental control."

MEDICAL RACKETEERING

Abuses in connection with medical fees in workmen's compensation cases are the subject of frequent comment in the daily papers and of investigation by State officials. The Grievance Committee of the Medical Society of the State of New York has investigated the problem, but finds no law to support the ethics which governs the medical profession. The Governor's Committee of Investigation recognizes the existence of the evil, but has not produced the remedy. Commenting editorially on the condition, the New York Herald Tribune of July 20, says:

"Mr. Cullman's committee drew up a list of recommendations calling, among other things, for the elimination of fee splitting and commercial clinics and the establishment of a physicians panel system under adequate professional, non-political supervision. These recommendations, designed to meet both aspects of the problem, are now being studied by a committee of physicians appointed by Governor Lehman; but while waiting for their report it is important for the public to bear in mind the reality of the abuse and the necessity for its elimination."

TEACHING PSYCHIATRY

A report on a scientific subject may convey a wrong impression to laymen who do not understand the background under which the report was made. An example is an editorial in the New York Times of July 17, which begins:

"Medical schools of the United States have been woefully tardy in developing department of psychiatry, in establishing standards of instruction in that subject, and in correlating the study of mental diseases with that of physical disorders, according to a report made public yesterday by the National Committee for Mental Hygiene, 450 Seventh Avenue. The data are based on a twoyear survey of the position of psychiatry in medical and lay activities throughout the United States. The entire project was under the general supervision of the National Committee's division of psychiatric education and was financed by the Commonwealth Fund, the New York Foundation, and the American Foundation for Mental Hygiene."

The report deals with the four years of a medical course that leads to the M.D. degree. Laymen do not realize that neurology is distinct from psychiatry, although their fields overlap. The approach to neurology is by way of the nervous system; its anatomy and physiology. This is well

taught in medical schools.

The approach to psychiatry, or the study of mental derangements, is by way of psychology. This is a course in the undergraduate college, and its post graduate study leads to the degree of Doctor of Philosophy, and to a knowledge of mental abnormalities and derangements. Those who have this degree are largely teachers who deal with the prevention of mental disorders. Psychiatrists with the degree of M.D. assume the treatment of these disorders after they have developed into actual diseases or fixed abnormalities.

Psychiatry is the most highly developed specialty in all the field of medicine. The report of the Committee on Mental Hygiene recognizes this fact, and the further fact that the student cannot learn a specialty in the four-year course of a medical school, as is shown by the closing sentence of the *Times* report, commenting on the

medical student:

"But he should be trained primarily to observe and to reason, and to read critically and intelligently, so as to use the findings of other workers. He will be able to obtain further clinical experience in the special departments of medicine after his graduation. We must, in the first instance, train physicians; and, secondarily, train specialists."

TAX ON FLOUR

Physicians, as well as dietitians, will be interested in the tax imposed by the Federal Government on flour, in the interest of the farmer who raised the grain. The *New York Sun* of August 5th explains the distribution of the tax in the following editorial:

"Gross figures on the 30 cents a bushel processing tax on wheat give the ultimate consumer little notion of what it means to him when he buys a loaf of bread. There are few men or women who know how many loaves there are to the bushel, or possess a slide-rule mind to transform the bushel tax into the loaf tax. Variations in recipes would have to be considered. Probably no one figure would apply to every loaf or doughnut, but the Government has established standards which are interesting because they are broken down to tax by the pound. The official tax on a one-pound loaf of bread is \$0.00483. The rates are those which the Commissioner of Internal Revenue has prescribed for collectors who must impose levies upon stocks of flours and flour products according to their wheat contents. Here they are, 0.500 equaling one-half cent:

1.	F	our	•

a)	Whole wheat and graham	.500
b)	All other	704
(c)	Whole wheat and graham	704

Z.	Prepared nour:	
	(a) Doughnut	.401
	(b) Biscuit	.00
	(c) Pancake	493
	(d) Pie crust	.422
3.	Cereal preparations:	
	(a) Whole wheat type	.500
	(b) All others	.7 0-
4.	Bread:	
	(a) All bread except rye	.483
	(b) Rye	
	(c) Zwieback	.462
	(d) Rolls and coffee cake	
5.	Crackers	.690
6.	Pretzels	.732
7.	(a) Macaroni and spaghetti, except canned	.750
	(b) Canned macaroni and spaghetti	
8.	Noodles	
	Paste	
	Foundry molding materials	
10.	Poundry mording materials	.390

"The consumer who wishes to eat wheat but to pay as little tax as possible must turn to canned macaroni and spaghetti; the one who wishes to pay taxes in even figures may use whole wheat and graham flour at one-half cent a pound. The Government figures give some idea of the task imposed on bakers, who must not only pay the tax but explain to the public its effects."



BOOK REVIEWS



Non-Tropical Sprue. A Study in Idiopathie Steator-rhoea. By Th. E. Hess Thaysen, M.D. Octavo of 258 pages, illustrated. New York, Oxford University Press, 1932.

There is a peculiar disease syndrome in which the chief objective symptoms are fatty diarrhea, emaciation, meteorism, stomatitis, and anemia. It runs a chronic course characterized by intermissions and recurring relapses. It has been described under many names and occurs in many parts of the world in patients of all ages. Depending on the place of origin and the age of the patient, it has most frequently been reported as tropical sprue, non-tropical sprue, or coeliac disease in children.

It is the view of Thaysen that these cases represent a unitary symptom complex and are nearly related if not identical conditions which he describes under the heading of idiopathie steatorrhoea. He has collected 26 eases of non-tropical sprue from the literature and adds 8 more from his own experience. The present monograph is devoted to a detailed discussion of the anamnesis, symptomatology, physical findings, laboratory studies, and pathological data obtained in the study of this group of cases. It is possible to differ with the author regarding the interpretation of some of his metabolic studies in relation to the pathogenesis of the condition. These are minor details, for until the etiology of these various conditions is established it is manifestly impossible to either prove or disprove the author's thesis.

Thaysen has done the medical profession a service in ealling attention to the frequency of non-tropical sprue. This monograph is an excellent presentation of present day knowledge, or lack of it, of an important but little understood group of diseases. Solution of the problems raised awaits further study which should be stimulated by Thaysen's report. The format, illustrations, bibliography, and index are excellent. CARL H. GREENE.

THE RISE OF PREVENTIVE MEDICINE. By SIR GEORGE NEWMAN. M.D. Octavo of 270 pages. illustrated. New York, Oxford University Press, 1932. Cloth, \$3.00. (University of London Heath Clark Vectures (University of London Heath Clark Lectures,

The author of this volume has an international reputation in the Public Health field, and now presents in book form a series of lectures delivered by him at the London School of Hygiene and Tropical Medicine in 1931.

Beginning with the early days of folk-lore and magic, Newman shows their relation to the preservation of life, as evidenced in the quest of food and the general strug-gle for existence. From this point, he traces in the medical history of Egypt, the Hebrews, Greece and Rome those measures which indicate a recognition of hygiene and sanitation.

In the Middle Ages, the advances of Preventive Medicine are shown in the social attempts at defence against famine and pestilence. It is in the Renaissance Period, however, that the rise of modern Physiology and the introduction of experimental and scientific methods laid the basis for modern medicine, and this holds true also with respect to measures of a sanitary and communal protection character.

Every physician of course should be familiar in a general way with the history of medicine as a background for intelligent approach to modern problems. With growing interest in Preventive Medicine, this book provides information of its development in a concise way.

A. E. Shipley.

SEX AND INTERNAL SECRETIONS. Edited by Edgar Allen. Oetavo of 951 pages, illustrated. Baltimore, Williams & Wilkins Company, 1932. Cloth, \$10.00.

Investigations concerning the endocrine aspects of sex have made tremendous strides in recent years. The discovery of the ovarian and male sex hormones together with the sex hormones of the pituitary have revolutionized our concepts. The number of papers concerning this topic and the sometimes contradictory evidence makes it exceedingly difficult for the medical profession to get a elear pieture of the present status of knowledge. Allen and the numerous contributors to this volume can claim credit for a splendid accomplishment. They have colleeted in a systematic and precise way all the evidence available at present, which enables the reader to obtain a rather clear pieture of this so involved subject.

Their survey differs from most others inasmuch as it has been compiled by those men who did most of the original work themselves and have full authority to discuss the matter and judge conflicting opinions accord-

ing to their merits.

After a general biological introduction by Lilly, the interrelation of genic and endocrine factors is discussed by Danforth. Chapters of general biological interest are contributed by Bridges, Willier, Witschi and Riddle. There is a chapter on the biology of the testis by Moore and one on the biochemistry of the male sex hormone by Koch. The ovarian follicular hormone is discussed by Allen and its biochemistry by Doisy. Hisaw presents the physiology of the corpus luteum and Turner that of the manuary glands. The important plumage tests in birds are amply discussed by Domm and others, and so is the question of ovulation and fertilization by Hartman. Smith and Engle present the relation of the pituitary gland and pituitary hormones to the sex glands and contribute a much welcomed discussion of the hormones found in blood and urine. Two final chapters on the sexual drive by Stone and on endoerine disorders in men by Pratt complete the volume. With the exception of the last mentioned chapter which attempts to dispose of a variety of rather complex problems on 30 pages and falls somewhat short of its aim, all others are exceedingly well written, competent and thoroughly inclusive. The volume as a whole represents one of the most valuable callists. able additions to the literature of endoerinology published in recent years.

M. A. GOLDZIEHER.

PREVENTIVE MEDICINE. By MARK F. Boyd, M.D. Fourth cdition. Octavo of 532 pages, illustrated. Philadelphia, W. B. Saunders Company, 1932. Cloth, \$4.50.

This book of over 500 pages has been earefully read by the reviewer from cover to cover and he has no hesitancy in stating that it is probably the best work of its size on this subject which has yet been written, certainly the most workable and readable book that has come to his attention. He has followed the unusual course of keeping it on his desk for a number of weeks where it has been freely consulted by himself and other

Department of Health workers always with satisfaction.
In the first two-thirds of the book Dr. Boyd treats of the Diseases due to Invading Micro-Organisms in a most thorough and satisfactory manner, discussing among many subjects Sources of Infection, Dissemination of Infective Agents, Contact Transmission, General Measures of Disease Control, Disinfectants and Disinfection. Excreta Disposal, Relationship of Water to Health and Disease, Water Purification, Milk as a Route of Infection, Its Production and Inspection, Other Foodstuffs as Route of Infective Production of Infection of Infective Production of Infective Pr as Routes of Infection, Insects as Vectors of Infective

The remaining one third of the book is Agents, etc The remaining one third of the book is devoted to Deficiency Diseases Occupational Diseases, The Puerperal State, Heredity and Disease, Special Aspects of Hygicne and Sanitation Demography and Public Health Administration The index is adequate. The book is well balanced, shows a good sense of values in the selection of matter omitted as well as included is written by one who thoroughly knows his subject and his recommendations are in keeping with the best modern Department of Health procedure Only such charts graphs and tables of statistics are included as are necessary, a surprisingly small number when the nature of the book is considered. A most satisfactory work not only for those engaged in public health work but also for students and general practitioners

THE MANAGEMENT OF ARDOMINAL OPERATIONS By New York 12 Management of Albominal Operations By New York 12 Management of Albomina Operations By New York 12 Mana RODNEY H MAINGOT M D 12mo of 311 pages York, William Wood & Company, 1932 Cloth, \$225

The plan of this manual is well conceived, the material segregated into convenient chapters and discussed at

length

Many statements however, will not find acceptance by American students and surgeons So for instance, the opinion of the author that a mixture of chloroform and ether with oxygen is the best anesthetic in operations for a runtured viscus or other emergency cases, or the advisability of giving sod bicarbon in warm water im mediately after operation to relieve the patient of the

inhaled anesthetic by forcing vomitus

The American School of Surgery has outgrown many
of the precepts laid down by the author, thus making it difficult to evaluate this book as a whole As a textbook for beginners it may be misleading other books on the same subject giving information more in accordance with the teachings on this side of the Atlantic Ocean

GEO WEBB

A SYNOPSIS OF SURGICAL ANATOMY By ALEXANDER LIFE MeGRECOR 12mo of 609 pages illustrated New York, William Wood & Company, 1932 Cloth \$450

A very remarkable volume of anatomy contained in 580 pages including in its text a short but very lucid description of the common dislocations and fractures as well as other important surgical data. The illustrations are diagrammatic and serve the purpose excellently

The reviewer heartily recommends this book for every surgeon's desk and predicts that it will never be placed GEO WEBB into the bookcase

CLINICAL PHYSIOLOGY OF THE LAF By FRANCIS H
ADLER MD Octayo of 406 pages illustrated New York The Macmillan Company, 1933 Cloth, \$500

The things we read about in text books are usually taken for granted that one rarely, if ever, disputes the sources of such established data. These principles be come so woven into our mental processes through an thoritative teachings that there seems to be little or no room for flexibility

On that account this book by Adler should ring a new note in medical concepts. It has so coordinated re search physiology with ophthalmologic practice as to make us seek the basis for everything supposedly factual Many a book is valued only for the 'meat' it contains This book by Adler does not fall into this category It is stimulating in every paragraph and brings the reader into a world of creation and ideas. Those readers who enjoyed Hilton's book on Rest and Pain' will find added pleasure in this work because it so encompasses our knowledge of minute eye functions in terms of neuro anatomy

That the eye is a camera in fact as well as in theory

is described in actual experiments on animals showing the changes in visual purple in areas corresponding inversely to that of the object seen or focussed upon The experiments leading to such convincing deductions are inspiring and very fascinating. The determination of the duration of the various components constituting the light reflex by means of motion pictures is another instance whereby medicine has harnessed other branches of scientific knowledge to convert theory into fact

These and many other details make this book one of the very finest which has come to this reviewer's attention EMANUEL KRIMSKY

CALCIUM METABOLISM AND CALCIUM THERAPY Second continum By Abraham Cantarow M D 12mo of 252 pages Philadelphia, Lea & Febiger, 1933 Fabrikord \$2 50

The second edition of this book is a revision and supplementation of material presented in the first edition We appreciate now, more than ever before, the im-portance of the proper understanding of the physio logical indications of calcium therapy. It is therefore essential that the specialist as well as the practicing physician acquaint limself with the true actions indications and limitations of this chemical. Few changes have been made in this edition, but previous controversial points are brought up to date. Among these discussions are found a conception of the relationship between the parathyroid hormone and vitamin D, the relation of the calcium and phosphorous intake to the effects of vitamin D and the parathyroid hormone, the significance of the phosphatases in the mechanism of ossification and in bone diseases dental caries the influence of calcium upon the action of other drugs calcium in nephritis and tetany, the nature of the parathyroid hormone action

The reviewer recommends this book to the laboratory worker and especially to the practicing physician, because it discusses all the phases of the present important subjects of calcium metabolism and therapy S J Cohen

THE PRACTICAL MEDICINE SERIES Comprising Eight Volumes on the Year's Progress in Medicine and Surgery Series 1932 Chicago, The Year Book Publishers (c 1933) Obstetries Edited by Joseph B DeLke M D Gynecology Edited by J P Green-\$2 50

These abstracts from the obstetrical and gynecological literature of 1932 have been selected by the authors with their usual care and discrimination. The book fills its purpose admirably DeLee's parenthetical comments, often facetious occasionally caustic, always pointed are priceless CHARLES A GORDON

The Organs of Internal Secretion By Ivo G Cobb M D Fourth Edition Octavo of 303 pages Balti more William Wood & Company, 1933 Cloth \$350

This is the fourth edition of a book which was first published in 1916 and which is now presented as having been completely revised and brought up to date

Unfortunately the author has included too many parts of the original edition which are now out-dated and has failed to include more than passing mention of the numerous advances which have been made since then

This is especially true in the consideration of the parathyroid adrenal cortex and anterior pituitary hormones

The chapter on obesity is fairly well handled

The presentation in general is quite sketchy and does not add much to the knowledge of the reader who is unacquainted with the subject M B Gorpon



OUR NEIGHBORS



COUNTY SOCIETY NEWS IN MISSISSIPPI

The May issue of the New Orleans Medical and Surgical Journal has a Mississippi section which contains a report of the Annual State meeting May 9-11, 1933, in Jackson. A feature of the account of the meeting is a report from each county society, 26 sending reports and 54 failing to reply.

The reports are unique and show both humor and sympathy. The editor from Granada

County writes:

"Only a line to answer 'roll call."

"Nothing of particular interest has happened since my last report. The health of our county is exceptionally good. The doctors are all at their posts; they and their families well, no changes in our personnel, no deaths or births or removals.

"We are looking forward to the state meeting next month and anticipating a good meeting.

"More anon."

The doctors of Issaquena County are doing their duty cheerfully, as the following letter proves:

"The horde of doctors in Issaquena have been living off the fat of the land since the R. F. C. began operations in our county. Those of us who heretofore have given both our services and our medicines free of charge to all comers are now being paid for our medicine by the R. F. C.

"In some instances we are receiving pay for our visits at the rate of \$1.33 per visit. For this we are thankful. True there are ups and downs to it. Some visits are far, and some are near. One doctor drove five miles in his car to the jumping off place. Then he put on his rubber boots and walked a mile farther to get to the patient. Another made a night trip out eight miles to attend a complicated case of labor, adherent placenta, and received the usual \$1.33 for it. Probably better than nothing. With their limited means the R. F. C. cannot afford to give any more.

"The country is flat broke. No money to pay nothing. But the country doctor has to go to these cases. He cannot turn them down because they have no money, and never will have any. He cannot tell them to get another doctor, because there ain't no other doctor. He cannot dodge the responsibility."

The Tate County editor writes:

"The Tate County Medical Society meets every first Wednesday night. However, we

have not been meeting regularly for some time. We hope to begin again at once. We always get lots of good out of our meetings even if only a few are present. Every member has something that will help the other members.

"There have been several people in the county bitten by rabid dogs during the past month, but all are taking treatment and doing fine, so hope there will be no further trouble; also several cases of diphtheria, but all exposed have been vaccinated, and the disease will soon be checked. There have been over 1,100 vaccinated against diphtheria during the past year in this county and we have only a part time health office; nearly 2,000 against typhoid and something over 1,500 against smallpox."

The editor from Montgomery County goes in for personals:

"We have very little to report. The doctors all seem to be fairly busy. Since our last report we have had only one new doctor added to our county, Dr. Oliver, of Dutch Hill. We wish him success in his new field of practice.

"Dr. and Mrs. James P. Ward are visiting in Winona.

"Mrs. Oscar Ringold of Dallas, Texas, is visiting in the home of her father and mother, Dr. and Mrs. J. O. Ringold. She will be here until Dr. Oscar Ringold returns in June.

"The doctors' collections seem to be a little short, but I guess things will soon be better."

The Pearl County editor says:

"There seems to be comparatively little sickness in the county other than appendicitis and other such surgical conditions. And lest we forget, the birth rate in this county has not decreased at all since so many people have become indigent, banks have closed and physicians can not collect their fees. A rather large number of acute surgical cases have developed since the banks have been closed. The incidence of acute communicable diseases is very low, however, much to the gratification of all concerned. And the county health department is making every effort to see that this shall obtain at all times.

—"The hospitals of the county are having their troubles just as do individuals. They are still operating but under many handicaps. That goes, however, for all such institutions I judge."

(Continued on page 1018-adv. xii)

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Dextri-Maltose No. 1 (with 2% sodium chloride), for normal babies Dextri-Maltose No 2 (plain, salt free), for salt modifications by the physician Dextri-Maltose No 3 (with 3% potassium bicarbonate), for constipated babies Dextri-Maltose With Vitamin B" for its appetite-and-growthstimulating properties and the prevention of nutritional anemia (also supplies 24 mg. iron and 0 57 mg. copper per oz.).

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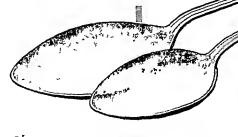
Tothing tells more graphically the story of greater safety—the freedom from nutritional disturbances in infant feeding that goes with the use of Dextri-Maltose, than the circumstances surrounding its introduction in England.

In England, as in America, it had been prescribed-for modifying cow's milk-by the level tablespoonful.

It was not until Dextri-Maltose had been used in England for over three years, that a prominent English pediatrist pointed out that the British tablespoon is twice the size of the American The English level tablespoon holds 1/2 ounce of Dextri-Maltose, the American, 1/4 ounce. Where 6 American tablespoonfuls had been prescribed in 24 hours, the infant was actually taking 12, or, in other words, instead of the usual 11/2 ounces per 24-hour period, the carbohydrate addi-

3 ounces. However,

Comparative Sizes of English and American Tablespoons



Despite the continued use of twice the usual amounts of Devtri-Maltose in England, nutritional disturbances were a rarity. It is doubtful if any other carbohydrate could have been used in such excessive quantities with equal immunity from serious results.

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Tablets: 7½ grains each also Theocalcin powder.



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(Continued from page 1016)

The doctors of Pontotoc County seem to be

having a good time.

"We are glad to welcome Dr. C. W. Patterson to our county. Dr. Patterson moved to Houlka, R. 3, from Reid.

"Dr. J. A. Donaldson, of Okolona, died at

his home one day last week.

"Very little sickness in the county now. Usually see three or four out-of-town doctors in town every day. Some of them have begun to get fishing in their bones. Quite a number report that they expect to attend the meeting of the State Medical Association in Jackson, next month. We hope to have a good crowd from Pontotoc County.

"Dr. J. M. Hood, of Houlka, was a visitor

in town one day last week.

"We have had a few rabid dogs in the county in the past two weeks, but fortunately have not had any one bitten so far.

"Will ring off for this time."

EMERGENCY RELIEF IN DELAWARE

The June number of the Delaware State Medical Journal contains the following official statement by the Relief Directors of the Temporary Emergency Relief Commission regarding fees to physicians:

"At a joint meeting of the Relief Directors of the Wilmington-New Castle County Area of the State of Delaware Temporary Emergency Relief Commission, and physicians representing the State and County Medical Societies, the following rules and charges were agreed upon and will go into effect immediately:

"1. It was agreed that the fee charged for the initial visit of a physician to one of our relief cases should be fifty cents, and thirty-five cents for each subsequent visit. (The 'fees' mentioned here are not regarded actually as fees, but as reinbursements for expenses incurred, chiefly in transportation. The word 'allowances' would be more descriptive.)

"2. The initial visit shall be construed to mean the first visit made by the physician on any one spell of sickness, and that two initial charges could not be made on the same sickness of any

one patient.

"3. Twenty-five cents was the amount agreed

upon as a fee for all office calls.

"4. In cases of pregnancy and miscarriage, the patients should be sent to a hospital. When it is impossible to admit them to a hospital, the charge for treating them at home should in no case exceed \$15.00, this charge including all supplies used in connection with the case such as bandages, etc.

"5. In cases of pneumonia, and long-time illnesses where the physician must make more than one call a day, in order to watch the disease, re-

(Continued on page 1020-adv. xiv)

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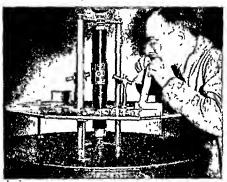
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X-Ray Diffraction Research

An X-Ray technique has recently been developed that now makes it possible to do basic research on catgut structure that is revealing hitherto unsuspected facts. Curity Snture Laboratories recognized the importance of this new research tool and use X-Ray Diffraction equipment for such study. While all catguts are essentially the same chemically, their structural make-up may be totally different. Two pieces of catgut may exhibit very different absorption characteristics. For the first time through the X-Ray, this difference can be definitely predicted.

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Sample on request

A product of Merckens-Buffalo, N. Y.



(Continued from page 1018-adv. xii)

imbursement will be made for each call made.

"6. Where more than one person is treated in a family at the same time no extra charge will be made, except the actual expense of bandages

or medical supplies used.

"7. When the physician is called in on a case, without the authority of the case worker, the physician should call the case worker and obtain authorization before making the call. The only exception to this rule being on Saturday afternoons and Sundays when our case workers are not on duty."

CANCER CONTROL IN KANSAS

How the Kansas Medical Society is dealing with the Cancer problem is told in the following editorial in the July number of the Journal

of the Society:

"The outlook for a practical program of cancer control rests upon an educational foundation. Present misconceptions in the public mind and a certain amount of pessimism in the professional mind must be replaced with constructive facts and a knowledge that cancer is being cured in an encouraging number of cases.

"The profession should realize that cancer is not a one man disease; its diagnosis and treatment require the services of the pathologist, radiologist and internist in addition to the surgeon who may be in charge of the case. Each of these specialists has a contribution to make to the diagnosis and treatment of the case. Special facilities are also necessary to care for cancer patients in keeping with our present knowledge of diagnosis and therapy of this disease. The interest and cooperation of hospitals, therefore, is essential to the rendering of an adequate service to cancer patients, and so a program of coordinated and cooperative effort is required for the development of a practical and effective program of cancer control in any community.

"The Kansas Medical Society has accepted the responsibility for the cancer work in this state, and has shown its interest in practical and constructive ways. A permanent committee of the Society has been formed to consider the various aspects of the problem. A symposium on cancer was presented at the last annual meeting. The papers of this symposium appear in this issue of the Journal and should

be read by all members.

"Perhaps the most significant evidence of the interest of this Society was the invitation extended to the American Society for the Control of Cancer to make a survey of the cancer problem in Kansas, reporting its findings with recommendations to the Society. This survey

(Continued on page 1021-adv. xv)

(Continued from page 1020-adv. xiv)

will be a fact finding undertaking and will bring together for the first time reliable data on facilities in the state for diagnosis and treatment of cancer, their distribution and how used; on the number of cancer patients hospitalized, and the distribution of cases and deaths throughout the state. The report of this survey, when submitted, should point the way to an improved service to sufferers from this disease and coming, as it will, from an impartial and unbiased source should commend itself to the thoughtful consideration of this Society. Similar surveys made in neighboring states, Colorado, Iowa, Minnesota and Wisconsin, have been accepted by the medical profession in those states and the recommended program put into effect as far as local conditions permitted."

APPENDICITIS DEATHS IN MASSACHUSETTS

The New England Journal of Medicine for May 11th contains the following account of a plan for encouraging the early diagnosis and treatment of appendicitis, thereby reducing the death rate from the disease:

'Massachusetts has shared in the increase in fatality of acute appendicitis which has become evident in the United States during the past twenty years. The plan for reducing this mortality which was successfully carried out by the Philadelphia County Medical Society in 1931, suggests that similar results might be obtained in Massachusetts. Representatives of the State Department of Health, the Boston Retail Druggists Association, the Massachusetts State Pharmaceutical Association and the Committee on Public Health of the Massachusetts Medical Society have conferred and decided to project a publicity week, similar to that organized by the Philadel-phia Society. The date fixed for this was the week of June 12.

"The wording to be used on posters and all other printed matter has been carefully edited by the Committee on Public Health with the aid of selected surgical consultants. It is hoped that a measurable reduction of the time lost between the onset of the pain and the seeking of medical advice will be observed here, as it was in Philadelphia where one hospital reported a reduction of twenty-five per cent in this lost time, together with a reduction of nearly fifty per cent in the mortality of acute appendicitis after the publicity period. Several of the larger hospitals are already cooperating with the State Department to secure controlled data from which the effects of this campaign may be judged at a later date.

"The Committee on Public Health plans to furnish to the Fellows of the Society, on request, 3x5 cards on which the following will be printed: (Continued on page 1022-adv. xvi)



Importance of milk in the adult diet

MILK is the one food for which there can be no effec-tive substitute. But many adulta dislike milk; often those who need it most soon tire of its taste and color.

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(Continued from page 1021—adv. xv)
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MALPRACTICE INSURANCE IN COLORADO

The July number of Colorado Medicine has the following announcement regarding increased rates for malpractice insurance:

"The Ætna Life Insurance Company has been writing a large number of the members of the Colorado State Medical Society for the past eighteen years at a very low rate, but the matured results indicate the necessity for a material increase in the rate for this form of insurance at this time.

"Insurance executives tell us privately that, in the last analysis, doctors themselves must assume whatever responsibility for the increase is not directly traceable to the economic conditions of the times. Almost every malpractice claim, their records show, has had its inception in criticism of a doctor by one or more of his colleagues, criticism usually thoughtless or careless, but too often criticism born of personal animosity.

"Thus it develops that continuance of the new higher rates will depend very largely upon the attitude of our Colorado profession, both individually and collectively. Greater care on the part of physicians and individuals when discussing treatment of a patient by a colleague, greater care in avoiding the unjustified criticism that a patient uses as the basis of a suit, greater unity of organization and closer cooperation in defeating the many claims and suits that have no fair foundation and amount to little better than extortion—these may in the not too far distant future bring malpractice premium rates back down.

"In the meantime, while rates for members of the State Society have increased, those for non-members are still higher. The man who keeps himself in good standing in the Medical Society still gets his malpractice insurance cheaper than can anyone else. The reduction for all but the smallest policies amounts to more than the medical society dues."

COMPULSORY MEDICAL CARE IN NEBRASKA

The June issue of the Nebraska State Medical Journal contains the following report of the decision of a county judge that a county must furnish medical aid to the needy, as is the law of New York State under the present Welfare Law.

"It takes a judge to every now and then tell the county boards that physicians have rights in connection with the care of the paupers and indigents, that the boards are bound to respeet. Judge Blackledge of Adams county informed the county board of that area the other day that it has a responsibility with respeet to earing for the sick. It was a case wherein the board refused to provide hospitalization for a person who needed it. The court pointed out the plain duty of the local government, at the same time declaring it is the duty of the board to use discretion and judgment in its use of public money. The judge said the board was compelled by law to furnish medical treatment to persons, whether residents of the county or not, who had no means of procuring treatment and who were found to be in need of attention by a physician or surgeon."

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conservatively. Cancer is usually secondary to a lesion in the breast or genito-urinary tract. In this connection should be emphasized the great relief afforded patients suffering from this very painful affection by adequate x-ray treatment or by sectioning the antero-lateral pain tracts in the spinal cord above the lesion—cordotomy, as suggested by Spiller and developed by Frazier and Spiller⁵ and by Peet, and others. Multiple myeloma may give rise to repeated fractures through the punched out rarified areas scattered throughout the skeleton. The blood may show high grade anemia or simulate lymphatic leucemia, and the urine may show Bence-Jones protein.

The commonest acute joint disease is rheumatic There has lately been some tendency to confuse this malady with the chronic arthritides, merging them in statistical studies designed to bring out information concerning the pathogenesis and nature of so-called "arthritis." I plead for a place for rheumatic fever as a distinct entity, differing essentially from every other type of arthritis? The distinctive tendency to rapidly rotating large joint involvement, the typical cardiac and central nervous system attack, and above all the characteristic architecture of the cellular pathology, as seen in the Ashoff body and subcutaneous nodules, seem to outline and define the disease as a distinct clinical entity. Do these same factors not further strongly suggest that the disease is caused by one specific organism and not by any one of a group of more or less related organisms, as has been lately suggested?

In such a brief review as this no attempt will be made to discuss the diagnosis, which is sometimes a bit tricky, but some points in treatment will be discussed.

Given an acute, febrile polyarthritis of the rheumatic type, the fashion, and a wise one I believe, is to turn to sodium salicylate as the most important therapeutic defense. There is an art in its use which is worth cultivating, as the drug is utterly useless in too small doses and is dangerous in excess. For the average adult twenty or thirty grains every three hours, with a like amount of sodium bicarbonate, will usually be required. In the absence of complications the temperature usually drops to about normal within two to four days, and the painful joints are controlled at the same time. True, both fever and arthritis are very apt to recurr, particularly if the dose of the drug is much reduced, but many times the attack once controlled in this manner, goes on to healing without interruption.

But suppose the disease is not controlled by three or four days of this dosage, what then? One should think of complications such as carditis, and recheck the original diagnosis. With rheumatic arthritis still as the challenger can the drug be further pushed? If the patient is tolerating it well, a slight increase may be cautiously tried but over 200 grains a day is definitely over

into the danger zone. Fatalities have been reported from 75 to 180 grains (Sollman). The dangerous symptoms of salicylates are the cerebral symptoms, delirium or unconsciousness, and dyspnea. Much less serious and much more common are the gastric symptoms. With an irritable stomach one may well turn to rectal injections. A teaspoonful of sodium salicylate in 4 oz. of starch water per rectum is often quite effective. This may be used twice a day, and it is well to add 15 to 20 drops of laudanum to each dose.

Where salicylates are badly tolerated pyramidon (amidopyrin) in 10 gr. doses every three hours sometimes acts very well. An obstinate rheumatic arthritis can often be promptly terminated by a few doses of typhoid vaccine intravenously. The initial dose should not be over 10 million organisms. During convalescence from rheumatic fever iron in large doses is nearly always needed.

May I remark in passing that I have never seen salicylates have any effect upon rheumatism of the heart?

Another form of acute arthritis is Schönlein's disease, or rheumatic purpura, in which a typical purpuric eruption, often combined with urticarial lesions, is associated with a rather mild polyarthritis, the heart being entirely unaffected. True rheumatic fever may begin with urticaria so that the distinction is not always easy. The tendency for rheumatism to migrate from one large joint to another and to involve the heart, and the absence of hemorrhagic lesions will usually differentiate the two conditions. Arthritic purpura is now known to be an allergic disease and treatment on this basis brings much more satisfactory results. Sometimes the offending antigen can be discovered through history or skin tests. I have found the intravenous injection of 1 or 2 c.c. of a 5 per cent peptone solution every 3 or 4 days to be very helpful in this notoriously obstinate dis-

care. Chronic arthritis is usually divided into the atrophic and the hypertrophic types, and in their pure forms these conditions are quite distinct. The atrophic arthritis tends to occur in younger individuals, sometimes exhibits acute febrile exacerbations, is usually characterized by a rapid pulse, a tendency to sweat and various vasomotor faults, and leads to marked wastings and deformities but not to bony ankylosis. The hypertropic form lacks most of these clinical characteristics, occurring typically in older and stouter people and probably nearly always bearing a definite and probably nearly always bearing a definite relationship to trauma or strain of some sort. Pure types are probably rarer than those which present some characteristics of both, which is important from the standpoint of etiology, pathology and treatment. Infection no doubt plays some part in every case of atrophic arthritis and we always search for and remove all possible foci. Even with the hypertrophic form this should not be omitted. Descusitizing vaccines and immunizing protein shocks are often valuable when infection plays a part. Personally I have got most help from very small doses of mixed strains of Streptococci all of which were recovered from arthritic patients, as worked out by Burbank, and from colloidal sulphur used intravenously. Neither should cause any systemic reaction. General measures, carefully individualized, are of the greatest importance. Rest for the tired, reducing for the overweight, iron and arsenic for the anemic, digestive survey and correction. orthopaedic assistance, particularly for the feet, which affect so vitally all the structures of balance, carefully checked physiotherapy with particular emphasis upon exercises, active and against resistance to reduce muscle spasm, and finally optimistic moral support and everlasting perseverance are all indispensable.

Gout can have but little space this afternoon, but we should not forget its existence. It is commoner than we give it credit for. There is a very striking case on my service at Long Island as I write. Gout can usually be promptly identified by its trade mark, the tophus. If you can have your way with a patient about diet, exercise and

fresh air you can do a great deal if the diseasc is not too far advanced. The older patients with ehronic ehanges are more difficult.

Syphilis practically never causes a polyarthritis except with the dactylitis of early hereditary syphilis or the very mild joint swellings that sometimes come with the secondary roseola. An obstinate monarticular syphilitic arthritis, resembling tuberculosis occurs in hereditary syphilis.

Tabes dorsalis or syringomyelia may cause the curious trophic changes in one or more joints which we know as Charcot's joints. These are painless swollen joints with considerable destruction and a rather characteristic hypermobility, giving almost a flail like effect. They may require mechanical support and protection.

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THE DIAGNOSIS OF DISEASES OF BONES AND JOINTS And a Few Remarks Concerning the Diagnosis of Fractures

By FRANK S. CHILD, M.D., PORT JEFFERSON, N. Y.

Read hefore the Second District Branch of the Medical Society of the State of New York, in Garden City, Long Island, on Nov. 17, 1932, in a symposium of six papers on "Diseases of the Bones and Joints" presented by Long Island physicians

ANY of the deformities which the orthopedic surgeon is called upon to treat are caused by infections of the bones and joints. Prevention of these deformities begins with early diagnosis. By this it should not be understood that every deformity can be prevented but early diagnosis followed by properly instituted treatment will ameliorate or prevent deformity in many cases.

Acute Infectious Osteomyelitis

Acute infectious osteomyelitis is the commonest destructive process in the bones of children. Staphylococcus aureus is the organism most frequently causing this disease. The infection is usually blood stream, commonly arising from some distant focus as infected tonsils, middle ear, furuncle, etc. A preceding injury is a frequent contributing cause.

It is a characteristic of this disease, in children, that the infection practically always begins in the growing end of the bone, except of course in those cases in which there is a direct infection. Thus the disease begins in close proximity to, but not in, the joint.

The onset is sudden and severe, usually with a chill, sometimes with a convulsion. The symptoms are those of a severe septic infection. Death may ensue before local symp-

toms become pronounced.

In making the diagnosis careful palpation is most important, for in the early stages localized tenderness is frequently the only clue. Other signs as swelling, local heat and redness may not appear until a few days later when the disease is well developed in the bone. The patient may be delirious, or too sick otherwise to complain of any localized pain, and to elicit local tenderness every long bone should be carefully palpated. Increased pressure at the point of local tenderness will cause exquisite pain.

The X-ray is of value only for its negative findings, for bone changes cannot be demonstrated in the early stages.

The blood culture, taken early, is positive in a large majority of eases,

Important diagnostic signs are:

- 1. Sudden onset and high fever
- 2. Generalized sepsis 3. High leucocytosis

4. Intra-osseous pain without swelling

5. Exquisite pain on pressure at point of local tenderness

6. Swelling absent early, present after few days

Sometimes it happens that the physician does not see the disease until it is well ad-Then the picture is different. The high fever and delirium may suggest typhoid fever. The swelling near the joints may suggest rheumatic fever or primary cellulitis. A milder fever and swelling may be suggestive of tuberculosis of the joint.

In this stage bone destruction has occurred and the X-ray will easily differentiate from typhoid and rheumatic fevers, but not so easily from tuberculosis. Cellulitis is a late develop-

ment of osteomyelitis.

Chronic osteomyelitis must be differentiated from syphilis and sarcoma.

Acute Infectious Arthritis

Acute infectious arthritis may begin as an infection of the synovial membrane or it may be secondary to osteomyelitis, a complication occurring in the hip joint. In primary form it is a blood stream infection arising from infection in the tonsils, teeth, accessory sinuses of nose, furuncles, etc. It may also follow as a complication of measles, scarlatina, pneumonia, meningitis or smallpox.

The onset is sudden with high fever and symptoms of severe sepsis. The joint involved is very tender and there is fluctuation.

local heat and redness.

X-ray findings are negative in the early stage but after the disease has continued several weeks bone changes will be evident.

The acute stage of infectious arthritis may be confused with osteomyelitis, bursitis, teno-

synovitis and inguinal adenitis.

The subacute stage may simulate a low grade infectious arthritis and be mistaken for tuberculosis. Aspiration of the joint fluid and laboratory examination will aid in the tuberculosis. differentiation.

The bone changes appearing in the subacute stage, as seen by X-ray, begin as erosion on the superficial surface of the cartilage. This differs from tuberculosis as in this disease the erosion begins on the under surface of the cartilage.

Important signs are:

1. Sudden onset and high fever

2. Generalized sepsis 3. High leucocytosis

4. Severe pain on motion of joint

5. Swelling, fluctuation, redness, local

6. Purulent fluid in joint as shown by aspiration

Now there are some low grade infections of the bones and joints which have some characteristics common to the chronic or subacute stage of the acute infections. The most important of these is tuberculosis, sometimes called caries, white swelling.

Tuberculosis of Bones and Joints

Bone tuberculosis is a blood stream infection from a focus usually in the bronchial nodes. possibly also from the intestinal tract. Mild trauma is a predisposing factor, but severe trauma is never followed by tuberculosis. The infection may occur at any time of life but is most frequent between the ages of three and ten. The spine is most commonly affected and next in frequency the hip, knee and ankle, respectivley.

The onset is gradual and usually monarticular. Pain is an early symptom, and is peculiar in that in the hip and shoulder it is referred to a more distant point, as the knee or elbow, while in the distal joints the pain is in the joint involved. Pain causes the patient

to cry out at night during sleep.

Muscular spasm is common in children and less pronounced in adults. There is an elevation of evening temperature but it varies with the joint affected, being higher when the disease is in the ankle than when it is in the spine. The fever is also lower in adults than children.

There is some swelling of the joint, with without apparent increase in synovial There is muscular atrophy on both sides of the affected joint and there is also increased local heat. The tuberculin test is of value in young children.

No bone changes can be demonstrated by X-ray until several months after onset. Bone atrophy is the earliest change noted.

Important diagnostic signs are:

1. Gradual onset

2. Pain on motion of joint involved

3. Muscular spasm

4. Limitation of motion

5. Swelling of joint, moderate

6. Fluctuation usually absent

7. Increased heat about joint

8. Evening fever

9. Disease usually confined to one joint

Low Grade Infectious Arthritis

Low grade infectious arthritis is generally caused by a focal infection in the tonsils, teeth, sinuses, genito-urinary tract or gall bladder. There are two types, one synovial, in which there is proliferation of synovial villi, thickening of capsule and some increase in fluid. The other is the osseous type, in which there may be erosion of the articular surfaces and even actual bone destruction.

This disease is usually confined to one joint and the onset may be sudden or slow, but without severe constitutional symptoms. The

knee is most frequently involved.

In the synovial type there is increased fluid and slight limitation of motion. Pain occurs after excessive or sometimes after normal use of the joint. In this type there is also a condition known as intermittent hydrops in which there is excessive fluid in the joint, remaining a few days and then subsiding.

In the osseous type the pain may be slight or severe and there is some limitation of motion. The swelling is slight. The X-ray may show erosion on the articular surface.

The disease is milder in its course than tuberculosis and continued observation is sometimes necessary before one can be sure of the diagnosis. The Wassermann differentiates it from syphilis.

Important diagnostie signs are:

1. Gradual onset

2. Pain after use of joint

- 3. Motion in joint slightly limited or not at all
- 4. Swelling slight or absent
- 5. Fluetuation usually absent
- 6. Local tenderness slight or absent

Fractures

A few words concerning the diagnosis of fractures.

Not all fractures have the classical signs of erepitus and false point of motion. The diagnosis of some fractures, particularly in children, is impossible without the X-ray. And it goes without saying that every suspected fracture should have an X-ray examination. Incomplete fractures are so common in growing bones that no diagnosis of a joint injury should be considered complete without an X-ray examination.

For example: a girl fifteen years of age was thrown from a horse. The only injury appeared to be a contusion about the right

shoulder. The disability was slight, passive motion free in all directions, active motion somewhat limited by pain. Examined under fluoroscope the bones appeared normal. However, an X-ray film showed an oblique fissure fracture extending from the epiphyseal line downward into the shaft of the humerus. Also there was another fissure fracture in the scapula.

The diagnosis of fracture about the elbow joint in children is difficult by X-ray due to the lack of osseous tissuc. Because of eartifuginous tissue the crepitus is usually soft. Soft crepitus, abnormal motion, and deformity

are signs indicative of fracture.

Fractures of the bodics of the vertebrae are easily missed unless an X-ray is made in two planes. Localized pain and tenderness over the spine, following an injury, should make one suspicious of fracture. Deformity

is frequently absent.

For example: A boy, seventeen years of age was riding in the back seat of an automobile when it collided with another car. The sudden stopping of the car threw him forward but did not throw him from the scat. He complained of pain in the back over the spine. An anterior-posterior film did not show any abnormality, a film taken in the lateral plane showed a compression fracture in the middorsal region

In examining bones by the X-ray for fracture, films should always be made in two planes, first because in one plane there may be no evidence of fracture, and second because one plane may not show the amount of displacement of the fragments. In certain cases stereoscopic films are more satisfactory than

films in two planes.

The fluoroscope should never be used for the diagnosis of fractures except in emergency, in which ease films should be made before instituting treatment. There is always the possibility that the film will be required for legal evidence

FIRST AID IN THE TREATMENT OF FRACTURES

By OTHO C. HUDSON, M.D., HEMPSTEAD, N. Y.

Read before the Second District Branch of the Medical Society of the State of New York, in Garden City, Long Island, on Nov 17, 1932, in a symposium of six papers on "Diseases of the Bones and Joints" presented by Long Island physicians

A^S the most common bone and joint lesion is probably a fracture I am going to use the time at my disposal to emphasize some of the points you already know.

What First-Aid Is: The first-aid treatment of fractures begins immediately following the accident, and must be maintained until the patient has been transported to his home or a hospital and the permanent treatment instituted. The

ambulance of every hospital should be fitted with an emergency fracture outfit consisting of basswood splints, a half-ring Thomas splint for the lower extremity, ring Thomas splint for the upper extremity, and the necessary bandages, slings, sheet cotton, and paper elips for applying emergency traction Without immobilization most fractures of the femur or humerus arrive at the hospital with marked shortening and angula-

tion; but when these same fractures are splinted and transported they arrive at the hospital with little or no shortening and angulation. Adequate first-aid when it is carried out as soon after the injury as possible simplifies the final treatment. Delayed or absence of the initial treatment of the fracture by immobilization often leads to serious complications, delays the permanent reduction, and increases the shock and pain to the patient. In our treatment we must consider the condition of the patient first; and then direct our local treatment of the fracture so as to shorten the period of disability to a minimum and restore function of the part to a maximum.

General Treatment of the Patient: The general condition of the patient must be evaluated. The young robust adult can withstand severe trauma much more easily than the young or elderly patients. In the elderly other complications from pulmonary, cardiac, or renal origin may occur and we must prevent their development if possible. If the patient is unconscious many serious injuries as multiple fractures of the spine, pelvis, or extremities must not be overlooked. The pain of the injury must be relieved by giving morphine sulphate or Majendie's solution hypodermatically immediately. The dose should be large enough to accomplish its purpose. Relieving pain also lessens the associated shock. The shock is treated by protection from exposure, by covering the patient well with blankets, and by bandaging the extremities from the toes to the groin. The extremities from the toes to the groin. medication of value in shock is caffeine sodium benzoate and adrenaline chloride hypodermatically. These drugs may be repeated as necessary.

Examination: The patient must be examined quickly and without increasing his discomfort. All rough manipulation and attempts to elicit crepitus are contraindicated. During examination all unnecessary exposure is avoided. When there is a question of fracture, treat as such until proven otherwise. Gross deformity of an extremity is readily seen. Have some one maintain firm, steady, continuous, and strong traction on any fractured extremity during your examination. If this is done with the extremity in its normal line; your procedures of examination and dressings are made easier. The traction also prevents muscle spasm, relieves pain, and prevents further soft tissue damage. Injuries to the skin as abrasions, lacerations, or protrusion of bony fragments are noted. Nerve injury should be tested for by having the patient move the fingers or toes.

Simple and Compound Fractures: Simple and compound fractures are treated alike except for the wounds present. As every compound fractise potentially infected, no cleaning or debridance be attempted in the first-aid dressing. So or large wounds should be covered with a so dressing after painting the edges of the wo

with tincture of iodine. In doing this begin at the lacerated edge and paint away from it so as not to further contaminate the wound. Under no circumstances should any probing, picking, or attempt at cleaning of the wound be done until the patient is hospitalized and anesthetized.

If large blood vessels are cut, a tourniquet may be needed. When it is applied place it above the knee in the lower extremity and above the elbow in the upper extremity. Use a broad tourniquet instead of a thin narrow one and protect the skin with a towel. The ordinary blood pressure cuff makes a very effective one if distended with air. The tourniquet must not be left on the extremity indefinitely for fear of gangrene in all ready devitalized tissue. It should be loosened from time to time to allow bleeding to occur. Oozing from any wound is best controlled by firm pressure but it is also helpful in cleaning the tissues of foreign materials.

The Fracture Should Be Splinted Not Manipulated: The splintage or local treatment of the fracture varies with the bone involved. During the World War the slogan in fractures was, "Splint'em Where They Lie," and that statement is equally true today in civil practice as on the Splint them immediately. battlefield. itial trauma may have left the bone ends in apposition and we would not want to displace them. Manipulation, if done may displace the fractured fragments, or may cause the sharp bony ends to do considerable damage to the surrounding soft tissues. Certainly every movement of a fracture increases the hemorrhage, swelling, and inflammatory products thrown out by nature. A large blood vessel or nerve may be damaged with disasterous results. A more serious condition is the conversion of a simple fracture into a compound one with manipulation by puncture of the skin thus opening the way for sepsis with its prolonged convalescence or loss of life and limb. When gross deformity is present it may be better to apply the temporary splint in line with the deformity without correction. Do not make any vigorous attempts at reduction until they can be done painlessly as they are not needed in the first dressing.

Requirements of a Splint: The requirements of a good splint are that it is long enough to immobilize the part and that usually requires the immobilize in the immobility of th

e or

stretcher is obtainable, take the door off the hinges and use this to transport the patient.

In fracture of the clavicle, immobilize the arm at the side of the body by means of a bandage

with a towel in the axilla.

In fracture of the humerus, the best immobilization is by means of the Thomas hinged arm splint in which traction from the padded wrist can be maintained by a Spanish windlass. The extremity is slung in the splint by means of slings, and then bandaged to the splint to prevent motion. As one does not usually carry this apparatus in his automobile, the use of an axillary pad of towels and bandaging the arm to the chest with a sling about the wrist and neck is satisfactory.

In fractures of the elbow, it is best to splint them in the position that the patient holds the extremity. If the elbow is extended, use a padded piece of wood from the finger tips to the axilla and bind the arm to it. If the elbow is flexed, the axillary pad and binding to the chest wall is

useful method.

In fractures of the hand, wrist, or bones of the forearm a long padded piece of wood, magazines, or tightly rolled newspapers extending from the finger tips to the mid-arm serve as a good tem-

porary splint.

In any fractures of the femur, or tibia and fibula, the Thomas leg splint is again the ideal method of immobilization. The splint may be quickly applied and traction on the extremity maintained from the ankle. Cutting the trousers leg and folding over the side bars of the splint give excellent slings.

In fractures of the shaft of the femur, tying one lower extremity to its mate affords some immobilization. In fractures about the neck of the femur and intertrochanteric region, the only sure way of holding the position is by using a long splint extending from the axilla to the heel. The best one is probably the old fashioned bedslat padded and bandaged to the extremity. Garden tools with long handles made good splints.

In fractures of the tibia and fibula, and about the ankle, the use of a pillow splint with three boards placed beneath the pillow case (one posterior and one on each side) extending from the toes to the mid-thigh and tied securely about the leg and pinned about the foot to prevent twisting is the quickest splint to make.

In fractures of the patella, a long padded board from the ankle to the groin is all that is needed.

Summary

The important points in first-aid treatment are:

1. Relieve the pain by morphine sulphate hypodermatically.

2. Treat the shock by warm blankets and un-

due exposure.

3. Prevent further injury to the damaged extremity by unnecessary movement.

4. Splint the fracture securely using a splint long enough to produce immobilization of the joint above and below the site of injury.

5. Cover all compound wounds with sterile dressings immediately and swab the skin edges with tincture of iodine. Control severe hemorrhare.

6. Transport the patient to a hospital as quickly as possible where the permanent treatment can be carried out and roentgenograms can be taken.

7. Do not perform painful operations or manipulation until the patient is anesthetized and you are ready to carry out further treatment.

COMMON DISEASES OF THE BONES AND JOINTS IN CHILDREN By WALTER C. A. STEFFEN, M.D., FLUSHING, N. Y.

Read before the Second District Branch of the Medical Society of the State of New York, in Garden City, Long Island, on Nov. 17, 1932, in a symposium of six papers on "Diseases of the Bones and Joints" presented by Long Island physicians.

WHEN one considers diseases of the bones and joints in children, there are certain rather elementary fundamentals with which we are all familiar but which should be constantly borne in mind.

The Growth Factor—The most important factor is involved in the phenomenon of growth. The adult bone and joint is static in this respect. Growth brings with it an extremely active metabolism and a much greater vascularity. The growth centers are either involved in or adjacent to seats of many of the common pathological processes affecting the bones and joints of children. Interference with growth may produce deformity by shortening, even though function may be

otherwise restored. However, the more active metabolic processes of a child also aid in the more rapid restoration of function and allow a far better prognosis than is often possible in a similar condition in an adult.

For reasons perhaps not altogether clear these tissues in children appear to be more vulnerable. The bones and joints are more frequently attacked by acute diseases, and when attacked the destructive process advances rapidly, because the child's defense mechanism is not so well organized, but when the tide turns repair proceeds with greater celerity than in the adult.

Although the osseous and joint system of the child seems to be more susceptible to acute conditions luckily, with a few exceptions, it is spared the chronic forms of arthritis and bone disease.

The Diet Factor—Another factor of the utmost importance in the prevention and treatment of bone and joint diseases in children is intelligent supervision of the diet and accessory factors. Fortunately the empiric era is passing and we are coming to a more scientific basis for our diets. However, much is still unknown and we have to combat a great deal of pseudo-science in dietetics.

The preventive action of orange juice due to its vitamin C content, in scurvy and the almost miraculous cure of the same condition by this agent need only to be mentioned. In addition some recent work seems to show that vitamin C plays a part both in dentition and ossification. In the same category the use of vitamin D or sunshine in rickets is of equal importance.

The diet of the child calculated to build sound bone should be well balanced and furnish abundant mineral salts and vitamins. The best sources of mineral salts are milk and vegetables. Such a diet also furnishes all the necessary vitamins except D. This is best administered in the form of cod liver oil. Viosterol furnishes an ample source of this vitamin but it is not as well utilized as when cod liver oil is given. The combination of viosterol and cod liver oil seems to furnish an optimum way, when large amounts of vitamin D must be administered. Up to the present time I have found a proper diet an adequate source of all the other vitamins and do not feel it necessary to use the various vitamin preparations.

Rickets—The use of sunlight, particularly the ultra-violet radiation, in the therapy and prophylaxis of bone and joint diseases owes much to the orthopedist, who pioneered this form of treatment. Vitamin D internally and ultra-violet radiation, artificial or natural, are in a large measure interchangeable or may be used to supplement one another.

When an infant receives insufficient ultraviolet radiation or an inadequate amount of vitamin D internally, rickets may result. What constitutes a sufficient quantity of these agencies for prophylaxis or treatment is a factor that varies greatly with the individual child. Race and heredity are also etiological factors in the development of rickets.

For the purposes of this discussion the bony pathology of rickets may be summed up briefly as a deranged ossification, manifesting itself in hyperplasia, delay and rarifaction. All these changes may be present at one time. The bones are readily distorted and fractured. The fractures may be multiple.

In the bones of the skull we find the rarifaction resulting in cranio-tabes, also the hyperplasia, at a somewhat later date, giving us the parietal and frontal bosses. It should be mentioned that cranio-tabes is not always a ricketic manifestation. The beading of the ribs, one of the early and easily recognizable evidences of rickets, is known to every one. The later appearing deformity of the lower chest wall resulting in Harrison's groove is of considerable importance for the possible interference with respiration. The deformities of the pelvis may be of grave import in girls.

Probably the commonest orthopedic disabilities arise from the changes that rickets produces in the lower extremities. A good many cases of knock knees and most cases of bow legs are due to rickets. We also find a relaxation of the joints which augments the deformities just mentioned and predisposes to weak and flat feet and the pronation of the feet so often seen in children.

Attention should be called at this point to the importance of the early recognition of these symptoms, the adequate treatment of the ricketic condition by methods already alluded to and the prompt institution of proper orthopedic measures when indicated.

It might be mentioned that in early cases the x-ray will show characteristic changes in the bones before they are manifest clinically.

Scurvy—Although scurvy is becoming a comparatively rare disease it is well to remember that any artificially fed infant who cries when handled and whose joints appear tender and at times swollen should be suspected of having scurvy. When this is associated with hemorrhages into the gums the diagnosis is certain. In any event the therapeutic test of orange juice for a few days or the x-ray finding of the characteristic white line at the diaphyseal end of the long bones will confirm the diagnosis. Occasionally an epiphyseal separation due to hemorrhage may also be found

Rheumatism — Rheumatic fever is not usually considered in the discussion of diseases of the bones and joints, yet because of the errors that often arise in the diagnosis of this condition it seems wise to consider some of the manifestations of rheumatic infection in children. Rheumatic fever is a disease of childhood, not of infancy. It may occur without fever, simply as vague fleeting pains usually in the lower extremities, sometimes in the fingers, the so-called growing pains. A name that had better be discarded. These pains when they occur in the legs may, how-

ever, be due entirely to weak or flat feet. The best known manner of onset is with fever, sometimes a hyperpyrexia. The joint involvement may precede or accompany the elevation of temperature. The involvement in rheumatic fever is always poly-articular in contradistinction to acute arthritis and other conditions to be discussed later. Joints are involved successively and clear up completely upon recovery.

The greater frequency of cardiac involvement in children with rheumatic infection deserves mention, because it necessitates care

long after the joints have subsided.

The treatment of rheumatic infection offers nothing new. Rest and salicylates are still the best therapy. Salicylates apparently relieve the pain and act as anti-pyretics but do not affect the course of the disease.

Arthritis-There is confusion as to the character and nomenclature of chronic arthritis in children. Fortunately this group of diseases is uncommon. One type, an atrophic arthritis is known as Still's Disease. describes the onset of chronic arthritis as sudden with fever and multiple joint involvement, or with persistant fever sometimes for weeks before the joints are affected. In another type the joints may be involved with little or no elevation of temperature. Later the lymph glands and the spleen may be enlarged. The disease frequently begins in children before three years of age, is chronic in its course and often results in joint deformity. McRae2 believes that chronic arthritis in children is a form of arthritis deformans. He is also of the opinion that some adult arthritis deformans may be based on these childhood infections. Chronic arthritis may follow scarlet fever, measles and suppurative processes in the pleura, bones, accessory sinuses, teeth and On the other hand, I have seen arthritis follow scarlet fever a number of times, but complete resolution always occurred and no chronicity was observed.

The treatment of chronic arthritis is symptomatic. Infected foci should be eradicated. The joints require physio-therapy and at times

orthopedic care.

Acute suppurative arthritis and acute osteomyelitis are principally diseases of young children. Both processes are often found associated. The organisms usually recovered are streptococci, pneumococci, staphylococci, or gonococci.

Various modes of onset have been noted. After a pneumonia a septic type of temperature may persist and the involvement of a large joint may be found. The local process develops rapidly and fluctuation often appears

in a few days. Or subsequent to an acute upper respiratory infection, pain and swelling of the knee or another joint appears. The inflammation may also involve the peri-articular structures. Again the disease advances rapidly, so that evidences of suppuration can be detected early. In other cases the onset may be sudden without any apparent previous disease. These cases often have a high temperature. The tenderness and slight swelling are at times overlooked due to the extreme prostration. Pneumonia may be suspected as the cause of the illness. Yet a careful examination will usually reveal a tenderness over one of the long bones or the swelling of a joint. Involvement of the hip presents considerable difficulty from a diagnostic standpoint.

Usually one or a few joints are involved, hip, knee and shoulder in order of frequency, except in gonococcus arthritis, which may be multiplied and often attacks the small joints. In the gonorrheal form the disease is usually less severc. The presence of a vaginitis or an ophthalmia and the fixation test are valuable

aids in diagnosis.

Blood cultures except in the gonococcus infection are often positive.

Osteomyelitis and suppurative arthritis require early surgical intervention. The aspiration of a suspected joint for diagnosis frequently allows earlier interference. The destructive process in these conditions is usually extensive. A fatal issue from septicæmia or meningitis, the latter particularly after pneumoccic infection, is not uncommon.

Care should be taken to differentiate the rarer gonococcus arthritis, as this usually goes on to complete resolution. The use of vaccine in gonococcus infection is advocated.

Acute suppurative disease of the bones and joints differs from rheumatic infection in that it is largely mono-articular, the local signs are greater, and, most important, its principal occurrence is before two years of age. Let it be repeated that rheumatic fever is rare before three years.

In my experience the x-ray has been of little value in the early diagnosis of acute arthritis and osteomyelitis. Later when there is much fluid in the joint or bone destruction has taken place the x-ray findings are characteristic.

Tuberculosis of the bones and joints is essentially an orthopedic problem and will be covered so much more authoritatively in this symposium from that standpoint that I will touch upon the subject but briefly.

It is generally conceded that most of the bone and joint tuberculosis is of bovine origin. The tuberculin testing of cows, the pasteurization of milk and the more careful control of human cases all have played a part in making bone and joint tuberculosis in children a much rarer disease than it was twenty years ago.

In spite of the safeguards thrown around our milk supply, raw milk should not be fed to infants or children, because there is still a possibility of infected milk reaching the public. The milk should be boiled or pasteurized. Parents should be especially cautioned about this when away on vacation or in traveling. Boiled or pasteurized milk will prevent the bovine type of infection and incidentally septic sore throat and diarrheal diseases.

It seems hardly necessary to mention it, but the diagnosis of growing pains is still made in the child with a slight limp and perhaps a slight stiffness of the hip. The physician should be ever on his guard lest he miss those early, slight and often indefinite symptoms of beginning bone and joint tuberculosis and deprive the child of that adequate orthopedic therapy which at this time means so much.

Syphilitic osteo-periostitis is another disease which is becaming rather infrequent. Due no doubt to the active and intensive efforts to prevent and cure the disease in the mother.

As inferred in the previous statement osteoperiostitis is seen in hereditary syphilis. It affets chiefly the long bones and may be associated with an acute epiphysitis, the latter often producing symptoms of a pseudo-paralysis. X-ray and the serum reaction of mother and child are important aids in diagnosis. Time does not permit a discussion of antisyphilitic treatment in infants, but the value of sulpharsphenamine for this purpose because of the relatively safe and easy intramuscular means of administration deserves mention.

The occasional involvement of joints in purpuric diseases and the massive joint hemorrhages in hemophilia can only be brought to mind in a review of this type.

One further condition might be mentioned, namely, the occurrence in serum sickness of a transient polyarthritis simulating a rheumatic infection and at times requiring differentiation from a true arthritis, particularly when it is seen in scarlet fever.

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DISEASES OF BONES AND JOINTS—PROCEDURES IN PHYSICAL THERAPY By JEROME WEISS, M.D., BROOKLYN, N. Y.

Read before the Second District Branch of the Medical Society of the State of New York, in Garden City, Long Island, on Nov. 17, 1932, in a symposium of six papers on "Diseases of the Bones and Joints" presented by Long Island physicians.

PHYSICAL therapy in the treatment of diseases of the bones and joints is not new, in fact it probably preceded all other methods of treatment. Exposure of an ailing member to the sun, steeping it in hot or cold water, manipulation of a stiffening joint,—just to mention a few of our "modern" methods which have come down from antiquity.

The object of all physical therapy treatment of a bone or joint is to produce in that part some beneficial change which is difficult to obtain by any other means. Physical measures have their distinct indications, and when these observed and the proper modalities selected and applied, satisfactory results may be expected. The armamentarium of the physical therapist has been greatly broadened in recent years, until now it has assumed rather formidable proportions. Fashions change in physical therapy measures as in other things, certain modalities pass in and out of favor repeatedly, always with reasons which at the time seem quite logical.

In our limited time it will not be possible to present a complete detail of the subject, so I will attempt to describe a few of the out-

standing advantages of physical methods and also some of their contraindications.

In medicine we have altogether too few true specific treatments. In the treatment of tuberculosis of the bones and joints we find a true specific in ultra-violet light. The work of Rollier at Leysin has left no question of the efficacy of the treatment. In rickets ultra-violet light is also a specific either applied directly to the body or obtained second-hand through natural or artificial sources of vitamin D. Many other conditions of the osseous structure respond well to ultra-violet therapy, but specific action is not noted.

Diathermy is another valuable remedial agent which has been developed in recent years. It is particularly adapted to treatment of the bones and joints, but here the method of application and consideration of the indications are of the greatest importance. The response of a Neisserian joint infection to diathermy treatment is, in the opinion of many, another instance of rare specific action. The acute gonorrheal joint is extremely tender, and application of electrodes is difficult. Development of short wave technique, which

requires no application of electrodes, may in the future obviate this difficulty. With our present equipment experience has taught several novel methods of application, particularly the use of saline tubs, which make the treatment possible and effective

In order to treat any part with diathermy the bulk of the current must pass through the Failure to accomplish this will area desired give but poor result, which will usually be ascribed to the modality rather than to its ap The after treatment of fractures with diathermy is familiar to all, and its value is now conceded. In the injured joint with limited motion not due to bone block we can expect much benefit from the use of diathermy Correct and gentle application of the treatment will quickly dispose of extravasated blood and lessen thickening of the joint cap sule which otherwise so often occurs these cases the decongestive action of the static effluve and induced sparks will also be of value

The effect of diathermy is to produce deepseated heat by the passage of a high frequency oscillating current through the tissues temperature attained is rarely sufficiently high to be bactericidal per se But the increased temperature produces an active hyperemia, with all the blood vessels widely distended An increased supply of blood is brought to the parts under treatment, with fresh antibodies, phagocytes and repair materials, and the better to carry away detritus. With the above in mind we can readily note several contraindications to the treatment. Acute infection in a bone will rapidly develop pressure under diathermy treatment unless free drain age is provided. In the case of an arthritic joint where the distant primary infection is still active and the blood stream is loaded with toxins, bringing more blood to the part may only serve to aggravate the condition In an acute pyogenic infection production of an active hyperemia in the immediate area may lead to dissemination and septicemia same is true of a Koch infection of a bone or joint Danger is also apparent in any hemor rhagic condition, where production of active hyperemia is likely to cause further bleeding In the presence of a malignancy there is to be expected increased danger of metastasis if the application of diathermy is attempted

Baking and massage have been extensively used in arthritic and other conditions, too often for want of any better mode of treatment. The results are seldom those desired Despite the extensive use of massage and the great number of operators who apply it, there are few who ever acquire the necessary degree of skill to correctly treat all cases which

may be encountered. Were this not true we could expect far better results than are usually obtained

Cataphoresis or ionization is another modality worthy of mention which has had its The posphases of popularity and disrepute sibilities of the treatment are attractive, but a clear conception of its application and limitations is essential if any benefits are to be expected The majority of the active substances used in cataphoresis treatment to the joints are amons, which necessitates their application to the negative pole as the active one is under the negative pole, the alkali former, that galvanic burns are most likely to occur Moreover, these are particularly likely to occur when a pad of moistened lint is used rather than immersion of the part in a solu tion of the desired material Thus we can readily see that for the best application of cataphoresis we are limited to the distal portion of the extreinities, which are easily treated by immersion in the solution of chronic arthritis of the fingers and toes, and metatarsalgias, so often resistant to medication and other forms of treatment frequently respond in a most gratifying manner to the use of sodium salieylate by cataphoresis Many authorities claim that the benefits derived are brought about only by the galvanic current used, and that the ionic medication plays no part They point out that the ions move very slowly, and cannot penetrate deep layers of tissue in the time allotted to each treatment Moreover, the active circulation of the blood will carry away the molecule or atom which appears when the ion gives up its specific electrical charge All of these objections lose part of their significance when the distal ends of the extremities are considered, which possibly is another factor in the successful treatment of these parts by the

Manipulation of a diseased bone or joint must be carried out with the greatest caution Pathological fractures have resulted from the slightest stress applied where rest was indi-In the stiffened joint following injury or disease a gratifying immediate result can be obtained by forcible manipulation under anesthesia But too often the period of unprovement is brief. In breaking up of the organized tissues homorrhage has occurred, much blood is extravasated, and more massive organization than before is the result In many of these cases persistent use of diathermy would produce far better end results without any manipulation whatever

Other Measures—In the treatment of certain beingn and malignant tumors of the

bones x-ray and radium play an important part, but these methods are not usually included in the general classification of physical

therapy.

In closing we must not omit reference to hydrotherapy and its allied forms of treatment, such as the mud bath, paraffin bath, and hot air bath or blast. Occasionally these are combined with one or more of the modalities previously mentioned, often with the most desirable results.

Physical therapy has greatly added to the successful treatment of diseases of the bones and joints, and we can look forward to still further development along the lines described and possibly others as yet unthought of.

THE TREATMENT OF CHRONIC MULTIPLE ARTHRITIS

By GEORGE E. ANDERSON, M.D., BROOKLYN, N. Y.

Read before the Second District Branch of the Medical Society of the State of New York, in Garden City, Long Island, on Nov. 17, 1932, in a symposium of six papers on "Diseases of the Bones and Joints" presented by Long Island physicians.

As in all chronic disease processes, the etiology of which is obscure, the therapy of chronic multiple arthritis is far from resting on a completely sound basis. Until we fully understand not merely the pathological anatomy of this protean group of diseases but, more important, the exact mechanism of physiology involved in its production, we shall be obliged to grope in darkness for adequate therapy. At present we designate one phase of the disease with its pannus, cartilage destruction, muscle atrophy, ultimate joint annihilation, and deformity as "atrophic" and on the basis of presumptive evidence call it "infectious" in origin.

The far less virulent disease occurring more usually in senescence and presenting a different joint picture of fibrillary degeneration of cartilage leaving eburnated bald areas of joint surface and bony overgrowth at joint margins without any tendency to ankylosis, we call "hypertrophic" and arbitrarily relegate it to "degeneration." In truth we are in the same controvertible position as our clinical predecessors when they classified nephritis—a beautiful anatomical classification

unyielding to physiological proof.

No one will deny that infection, restricted capillary beds, faulty metabolism, and degeneration all play important parts, but the stumbling block is "how and why?" We do not know the mechanism—our large array of treatments attests to this fact. One patient is virtually torn asunder in the search for focal infection; another is subjected to the metabolism expert who may deplete him from the standpoint of calories, carbohydrates, proteins, or purins, emphasize vitamine deficiency, alkaline-ash diet, or uncover food allergy; the physio-therapeutist ranges his wares from elaborate electrical therapy to needle baths, colonics and body massage; the endocrinologist finds therapy in substitutional methods; the immunologist delves into specific vaccine methods or non-specific protein-shock therapy; the allergist pushes desensitization to bacterial proteins, toxins, and filtrates; and so ad infinitum.

All these principles have their important

places and with selection are justifiable—the real disease, after all, will usually remain, possibly improved, possibly made worse. A natural remission will often be heralded as the remarkable result of a specific therapy. Actually, there is no "cure-When one reports a large percentage of cures, he has under scrutiny not the same disease but usually an acute or subacute arthritis which is so commonly self-limited with proper methods of physiological rest. In the present state of our knowledge the only specific is individualization of the case in question—therapy must of needs be by induction—we have as yet no great truth from which to deduce rational treatment. The clinician who treats one disease entity in all patients must surely fail. With selective therapy, studying the patient as a whole, we may expect clinical improvement in about 50% of atrophic cases and 75% of hypertrophics. The rest will be unimproved and in a small percentage obviously made worse.

Types of Cases: Let us consider typical problems. We are presented with the obese plethoric female of the climacteric who complains of pain limited to the knees and objectively shows crepitating exostosed knee-joints without muscle atrophy or tendency to ankylosis-in addition, weak feet and Heberden's nodes. Aside from her local disability, the patient has no complaints In common terminology her disease is classified as "degenerative arthritis." She is a problem for both the orthopedist and the internist. The former's function is to build up the feet through support and selective exercises so that weight-bearing on the affected joint surfaces of the knee is equally distributed. The internist will also play a part in minimizing trauma to the knees and feet by reducing weight by rational diet which includes adequate protein, calcium and vitamine content but emphasizes low caloric ingestion. He must know whether this patient's cardio-vascular system will make restriction hazardous and accordingly regulate carbohydrate. He will probably expose the patient to generalized body massage for improvement of peripheral circulation

He may use dessicated thyroid to stir iip a sluggish patient. Strange as it seems in this type of case, stock streptococcus vaccine subcutaneously at weekly intervals frequently helps these patients—probably through non-specific protein effect.

In contradistinction to this patient, let us visualize the true chronic atrophic arthritic-a sallow, frequently poorly nourished individual with rapid pulse, low blood pressure, cold clammy hands, fusiform finger-joints, cold dusky lower extremities, appearance of anemia usually out of proportion to its actual degree (because of unfilled peripheral capillary beds) This patient is ill and should obviously not be depleted by restricted diet but rather coddled as one would a tuberculous case Most dramatic is often the improvement of such a patient when a previous regimen of caloric, protein, or purin starvation is supplanted by a well rounded-out adequate diet Nor would one in such a patient be inclined to "rip out" even obvious focal infection without considerable rejuctance Probably most of the real damage from the primary focal infection in question has long since been done, secondary foci having been established and the patient already been completely sensitized by repeated insults over months or years If the suspected focus is actually the guilty one, the immediate extirpation in such a patient may prove as disastrous as would an excessive dose of a highly specific vaccineprecipitating the patient on a downward course

Vaccines Let us assume as is generally accepted and on good evidence that infection with the streptococcus in one of its many families is responsible for this patient's disease and that infection has entered through diseased tonsils as a It is the practice in the Arthritis Clinic of The Brooklyn Hospital to treat such patients with a preliminary course of autogenous vaccine made from the tonsils in question-in accordance with the technique recommended by Dr Reginald Burbank 1 On theoretical grounds, we search for other points which may harbor streptococci, especially stools, gingivae, nasal passages, prostate, chronic discharging ears, gall bladder bile Streptococci found are incorporated into the vaccine, which is injected subcutaneously at weekly inter-Initial doses are very minute, occasionally as low as 100,000 organisms, increasing cautiously, aiming all the while to keep within the dose of tolerance as evidenced by absence of systemic reactions, failing blood pressure, or marked focal reactions in the joints. Recently we have used the intradernial route in view of the concept of the role of the reticulo endothelial system in mmunity reactions. We believe the latter route has definite advantages but are not prepared at this time to give relative statistics

Having carried on such therapy for three or more months we review the case from the stand point of tonsillectomy, performing the latter only

when the patient begins to show evidence of general physical betterment as increased blood pressure and subjective improvement. Tonsilections seems then in order, and in our experience is much less fraught with danger of harmful reaction.

We do not consider abscessed teeth in the same category with diseased tonsils but practice early removal, one or two at a time. Several considerations make this seem feasible. 1—the tonsils and lymphatic ring are frequently fed infection from diseased teeth. 2—Autogenous vaccine has little beneficial effect when administered in the present locked up infection. The teeth represent locked up infection from a drainage stand-point—the tonsils are more susceptible of untural free drainage. 3—The tooth root may furnish us with organisms of value for vaccination. 4—Extraction piecemeal rarely produces undesirable reactions.

Such vaccine therapy is continued with gradnally increased doses—usually in increments of one to five million organisms until maximum and stationary improvement is obtained as evidenced by absence of further progress over a six or eight month period. This final stage may be one with out symptoms but more often is one of definite amelioration of symptoms, rather than "cure"

All patients who are to receive any autogenous vaccine treatment go through a preliminary bac teriological study and in addition have their native serum complement titrated in a hemolytic sys-It is thought that low titres contraindicate vaccine therapy We no longer carry through routine complement fixation tests against fixed streptococcus^a antigens as originally recoinmended by Dr Burbank considering that the results of these while showing the presence of immune bodies developed in response to infection, do not posit the time when such infection was active One has no means of stating that the im mune response did not occur to an infection long since mactive or irrelevant. Most any normal individual has at some period of his life been ob liged to develop antibodies against the strepto coccus. It is interesting to note that cases termed as infectious frequently have a long list of positive complement fixations in high dilution to a variety of streptococci Presumably all of these streptococci are not simultaneously active. Such reactions may represent sensitivity to the strepto coccus in a "group" sense rather than strain-specificity Certainly, they help to malign the streptococcus as playing a part in this disease The maze of steps between focal infection with streptococcus and joint pathology is liowever, still unravelled. The mere casual finding of a streptococcus in the blood stream or joint is not necessarily significant of a local infectious process in the joint Transient bacternemia may occur even in normal individuals and may be the very means by which protective antibodies are estab

lished. The entrance of such organisms into the blood stream would form a classical means of sensitizing the host from an allergic standpoint to the bacterial proteins and toxins. Such hypersusceptibility might be expressed in various ways from vasomotor rhinitis, hives and asthma to a far less obvious influence on the capillary beds and synovial membranes of joints. Freiberg⁴ has experimentally produced in rabbits typical human atrophic arthritis by establishing hypersusceptibility to bacterial filtrates alone.

The extreme sensitivity of a few of our pa-



Fig. I. The Walking Chair

A "Solid Kumfort" Bridge Chair mounted on a base
with ball-bearing casters 3" (swivels in the back—
stationary in front). Height of seat from floor adjusted
to leg-length of patient.

tients to vaccine and bacterial products tempts one to consider an allergic side to the disease. Several of them developed asthma and hives together with increased joint manifestations coincidental with autogenous vaccine injections. In such patients we can reproduce this syndrome at will. The sharp flare-up and defervescence of their joints is somewhat analogous to the joint response to a heterologous serum. The caution with which a truly specific vaccine must be administered to avoid marked focal manifestations in joints is quite analogous to the focal response of an asthmatic to an excessive dose of pollen-

antigen. In man, the injection of an overdose of autogenous vaccine sufficient to produce systemic reaction is accompanied by a diminution of blood complement. Friedberger and Hartock have shown that in animals with the occurrence of anaphylactic symptoms there is also a reduction of complement.

Allergy: Experimental work of others in relation to allergy in arthritis led us to skin-test our patients to their vaccines. The results were very disappointing. We inconsistently obtained positive skin-tests immediate or delayed. Recently, Doctors Arthur Lamb and Louis Nerb of The Brooklyn Hospital have been making observations on these same patients with bacterial filtrates—using some fourteen virulent strains of streptococci Patients originally negative on skin-test to their own vaccine and who did not respond to vaccine therapy were skin-tested to the filtrate. A number of these showed strongly positive reactions both in skin⁵ and locally in joints. When treated intradermally by graded doses of the filtrate, not only did the skin-tests become less marked but joint symptoms improved. Encouraged by their findings, they have been applying autogenous filtrates in a similar manner. We hope for larger favorable response than to autogenous vaccine, which in our experience is extremely limited in its application. The filtrate should present a more effective therapy by desensitizing the patient to the bacterial products rather than to the organisms themselves.

General Treatment: Whatever be the argument for or against vaccine and filtrates, we may not forget that the host is a patient with a general systemic disease of which the joints are but one Failure to consider secondary manifestation. anemia, low blood pressure, malnutrition, faulty bowel function, and the mental depressive state so characteristic of most of these sufferers, may When possible, preclude satisfactory results. systematic general body massage should be practised for its tonic effect on peripheral circulation Contrast baths to hands and legs are helpful-the glove bath which I have recently seen described gives symptomatic relief to painful fingerjoints. Elaborate physiotherapeutic apparatus is rarely necessary. It may be interesting to note here that the use of diathermia in our group was disappointing.

In the atrophic type with radiolucent bones, one may find calcium and viosterol of value. In this connection, it is well to adjust diet and to avoid fruits and vegetables of high oxalic acid content (as strawberries and tomatoes) because of the drain on body calcium in the excretion of

It is unwise to keep these patients in bed for any length of time, a week or two being the maximum during any acute exacerbation. Time spent in explaining the necessity for maintaining straight knee-joints by avoiding pillows under

the knees may mean the difference between an ambiliatory and a chair-ridden future (in atrophic

cases)

Muscle atrophy in this disease should be vig orously fought by massage and judicious exercise. In this connection, of considerable help is the "walking chair," ⁶ (Figure 1) whereby a patient may make use of thigh and leg muscles to get about, at the same time obviating the trauma of body weight on pathological knee-joints

To summarize Chronic multiple arthritis is a protean group of diseases, the etiology of which is still obscure Principally for this reason, treatment is uncertain and frequently empiric disease does not readily lend itself to "cure," but by individualization of the patient a majority of these sufferers are considerably helped. The hypertrophic type of the disease is less virulent and yields more easily to therapy than does the

atropluc form Indiscriminate eradication of focal infection is meddlesome therapy and is frequently more damaging than constructive moval of obvious gross focal infection should when possible be preceded by preliminary desensitization with autogenous vaccine therapy is not a "cure all" but merely one weapon in selective cases. It may do more harm than good if injudiciously applied From the stand point of therapy, the allergic concept of the disease with joint pathology an expression of hypersusceptibility to bacterial products bears more promise than does the theory of localized infection in involved joints The finding of organisms in the joints or blood stream does not vitiate the theory of the allergic mechanism. The ultimate treatment is a challenge to the laboratory researcher, to the internist, and to physicians gen erally

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5 Reactions were consistently negative to broth used as control Titteen normals and fifteen cases of hypertrophic arthritis were akin tested to the filtrate There was only one slightly positive reaction in one normal
6 The Walking Chair was made in acordance with our specifications by Colson Co 7 E 19th St, N Y C

POLYCYTHEMIA VERA

Report of Ten Cases Treated With Phenylhydrazine

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POLYCYTHEMIA VERA (Erythremia, Splenoinegalic polycythemia, Vaquez's Disease, Osler's disease), is a chronic disease characterized by an increase in the number of the red blood cells. The spleen is usually enlarged, sometimes tremendously Minot says the disease is a new growth of the red blood cells.

The ctiology is unknown. The onset is extremely gradual, and the condition may go innoted for years. There is no known cure, but the progress of the disease is so slow that death is often due to other causes. Patients frequently reach an advanced age. They are poor surgical risks and have but little resistance to any infection.

In 1918 Eppinger and Kloss¹ first treated erythremia with phenylhydrazine Seven years later, in this country, Owen² followed their comple and was enthusiastic about his results Brown and Giffin⁴, Altnow and Carey⁵, Stealy⁶ and Cabot² were among those to report cases benefited by the drug In 1927 Bryan⁵ reported unsatisfactory results in one case and two years later Giffin and Conner⁶ called attention to the danger of giving the

driig to those who were bed-ridden, over 60 years old, who suffered from arteriosclerosis or gave "evidence of advanced visceral injury"

McNamara and Sansum¹¹ reported a case of poisoning from phenyllydrazine in a woman who had been given large doses by an osteo path. This case is particularly interesting because in all probability the patient did not have the disease

Harrop's article is a very comprehensive survey of the whole subject of polycythemia. He discusses the effect of the drug, but does not think there is any definite proof that a normal liver is injured by its continuous use. Owen feared this, as have other observers. Cirrhosis is of course a not unusual complication of erythremia.

In treating such a slowly progressing disease as this, is it justifiable to use such a dangerous drug? Is the benefit sufficient and improvement enduring enough to warrant the risk. After studying ten cases in the Presby terian Hospital and Vanderbilt Clinic, we think that the drug is indicated and to some patients may offer at least as much as any other form of therapy

N. Y. State J. M.

September 1, 1933

Certain individuals are undoubtedly susceptible and respond readily to small doses. So all patients should be watched very carefully when the drug is first given. We usually give 0.1 grams of phenylhydrazine hydrochloride in capsules by mouth, as a starting dose. In patients with only a moderate increase in red cells and hæmogloben, a satisfactory drop in the red cells may be obtained by only one or two capsules a week. In the more severe cases, 0.2 grams may with safety be given daily for five days. After five days, it is well to wait for two or three days to avoid the possibility of an accumulative effect. schedule should be repeated at least twice before increasing the amount. A slight drop in red cells and hæmoglobin may be regarded as a good sign and the same regime continued as long as results are favorable. A sudden drop in red cells contraindicates the drug, for at least a week.

Jaundice is not only an annoying symptom, but may be a danger signal. Hurwitz and Leviten¹² say it is easily avoided but in this series it appeared in four out of ten patients and in only one of these was the patient receiving large doses. Jaundice certainly indicates excessive dosage and should be regarded as a warning in future therapy, if the red cells and hæmoglobin again return to above normal.

There is sometimes a great increase in the number of white cells. Owen³ was very much interested in this and thought it might reveal the tolerance of the individual for the drug. Our patient No. 10 (who without our knowledge was given large doses of the drug when the red cells were going down), did have a leucocytosis of 52,000. In this instance, the rise in white cells undoubtedly was significant and was probably due to the drug, but it is well to remember that in the late stages of erythremia not only leucocytosis, but the picture of myeloid leukemia may appear, even without therapy. (Harrop¹⁰, Minot and Buchman¹³, Klumpp and Hertig¹⁵, McAlpin¹⁴.)

As far as possible and practical, the blood counts were done by the same observer. The Sahli Hæmoglobinometer (16 mg. Hæmoglobin=100 per cent) was used. The pipettes and counting chambers were all standardized. Two pipettes and two counting chambers were used for counting the red cells.

The accurate estimation of hæmoglobin has long been a bugbear for the clinician. We readily admit that the perfect method has yet to appear. At the same time, we believe that with reasonable care the Sahli gives excellent results. Absolute accuracy may not be possible, but with a trained observer working with the same instruments under the same

conditions, the variable element will be reduced to a minimum, and the final results will be more satisfactory than those obtained by the most skillful technicians all using different instruments, be they ever so delicate.

Case No. 1. C. B. No. 84433. An American woman of 47 years. In 1926 this patient had her gall bladder drained, the result was satisfactory for over two years. Then in July, 1929, after more trouble, she had her gall bladder removed, and made an uneventful recovery. Nine months after the second operation (April 25, 1930), she came in complaining of fatigue, backache and some dizziness. Spleen was palpable 6 c.m. below the costal margin. Blood count was as follows: hæmoglobin 138 per cent; red blood cells 7,800,000; white blood cells, 9,000; neutrophiles 70.5 per cent; cosinophiles 3 per cent; basophiles 2.5 per cent; lymphocytes 22:5 per cent; monocytes 1.5 per cent; platelets 675,000. (See Chart I).

There was nothing in her history to suggest polycythemia vera before this, but with such a blood picture and large spleen we made the diagnosis. She was given 0.1 gm. phenylhydrazine twice a day for five days, allowed a two-day rest, then the same dose was repeated for two days and she was allowed a five-day rest. After this little course of treatment (1.4 grams in two weeks), she became slightly jaundiced for four or five days. As the red cells had come down to 5,000,000 and the hamoglobin to 100 per cent, the drug was stopped for two months, then begun again, but in very small amounts.

nionths, then begun again, but in very small amounts.

At present she is able to do her secretarial work without difficulty and has few complaints. She takes 0.1 grams of the drug every week or two and seems better for it.

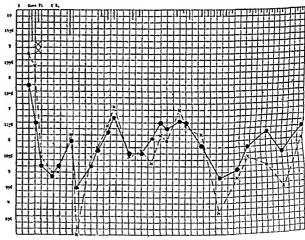


CHART I. CASE No. 1. C. B. See Explanation, page 1045.

Case No. 2. H. Z. No. 219974. A Jew of 22 with a schizoid personality. He complained of pains in joints and ringing in his ears. His face was red but this was partly due to recent exposure to the sun. He did not look ill. The spleen was felt at the costal margin; hæmoglobin was 108 per cent, with 5,500,000 red blood cells. With these findings, a diagnosis of polycythemia

vera in its early stages appeared justified.

He had had two small courses of phenylhydrazine (0.3 grams in three days, then 1.0 gram in two weeks), which had a marked effect on his blood count. The hæmoglobin dropped to 68 per cent and red cells to 3,000,000 in two weeks. Both returned to normal in another fortnight. There was some jaundice for a few days when red cells were down. His complaints remain unchanged.

Because of his peculiar personality, he was a most unsatisfactory person to deal with and is almost a psychiatric problem. Usually we do not treat patients with so moderate an increase in hæmoglobin and red eells; we did so in this instance because of the multiplicity of complaints. Although he received in all only 1.3 gm. of drug in three weeks, it was too much.

Case No. 3. H. K. No. 79946. March 4, 1929. A Jew of 44 came in because of dizziness for two years. His spleen was not felt, but a diagnosis was made from the blood count. Hamoglobin 120 per cent; red blood cells 6,800,000; white blood cells 14,500; neutrophiles 5 per cent; eosinophiles 1 per cent; monocytes 4.5 per cent; lymphocytes 3.4.5 per cent; monocytes 4.5 per cent; unclassified 1.5 per eent; platelets 190,000.

He was given 0.6 grams phenylhydrazine within three

days with no effect.

While in the hospital he developed a sub-acute Glaucoma and was considerably helped by operation (simple iridectomy).

Since then his count has varied little, and he has been given no more phenythydrazine. His spleen has never

been felt and his platelets have remained low.

The last blood count was: haemoglobin 120 per cent; red blood cells, 5,900,000; platelets 190,000. He holds his weight; is happy and active. So here is a patient who after two and a half years gets along very nicely without the drug. Under these circumstances, we doubt the advisability of phenylhydrazine. Should he have symptoms, we would consider the drug indicated.

Case No. 4. L. H. No. 275805. A woman of 59 who had been treated for polycythemia for three years. She had complained of severe headaches, vertigo, loss of memory and transient motor nerve weakness. She had been treated with radiotherapy, phenylhydrazine and nu-

merous blood lettings, with some benefit.

On admission in December 1930 her face and mucous membrancs were congested and spicen was felt 5 c.m. below the costal margin. Her blood count showed: hæmoglobin 102 per cent; red blood cells 7,300,000; white blood cells 12,300; platelets 930,000; neutrophiles 89 per cent; eosinophiles 1 per cent; basophiles 1 per cent; bymploet to 7 per cent; monocytes 1 per cent; unclassified 1 per cent.

Although blood pressure, urine and blood urea were normal, renal function test (phenolsulphonephthalein) showed an exerction of only 30 per cent, so it is safe to say that damaged kidneys might account for some of

the numerous symptoms

The blood responded fairly well to phenylliydrazine but the reduction in red cells was not accompanied by a similar improvement in symptoms, and it was thought best to discontinue the drug, especially as the color in-

dex was getting alarmingly low.

The patient complained that her headaches and pains in the extremities were so severe at times as to be almost unbearable and sedatives were necessary. The platelets have always been abnormally high and we think this may have a bearing on her numerous symptoms. Physio-therapy, in the shape of electricity, was tried, and afforded some relief.

With the relative anæmia and possibility of nephritis, the prognosis is, of course, very dubious and the possible benefit from phenylhydrazine questionable.

Case No. 5. M. E. No. 268890. A Jewish man of 59 who was told four years ago that he had polycythemia. He also had arteriosclerosis diabetes mellitus cardiac hypertrophy and insufficiency

When first seen (September 10, 1930) he was not acutely ill but his face was very red and the edge of spleen was felt 17 c.m. helow costal margin; hæmoglobin was 128 per cent and red cells 6,700,000. He had four short courses of phenylhydrazine, the first 0.1 gram daily for five days, and the last three 0.1 gram daily for two

days (a total of 1,1 grains). His hæmoglobin went down to 107 per cent and his red eclls to 5,900,000 and he felt better.

He continued to feel well and had no more plienylhydrazine. Because of his numerous ailments, it seemed wiser not to give him any more of the drug. He was being cared for in the diabetic clinic.

Case No. 6. I. B. No. 296983. In 1922 a Jewish exbartender came to this clinie, complaining of pain around the heart for seven weeks. The pain usually lasted a few minutes and was never excruciating, nor was he alarmed by it.

His face and mueous membrane were eongested, but he did not appear acutely ill. The heart was enlarged, but otherwise appeared to be normal. The spleen reached Blood Wassermann and uring were negative.

Blood count; hæmoglobin 140 per cent; red blood cells 6,300,000; white blood cells 7,900; platelets 440,000; differential not significant.

X-ray showed heart enlarged and electrocardiogram was "yery suggestive of myocardial damage."

A diagnosis of polycythemia vera was made and the possibility of coronary selerosis was considered. He was given radiotherapy, a single exposure covering half of anterior, or posterior aspect of the trunk, or the long bones. In nine months he was treated fifteen times, The hæmoglobin dropped to 84 per cent and red cells to 3,300,000.

He gained weight and the attacks of pain were less severe. In addition to radiotherapy he was also given nitrites.

His visits were not regular, but in October 1926 (four years after first visit) he was admitted to the ward with some pain in left upper quadrant of abdomen, which was thought to be due to splenic infaret. Pain lasted only a few days and he left the hospital much better.

After an absence of one year (i.e., five years after first visit), he reappeared with pain in the back and bloody urine. This was followed in a few months by an attack of phlebitis in left lcg.

In April 1929 his hiemoglobin was 132 per cent, red cells 9,700,000, and white blood cells 13,000. He was given three short courses of phenylhydrazine, after which the hæmoglobin dropped to 100 per cent. he did not like the drug and we did not urge him to take it. When last seen in June, 1931 (nine years after first visit) he had no complaints, spleen was 12 c.m. below costal margin and hæmoglobin was 121 per eent, red blood cells 9,800,000.

Here is a man who can get along pretty well and al-though his red cells and hemoglobin are far too high, he had no symptoms referable to polycythemia and so we stopped giving him the drug. The explanation of the cardiac pain remains in doubt, although apparently better, the possibility of a damaged myocardium remains.

It is interesting to speculate on the possible relationship between the cardiac pain and the abnormal blood. There is, of course, no gainsaying the evidence of the electrocardiogram but the observations in 1926 and 1930 both show definite improvement over the first taken in 1922. But at the time of these observations the hemo-clobin was between 120 and 125, while the red cells were between 8,000,000 and 8,500,000. Now, to add to the confusion, the red cells were not so high when he was having his pain. It is quite possible that the damage to the licart was not great and the pain was part of the discomfort so usual with these patients. It is worthy of note that one of Owen's patients complained of cardiac pain,

Case No. 7. R. W. No. 83446. In May 1929 a Russtan Jewess of 60 years came into the hospital with a great many complaints. Among the most annoying were headache, dizziness, and pain around the heart. The last was not severe enough to cause her much concern.

She had been feeling bad for three years but thought that her face had been noticeably red for five years. Her blood pressure had been high for approximately the

same length of time.

When first seen by us, the patient was an elderly woman with red face and purplish mucous membrane, not particularly uncomfortable and certainly not acutely ill. The most important finding on physical examination, at least from our standpoint, was a spleen just palpable at the costal margin. The blood pressure was 165/85. Hæmoglobin 160 per cent; red blood cells 8,500,000; white blood cells 14,700; nothing abnormal seen in the smear. The blood Wassermann was positive, Kahn—4. Kidney function test showed excretion to be only 50 per cent. Seven urinalyses revealed neither sugar, albumin nor casts.

Electrocardiographic report was as follows: "The low voltage in all leads indicates a moderate degree of myo-

cardial fibrosis."

X-rays of knees and right foot showed "mild arthritic

changes."

She complained bitterly of headache and was helped but little by sedatives, nitrites or phlebotomy (500 mils). The last had only slight effect on the red blood cells and hæmoglobin.

Splenic extract (83 grams in thirteen days) also proved futile. Her complaints continued to be numerous and varied. The problem was all the more difficult because in addition to being neurotic, the woman was really ill.

The advanced age, hypertension, myocarditis and possible renal involvement made her anything but a desirable patient for phenylhydrazine. However, we decided to try small doses and she was given 0.5 grams in five days, with little change in the blood pieture and no untoward symptoms.

After a visit of two months, she left the hospital slightly improved, to be cared for in the Clinic. Here she was treated for syphilis, her blood Wassermann became normal and for a time at least she was better. This improvement was not lasting and she was readmitted with the same old story on October 27, 1931.

Her condition was practically unchanged, except that blood pressure was up a little (208/100). No change in size of the spleen. The various therapeutic measures had improved the blood pieture but little. Hæmoglobin 140 per eent; red blood eells 7,700,000; white blood eells 11,700.

Two phlebotomies gave little relief and phenylhydrazine was tried again (1.2 grams in sixteen days). Two days after the last dos was 131 per eent and red eells were inical improvement was negligible, but the decrease in red cells continued and in a month the hæmoglobin was 102 per cent

and red eells 5,300,000.

This is a good example of a patient with polyeythemia vera for whom therapy offers little. In addition to the erythremia the patient had definite cardiovaseular disease, some renal involvement and chronic multiple arthritis. Her heart pain did not appear to trouble her much. Splenic extract and phlebotomy did little good. Not at all the type of case we would choose for phenylhydrazine, but the last blood count showed a favorable change and seemed to indicate that the drug was the most effective of any of the therapeutic measures tried.

Case No. 8. M. W. G. No. 224387. A well nourished, heavily built man of 47, with congested skin and mucous membrane. He eame to the hospital first in October, 1929, complaining of headaehes, dizziness and pains in his back, the last so severe that he could not work. His spleen was felt three or four e.m. below the costal margin. Blood count: hæmoglobin 160 per cent; red blood cells 10,600,000; white blood cells 9,800; neutrophiles 77 per cent; lymphocytes 23 per cent; platelets 327,000.

His first symptoms were noticed twelve years prior to admission. He had been treated at different places with radio-therapy and drugs (probably phenylhydrazine) but treatment had been neither regular nor helpful.

He had taken phenylhydrazine for over two and a half years and his blood observed regularly. (See Chart II.) He held his weight, complained of very little discomfort and was able to work steadily.

eomfort and was able to work steadily.

Six months ago (May 7, 1931) he suddenly became very yellow. After receiving 1.7 grams of phenylhydra-

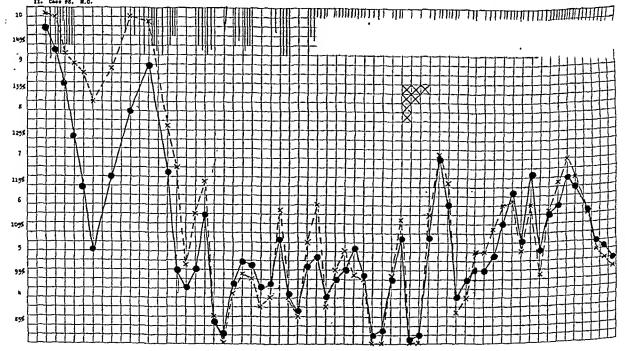


CHART II. CASE No. 8. M. W. G. Sec Explanation, page 1045.

zine in two weeks (09 grams in week immediately pre ceding attack plus 08 grams during week before that) It is interesting to observe that the red cells had tend ed to go up just before he became jaundiced and the dose was mereased from 08 to 09 grams a week For one who had been as resistant to the drug as this man this was not a large dose, he had taken more in a simi lar period. We are inclined to think this was an accu mulative effect and try to guard against it by giving the drug in relatively larger doses over a shorter time, with several days between For example the patient sible, after the 'rest days' The patient is seen, if pos This man of control of the patient is seen, if pos takes his capsules for three or four days and then is allowed three 'rest days' The patient is seen, if pos

This man at present shows no ill effects of what may be considered rather strenuous treatment, and a glance at Chart II will show that the red cells are kept in reasonable limits with less of the drug than was for

merly necessary

Case No 9 R F F No 230091 A college profes sor of 46 years who had been unable to "carry on" be cause of his numerous cerebral symptoms

In 1918 his first blood count showed a hæmoglobin of 115 per cent, with 5,900 000 red blood cells. This was considered a 'slight polycythemia rubra' but no treat ment was given

Disturbing symptoms began in June, 1923 Since that time he has had vertigo, transient paræsthesia, muscle aches, pun in joints, diplople, aphasia amnesia and fre quent nosebleeds. In 1924 he felt so badly that he again consulted a physician who found 12,000,000 red blood cells

He has been treated extensively, both in this country Phenylhy drazine was given first but in So used it had little effect. He was also and abroad bled and given radiotherapy, philebotom, usually afford ing immediate but only temporary relief and radio therapy little if any He also spent about a week in an oxygen chamber without benefit He was first seen at Presbyterian Hospital in October, 1929 At that time his spleen was felt 8 cm be

low the costal margin Radiotherapy was tried again and in eight months the long bones were treated twenty

eight times, without much success. He was then started on phenylhydrazine, and his been taking it pretty regu larly ever since (See Chart III) An endeavor has been made to make him comfortable, rather than keep red cells within normal limits. His symptoms are much less marked and he can lead a more nearly normal life When he is taking more strennous exercise he seems to need more of the drug but feels better, none the less

We think he illustrates the fact that phenythydrazine may be helpful when the Roentgen ray fails How long we can help is, of course problematical, but he cer talmly is better when taking the drug Like patient No 8, he requires less of the drug than he formerly

Case No 10 S A No 238861 On September 11, 1931, a Turkish man of 57 came in because his feet were painful and swollen. He had noticed that his face was red for four or five years. Physical examination showed the liver edge easily pulpable four em below the costal margin. The spleen was felt as a freely movable rounded mass, extending six cm into the right upper quadrant Blood count was hemoglobin 125 per cent red cells 8 500,000, white cells 15 900, neutrophiles 88 per cent, cosmophiles 3 per cent, lymphocytes 9 per cent A diagnosis of polycythemia was made and he was ad mitted to the hospital

He received 35 grams of plienyllis drazine over a perlod of nineteen days. His blood count was followed carefully, but unfortunitely, no allowance was made for a cumilitive effect and four days after the drug was discontinued, his hemoglobin went down to 43 per cent, with 2 400,000 red ecils (October 12, 1931) The white cells were up to \$2000 and reticulocytes were 172 per cent. He was markedly jaundiced

This shows what can happen when the patient's toleration for phenylliydrazine is unknown and an overdose is given. However, in this instance no harm was done, the patient returned for "follow up two weeks after discharge. His hæmoglobin then was 85 per cent red eells 5,100 000, white cells 19 000 He said he had not

felt better for years

On December 12 1931 hæmoglobin was 116 per cent ntd red cells were 6 300 000 He was given 06 of

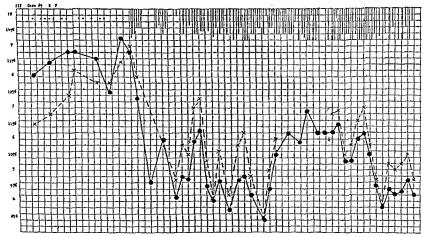


CHART III CASE NO 9 See Extlaration tage 1045

phenylhydrazine in one week which brought the hæmoglobin down to 86 per cent and erythrocytes to 4,800,000. Again he was slightly jaundiced. The color lasted for about two weeks. On January 13, 1932, the

hæmoglobin was 95 per cent and the red cells were 4,400,000; no other ill effects were noted.

Evidently this man must be very susceptible to the

drug, and may do well with smaller doses.

The primary object of this paper is to call attention to the use of phenylhydrazine in treating erythremia. No claim of originality is made; rather is the work of others confirmed. Several of the cases studied have been followed for years and two have received the drug almost continously, one for two and one for two and a half years (Patients No. 9 and No. 8). For the sake of brevity, the histories have been cut down as much as possible. There are, however, a few details worthy of special mention.

The first two patients (No. 1 and No. 2) may be classified as early. Both of these patients became jaundiced after comparatively small doses of the drug. Mrs. C. B. (No. 1) is apparently helped by small doses. Mr. H. Z. (No. 2), on the other hand, feels no better when the red cells are lower. So, for the present at least, there is nothing to be gained by this form of therapy in his case. This man is something of a problem; the psychiatrists call him a "schizoid personality," but he is not definitely psychotic. Levin¹⁶ found nine cases of psychosis in erythremia in the literature, and reported one of his own. Although, as he says, mental disorders may be rare in polycythemia vera, at the same time one is often impressed with the multiplicity of complaints that some of these patients have. this group at least two more may be said to be neurotic and inclined to find new symptoms (No. 4 and No. 7).

Much as we should like to be able to advocate phenylhydrazine in all cases, it does not seem to be necessary for patient No. 3, nor advisable for patients No. 4 or No. 5.

Mr. I. B. (No. 6) might have been helped by the drug, but he refused to take it and so that settled the question.

Although Mrs. W. (No. 7) is a good example of the type of individual who should *not* take phenylhydrazine, it was given her, more or less in desperation, as a last resort, and instead of being harmful, has been beneficial.

Mr. M. G. (No. 8) and Prof. F. (No. 9) both seem definitely better after taking the drug constantly for long periods. This is particularly interesting in the case of Prof. F, as various other forms of treatment had not been successful.

The last patient (No. 10) is probably susceptible to the drug, and twice has been jaundiced, once after too much of the drug, and again after comparatively small doses.

Notwithstanding this, he is much improved clinically and says that he feels "one hundred per cent better."

Of these ten cases, all of whom have been given phenylhydrazine three have been markedly jaundiced and one very slightly, but as far as we can see, in no case has there been anything but temporary inconvenience and there has been no indication of permanent damage. The symptom is certainly an indication of too much of the drug and should be avoided if possible. Sometimes it will appear most unexpectedly after small doses, as in patients No. 1 and No. 2, and sometimes when the tolerance of the patient is apparently known (No. 8).

It is too much to say that phenylhydrazine is the best method of treating erythremia, but it certainly has some advantages, not the least of which are convenience and moderate cost. In a chronic disease, these considerations are of real significance. In patient No. 9 it was helpful when radiotherapy had failed.

It may be advisable to use phenylhydrazine in combination with radiotherapy, but in this series, as far as possible, we have attempted to study the effect of the drug alone.

Of the ten patients treated, seven were male and three female; six were Jews; three were Americans, one was a Turk. All save one had palpable spleens (two were just felt at costal margin, four from 4 to 5 cm., one was 8 cm., one 10 cm., and one 17 cm. below the costal margin). There is, of course, usually some decrease in size of the spleen after treatment, but this is not always constant.

Mrs. H. (No. 4) had a very high platelet count (930,000). Although these patients are said to have high platelet counts, such an increase as this is, we think, rather unusual. Incidentally, she has been a difficult patient to treat. Her symptoms seemed to be out of all proportion to the blood picture.

In this series of ten patients, five seem to have been benefited by phenylhydrazine (patients No. 1, No. 7, No. 8, No. 9, No. 10). Of these, two are outstanding and the improvement is sufficiently marked and has endured long enough to be significant (patients No. 8 and No. 9). These two patients have been followed long enough to exclude the possibility of normal remissions. These results may not be considered noteworthy, but it must be recalled that this is a chronic condition and not easy to arrest. Taschenberg¹⁷ thought there

was danger of the drug losing its efficacy after long usage. The opposite would seem to be true with these two patients.

The drug, although not fool-proof, has its value and is often indicated, especially in the earlier cases. Unfortunately, it is not possible

to say what may be considered a safe maintaining dose. This must be worked out for each patient individually, and even when this is done, every patient that is under treatment should have blood examinations at frequent intervals.

Conclusions

1. Five out of ten patients were apparently benefited by phenylhydrazine. For various reasons, the others did not take the drug long enough to afford any satisfactory evidence. Except for jaundice, no ill effects were observed. The drug is dangerous and its use is not always advisable. Careful observation and the adjustment of the doses probably reduce the danger considerably.

2 Each patient is a "law unto himself" and

a high blood count does not necessarily indicate phenylhydrazine.

3. Phenylhydrazine should never be given unless the patient can be kept under close observation and the blood count noted every week or two.

4 Though phenyllydrazine cannot cure polycythemia vera, it often refieves symptoms and makes life happier, with but little loss of time for the patient.

EXPLANATION OF CHARTS

The unbroken line represents the red blood cell count, ond the broken line the hamoglobin,

Each square is equal to 200,000 red cells and 2 per cent hamoglobin when considered up and down. When considered from left to right coch square represents two weeks, so that every chart covers two years' time. The lines at the top of the chart indicate the disage of phenylhydrazine, each square equaling 02 grain of the drug.

The large crosses, completely filling the squares, indicate idendice, the degree of which is shown by the number of crosses Stars on Chart III indicate radiotherapy.

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PSYCHOPATHIC PERSONALITY

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PSYCHOPATHIC personality is a clinical condition in which character anomalies are in the foreground. It is not a general expression to indicate departure from the psychically well-adjusted group, but it has its own special connotation, its own special symptomatological picture or clinical syndrome. Nor does it refer to other psychiatric disorders that have come to have their own designations, such as demential praecox; manic-depressive psychosis, certain of the epilepsics, the psychoneuroses, the organic

psychoses, etc. The type of disorder now most commonly called psychopathic personality was first called "constitutional psychopathic inferiority," by Adolf Mcyer¹ in 1906. In order to cover the literature on this syndrome, it is necessary to remember that the following terms have also been used to designate this misunderstood condition: Constitutional Inferior, Constitutional Psychopathic Personality, Psychopath, Constitutional Psychopathic State, Moral Imbecile, Constitutional Defective,

Defective Delinquent, Emotionally Unstable or Inferior, Neurotic Constitution, and Instinct Character.

The "Statistical Manual" requires us to consider as psychopathic personalities a large group of persons showing abnormality expressed mainly in the character and intensity of the emotional reactions.

Psychopathic personalities are persons having anomalies of character which, because normal to the individual, cannot be said to be evidences of a psychosis. They lack continuity of purpose, fixity of ambition, and show a poverty of sentiment. They often show special or peculiar reactions such as tendencies towards habitual delinquency, pathological lying, eccentricities, sexual perversions, kleptomania, pyromania, etc.

In psychopathic personalities there are no known organic alterations acting as etiological agents. When a psychiatric syndrome resembling psychopathic personality is engrafted upon a recognized organic disorder, such as epidemic encephalitis, it is the practice to classify the situation according to the organic disturbance. Furthermore, there is no uniform finding in the field of intelligence in this group. Intellectual capacity may be below or above the average, or average. As Bleuler says about this group, "even if there is an average or greater intelligence, it has little regulating influence on action of the psychopathic personality."

Strecker and Ebaugh state that the psychopathic personality is an individual ill-equipped from birth to meet the demands of his environment. There is an apparent constitutional lack of responsiveness to the social demands of honesty or truthfulness or decency or consideration for others which incapacitates the person from settling down to any permanent standardized activity. He is therefore emotionally unstable, not to be depended upon, acts on impulses, shows poor judgment, is constantly led into unwise activities. Since the difficulty cannot be traced to any definite disease or organic process, the conclusion is that there is some constitutional lack of endowment.

The psychopathic personality may be recognized in youth, although it does not necessarily follow that the character traits may be perpetuated into adulthood. This type of person is prone to associate in a group life in which he can take leadership, and is often sly and cunning and gains his aims by unscrupulous means. Not infrequently these children are pugnacious and may be known as "toughs." They like to lead gangs into illegal pursuits, or, if that can not be accomplished, they may imagine they occupy the role of leader and recount imagined exploits as if they had really happened. As a rule, they do not get along well in school, for they are unmindful of classroom order, they may actively antagonize

their classmates or the teachers, and they are apt to play truant. When they do not have their own way they often develop tantrums of a severe grade. If they continue these traits into puberty, they are easily involved in criminal activity. Many thieves, liars, swindlers, forgerers have the background that has just been described.

Richmond² says that the psychopathic personality as a child is apt to be as hard as nails. He is with difficulty trained in habits of cleanliness, and it is not true of him that a burnt child dreads the fire. There is a marked superficiality of emotional life. Abilities are irregular; he may be very bright and yet show marked lack of judg-The psychopath does not adjust to any environment except one that he can dominate. He learns apparently only that which he chooses. In his love relations he demands everything and gives nothing. He is an egoist, and seems to be living in a world of his own. He is a difficult child to deal with. Promises are broken, appreciations of truth is beyond him, the gratification of his own impulses seems the thing worth while Because of the tendency to phantasy one cannot be sure that one is getting anywhere in tracing the origin of his difficulties.

Dooley describes the psychopathic woman as one who shows less ability to subordinate herself to the social group than the ordinary person, who cannot work or wait for deferred pleasure, is likely to be extravagant and a drifter in occupations, cannot acquire stable habits or fixed principles. and seems never to advance beyond infancy in making gratification of the desire of the moment the goal. She rebels against discipline, displays egoism and jealousy; she makes few friends, and is apt to choose those who are younger. There is superficial quickness and imitative power. The sexual instincts may be quite normal, although there may be homosexuality in practice. There is an overweening desire for sympathy and petting. There is seldom sincerity in the interest in reeducation.

Hinsie³ states that the psychopathic personality of adulthood is characterized by irresponsibility. carelessness, blunting of the ethical senses and disregard for the opinions of others in matters of ordinary conventions. It is often difficult, if not impossible, to distinguish between this type of psychopathic personality and the simple form of schizophrenia. Many authorities are inclined to regard sexual perverts as psychopathic personalities, particularly if the perversion forms the principal or sole outlet for sexuality.

Psychopathic personalities may be conveniently divided into three types, as follows:

First, those whose mal-adjustment appears to be due to deficiencies on the organic level, and therefore might be known as organic inferiority. These persons show mal-adjustment very early. This group includes the anti-social, mental defec-

tives, as well as cases with "stigmata," such as infantilism and dysfunction of the endocrine

glands.

Second, those showing inherent or acquired abnormalities at the psychosocial level. They show psychopathic family traits; there is no intellectual deficiency, and there are no marked physical anomalies. They are seclusive, suspicious, oversensitive, lack fixity of purpose, are drifters, often have feelings of inferiority, are emotionally unstable, submissive, and anti-social. They are often hysterical, epileptic, neurasthenic or psychasthenic.

Third, the social psychopaths, or "sociopathic," whose abnormalities of adjustment are usually acquired. They are difficult to manage at home. They are very alert, very aggressive, markedly egotistic, and narcissistic. Almost always there is a strong father antagonism shown in analysis. They are full of schemes, lack fixity of purpose.

The percentage of psychopathic personalities found in delinquent populations have been given considerable attention, with the following results:

	Cascs	Per cent
Glueck	608	18.9
National Committee for Mental		
Hygiene	1288	42.2
Bingliam	300	43.0
Stearns	107	12.2
Glueck	113	6.2
Raphael, et al	1988	36.8
Olson	2861	24.9
Gregary	1288	77.0

Examinations of 1046 new admissions classified at the Elmira Reformatory during the fiscal year 1931-32 showed that there were 32.4 per cent psychopathic personalities amongst these men, which might be divided into types as follows:

Type I-Constitutional organic inferiority-1.1.

Type II—Psycho-social psychopath—5.1.
Type III—Sociopath—26.9.

There is no recognized nor outlined special therapy for the psychopath personality as yet, and the general tendency is to regard the psychopathic maladjustments as fixed and incurable; and of course those who consider these states as inherited are already committed to the pessimistic outlook. Those who find in the endocrinological regions the etiology of personality difficulties, delinquency, ctc., or in any way introduce physiological concepts and biochemistry into the personality formulas naturally find some hopefulness in the development of therapy along this line. Prolonged analysis has given some encouragement, but work in the therapy is extremely limited.

Karpman states that the psychopathic person-

ality is seldom sincere in his wish for re-education, makes but a weak, fluctuating transference, which is superficial. O'Mally has much the same opinion, and states that he is so egocentric, so narcissistic, he is so well-satisfied with himself, especially with his behavior, that little can be done with him analytically. He likes the attention given by the analyst and tries to retain his difficulties. Successful transference cannot be obtained. He feels that if the psychopathic components were removed much of happiness would be taken out of life. Analysis is resisted, and the love life is satisfied with self love. Richmond thinks that because of the tendency to phantasy one can never be sure that one is getting anywhere in tracing the origin of the psychopath's difficulties.

CASE #987

A 19 year old boy of Polish-Jewish ancestry, of dull normal intelligence with a Stanford Binet age of 12 and an IQ of 80, with a performance age of 9; having very poor construction ability; he is five fect and 34 inches and weighs 100 pounds. He shows a heart murmur at the base of the heart, but which is not transmitted. He has a mottled skin, a feminine distribution of hair, is in fair physical condition, and shows normal neurological findings.

His father, 52 years of age, born in Poland, of Jewish ancestry, came to U.S.A. about 22 years ago, is literate, temperate, a citizen, and a baker by trade. Mother, 50 years of age, born in Poland, came to U.S.A. with the father 22 years ago, is a citizen, illiterate, in good health, a housewife, had four children of which inmate is the

youngest.

Inmate was born in N. Y. C. Birth was without pathology. Nothing much is known about his early childhood except that he began school at 5, continued until 15 and reached the 6th grade; then, for some reason or other, he was immediately jumped to the 8th grade. Inmate can give no reason for jumping these grades, complains that he could not do the work. The only illness he had during his childhood was whooping cough; when 17 years old he suffered a very severe head injury and as a result sustained a right facial paralysis. On leaving school he worked in a women's dress factory as a stock clerk, worked fairly steadily until the firm went bankrupt. He was out of employment for about 6 months prior to his arrest. As a boy he was a member of the Boy Seouts, but he was not interested in their organization, and after six months did not attend the meetings. On leaving school he began going around with a gang, and on losing his position in the factory he began to earn some money bootlegging. While delivering some liquor he was urged to handle narcotics and made good money selling the drugs, but was apprehended by the Federal Agents, was arrested and pleaded guilty.

He was sentenced to 15 months in the Reforma-

Psychiatric examination showed that this boy has a marked feeling of inferiority, feels that he has a very bad heart murmur, and says that he is in poor health, which is borne out by his appearance but not from the physical examination. This man has caused some trouble while at the Reformatory because of his psychopathic make-up, which was diagnosis of organic inferiority type. The prognosis for the future is very bad.

CASE #52393

A 19 year old boy of English-Dutch ancestry, of normal intelligence with a Stanford Binet age of 15, an IQ of 100, a performance age of $15\frac{1}{2}$, normal construction ability, weighs 145 pounds and is five feet 10 inches. As a child he was said to be in very poor health, undernourished. During his childhood he had measles, mumps, chickenpox, scarlet fever and pneumonia. On admission to the Reformatory he was physically found to be in good condition, with no evident

physical pathology.

The father, born in U.S.A., of English-Dutch ancestry, literate, intemperate, and a laborer; was very cruel to his family. He was arrested on a charge of burglary, sent to Auburn Prison and died 2 years later while in prison, from diabetes, when 66 years of age. He had been a painter by trade and had a very bad reputation in the neigh-Mother, born in Canada, of English ancestry, 64 years of age; following her husband's incarceration she worked in a steam laundry, but because of poor health and nervousness, had to quit and has lived on charity since. She had 8 children, only one daughter who died at 9 days old; inmate is the youngest child in the Three brothers of this inmate have served time in the Reformatory, and two of these brothers are now in Auburn Prison, on other charges.

Inmate was born in a small N. Y. town, when the mother was 45 and the father 51. He was always considered very nervous, but obedient although unreliable; was easily led, but he would work at anything he was offered. According to the mother the inmate's older brothers did not care for the inmate, who had to take his own part at all times. He was always very fond of music, could play the violin by ear and was very interested in mechanics, said to be very good in elec-. trical work and auto repairing. He began school at 7, continued until 16, finished the 7th grade, had no special ambition and on leaving school he worked in a paper mill as a laborer, for about 6 months; but he soon quit, worked at odd jobs and was frequently unemployed. He began to walk and talk at about 2 years of age, but was always considered dull in school, although our psychological examination shows him to be of normal

intelligence. Inmate stated that he never failed in his studies. He was first arrested when about 9 years old, when he stole some money from a milk fund in school, and from then on he was arrested 12 times, but never served time before The family was always in very bad financial condition, and inmate finally stole a roll of canvas worth about \$40 and was sentenced to the Reformatory for a term of 3 years.

Psychiatric examination of this man shows him to be emotionally unstable, having a marked feeling of inferiority, very aware of his bad family background, having had a poor school and working record, and who was physically ill as a child. He is the youngest of a large family, has always been lazy and shiftless, somewhat introverted, shy and retiring; a definite psychopathic personality, of psycho-social type, and is very irritable, who has found security in the Reformatory. The prognosis for the future is bad.

Case #14393

A 19 year old boy of Italian ancestry, who is of dull normal intelligence with a Stanford Binet age of 13, an IQ of 87, a performance age of 16, with

excellent construction ability; physically in good condition, weighs 169 pounds and measures 5 feet, 634 inches. He had no special illness as a child, was operated on for hemorrhoids about 6 years ago, when 13 years old, and had gonorrhea when 15 years old, for which he received treat-The father, died at the age of 51, following the death of his son, who was shot by the police when he attempted to get away from the scene of a crime. The father was born in Italy and came to

U.S.A. about 27 years before his death, was a citizen, practically illiterate as to English, was a moderate drinker, a shoemaker by trade who was well respected in the neighborhood, and apparently died from what was thought to be grief following the death of his son. Mother, 49 years of age, born in Italy, came to U.S.A. with the father 27 years ago, is illiterate, a citizen, a housewife, in good health, although she continually worries. She has had six children of which one died, inmate being the fifth in the family. The family lives in a four-room apartment, in a fourfamily house owned by the mother, who is highly respected in the neighborhood.

Inmate was born in N. Y. C. He began school at 5, continued until 14. He was frequently absent, but had good deportment, was considered an average pupil. He was then committed to the Catholic Protectory because of truancy, where he was considered a dull pupil. He was then committed to a truant school and paroled as a graduate from the 8th grade when 14 years old. While in that institution his conduct and work were good, his progress in his trade was good. He was said to be over-indulged by his parents.

was allowed to spend most of his time on the streets. On leaving school he only worked in two For about 3 months he worked as a butcher's helper where he earned \$5 per week, but he quit. He then worked off and on for his father, in a shoe repairing establishment, for about 7 months without receiving any special salary; otherwise he had no working record. He went around with a gang, and prior to his last arrest he was unemployed for about 18 months, apparently supporting himself by his eriminal activities. He was arrested in 1929 on a charge of assault and attempted robbery, but the ease was dismissed. July 25, 1932, in company with three associates, two escaped and one sent to Sing Sing, they hired an apartment, went to a public dance hall, secured a dancing hostess, took her to the apartment, stripped her of her clothes, and when she would not submit to having intercourse with four men, she was knocked down. When they had gone to sleep, she took one of the men's overcoats, escaped, notified the police. Inmate was arrested, indicted for rape 1st degree which on a plea was reduced to assault the 2nd degree, for which he was convicted, sentenced to the Reformatory for a term of 5 years.

Psychiatric examination of this 19 year old man shows him emotionally unstable, rather paranoid, and coming from a good family background. He has been a problem all his life, has been sexually promiscuous and rather precocious in his sexual development, having had sex intercourse. the first time, when he was about 14, and has continued sex indulgences frequently since that time. He is antagonistic, a definite psychopathic personality of sociopathie type, without any conception of social requirements; a dangerous gangster who will always be in trouble. He has always been able to beat the law, as he has done in this case. He has no insight, and prognosis is bad.

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PHYSICAL THERAPY IN DERMATOLOGY

By PAUL E. BECHET, M.D., NEW YORK, N. Y.

Read by invitation at the Forty-first Annual Meeting of the American Physical Therapy Association, Philadelphia, June, 1931.

NLY the essentials of this vast subject can be taken up in the usual allotted time, therefore it might be best to use that time to put before us the physical therapeutic opinions. impressions, and observations of twenty dermatologie years, rather than give you an alphabetical list of dermatoses with the exact definition of what particular apparatus might benefit each. It is the usual procedure, especially among the younger men, to commiserate our predecessors over their lack of the chromium niekeled, black, maroon, or grey enameled machinery of today. Such commiseration is needless, for I am old enough to remember the really very splendid cosmetie results often obtained by the dermatologist of the past generation with his very limited physical apparatus, yet I am young enough to appreeiate the enormous advances made since his day and to be grateful for the use of these modern methods. The most frequently used physical agents in dermatotherapeutics are the röntgen rays, radium, endothermy, ultraviolet light, refrigeration, and electrolysis. It might be well to consider these agents under separate headings, taking the most important one first.

X-Rays

This is the most important therapeutie agent in dermatology. Many skin diseases are either cured or improved by its use, it has done away with many obnoxious salves and lotions, and has contributed more comfort to the victim of a skin disease than any other single agent. As the years go on its sphere of usefulness does not diminish but on the contrary increases as our knowledge of its use increases. Like all useful measures it has its dangers. I have personally seen many deplorable results from its careless, ignorant, or eonscienceless use. Its employment in the treatment of diseases of the skin lies particularly within the province of the dermatologist, because he knows whether or not a particular dermatosis is amenable to the x-rays; and he is thoroughly acquainted with the results, complications, indications, contraindications, dosage, and other features. A correct diagnosis is essential, for after all the x-rays are not a panacea for all dermatologic ills; there are many skin diseases in which it proves of no benefit whatever and a considerable number which it actually aggravates. Overtreatment is a common error. It is a good plan

to use as small a dose as is consistently possible to obtain the desired result. Most of the dermatoses which yield to it do not require more than a quarter of a skin unit once a week. Only a very small group require a higher dosage. It is always better to err on the side of safety and give a little less treatment than too much. Patients are not grateful for the permanent atrophy and telangiectasia of a radiodermatitis, even though they are rid of their skin disease. On the other hand, with the low dosage of a quarter of a skin unit given once a week, eight to fifteen treatments may be administered without the slightest fear of any untoward sequelae. This is especially true of acne, in which disease the x-rays are almost a specific remedy; they are of the greatest value in all its stages, with the single exception of acne rosacea, in the treatment of which they often disappoint. The x-rays are the method of choice in the treatment of ringworm of the scalp. With careful technique the hair invariably regrows in a normal manner. Its brilliant achievement in this disease is due entirely to complete epilation, as it has no fungicidal value. Mycosis fungoides is not dreaded nearly as much since the advent of the x-rays; their use does not cure, but it stops the itching, causes the disappearance of many of the tumors and infiltrated plaques, and prolongs the patient's life by many years. The same result may be expected in multiple idiopathic hemorrhagic

Its value in basal cell epithelioma is known by all, but I do not depend on it alone in the treatment of skin cancer. I have been highly successful in the use of the following method, the various steps of which are done at the same time: (1) electrocoagulation; (2) thorough curettage of the softened mass with a very sharp curette; (3) electrodesiccation of the curetted surface; (4) two to four skin units of unfiltered x-rays. This method may sound a bit strenuous, but in reality it is not and the cosmetic results are very good. I much prefer an atrophic scar with perhaps slight telangiectasia to a recurrence of the epithelioma. I have had no experience with epithelioma of the lip for the simple reason that I consider this type of malignancy as being without the sphere of the dermatologist; it belongs to the surgeon, as resection of the lymphnodes is so often required. Radiotherapy should only be used as a postoperative measure to destroy whatever cancer cells might be left by the knife. Eczema, psoriasis. and lichenification at times give way to the x-rays in a remarkable manner. but they are rarely permanently cured and frequently recur. Röntgenotherapy should therefore be used most cautiously as it is easy to give an overdose through the repeated treatments of recurrences in the space of years. It is disconcerting to note patches of eczema or psoriasis occurring on the site of a radiodermatitis, caused by previous attempt to overcome the same disease with the x-ray. Other dermatoses in which röntgenotherapy is of great value are granuloma annulare, scrofuloderma, verruca plantaris, tinea barbae, and sycosis. In the last two diseases radiodermatitis is a most common sequel because of the repeated epilating doses. I have attained very much better results in sycosis with the smaller doses of one quarter of a skin unit once a week, thus abolishing the epilating dose. It is however at best a most intractable disease. Before leaving the subject of the x-rays may I be allowed a word in reference to their use in hyper-They should be condemned unqualitrichosis. fieldy. There is hardly a single dermatologist in active dispensary and private practice who does not within a year observe a number of unfortunate women badly disfigured by their use. Patients should be warned and told that the only safe measure for the removal of superfluous hair electrolysis. These permanently disfigured women have in most instances been burned in the offices of various concerns advertising the removal of superfluous hair by actinic measures, but at the same time hiding from their patients the fact that the x-rays are being used.

The supersoft röntgen rays with wave lengths averaging two angström units and known as the "grenz" rays have also a field of usefulness. They are however still in the experimental stage. They were believed at first to be absolutely free of any danger, even in large doses, but it is now known that atrophy and telangiectasia do occasionally occur although not nearly to the same extent as after ordinary x-rays.

Radium

The action of radium in a general way is similar to that of the x-rays, but the technique of its dosage is not as easily mastered as of the latter. Untoward results are for this reason much greater after its use than after the x-rays. Its greatest field of usefulness in dermatology is in the treatment of vascular nevi, small epitheliomas of the basal cell type, small keloids, senile keratosis, and Occasionally subungual warts plantar warts. disappear after its use. In my experience the smaller the lesion, the better the results. It should not be used for such dermatoses as nevus flam-In treating meus and pigmented hairy moles. vascular nevi or small angiomata the best results are attained in the lesions of shortest duration. It is therefore best never to defer the treatment until the child is older. The advent of endothermy has seriously curtailed the popularity of radium in dermatology. It remains however a most valuable agent in small angiomata. The cosmetic results after the careful use of radium in these lesions are splendid.

Endothermy

Surgical diathermy is outranked in importance in dermatotherapeutics by the x-rays only. Electrodesiccation and electrocoagulation are the two modalitics most used. They have proved an Ideal method in the removal of skin blemishes, such as moles, warts, granuloma pyogenica, telangiec-tasia, and small vascular nevi. Electrosurgery is of supreme importance in the destruction of eutaneous malignant growths. Its action is very rapid and inflammatory reactions are more severe than those following galvanocautery or electrolysis. However in the hands of an experienced operator the cosmetic results are exceedingly good. As in everything clse, experience is essential in the attainment of successful results. The cutting current is more important to the surgeon than to the dermatologist; it is however very useful to the latter in the removal of subcutaneous tumors.

Ultraviolet Rays

This apparatus now occupies the corner of almost every large beauty shop and barber shop in our broad land. Even the home has not escaped. Of course only a small quantity of these lamps are therapeutically efficient; otherwise they would have caused even more damage than they actually have. They have also been exploited I am sorry to say by a goodly number of medical men, either for the sake of financial returns or misdirected enthusiasm. The manufacturers have been responsible for much of this craze, for in their anxiety to make sales they have had printed in their brochures the most extravagant claims. From a dermatologic standpoint what are its actual benefits? They are very few, The water cooled lamp by the decompression method is of value in lupus erythematosus, adenoma sebaceum, nevus flammens, and possibly in the superficial type of lupus vulgaris; the air cooled lamp in pityriasis rosea, angioma serpiginosum, alopeeia areata, acne vulgaris, and psoriasis. In none of these, with the possible exception of nevus flammeus and adenoma schaceum, does it actually cure. As far as its value in premature baldness is concerned, I would like to quote the conclusion of a paragraph in a recent article by Fred Wise, who referred to it as "that form of refined suggestive therapy which induces wealthy baldheaded men to rest and meditate under an ultraviolet halo at certain prescribed intervals."

Refrigeration and Electrolysis

Carbon dioxid snow has undeservedly lost its popularity. It is a most efficient agent, and its cosmetic results are as good as, if not better than those of more popular agents. The difficulty of making proper sized carbon dioxid ice applicators has been entirely eliminated by the Lortat-Jacob eryocautery apparatus, in the use of which I have had much satisfaction. Refrigeration is the method of choice in pigmented nevi and superficial angiomata. It is also of great value in very superficial lupus vulgaris and senile keratoses. It was frequently used in lupus erythematosus before the advent of gold and sodium thiosulphate. Electrolysis is the oldest physical therapeutic method in dermatology. It was widely employed in former years, and I have seen very many splendid results from its skilled use. It is today in the discard, with the exception of its use in the removal of superfluous hair, for the relief of which anomaly it is still the only safe method. It also proves of great value in telangiectasis.

Conclusion

In conclusion it will be noted that many of the different physical therapeutic methods advocated are used for the relief of the same dermatoses. The choice of any particular method is determined by experience alone, and this experience must be acquired. It cannot be imparted by word of mouth, If this humble effort to place before you the salient facts of this vast subject proves of some slight assistance, I shall feel most gratified.

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INVESTIGATIONS OF MEDICAL SERVICES

A number of studies of the distribution of medical services have been made during the last few years, especially from a sociological point of view. All the investigators agree that medical science is abundantly able to cope with the largest proportion of the ills to which the human race is subject; and that the practicing physicians of the United States could give satisfactory service to all the people if the system of practice were adapted to that purpose.

Economic Conditions: The majority of the investigators of medical services have been so-

ciologists and economists who have emphasized their own specialties in their studies. They have secured data regarding the relation of the financial conditions of the sick to the medical services which they receive; and as a result they have classified the people into three groups according to their individual ability to pay for the medical services which they need:

- Those able to pay for all.
- Those able to pay for part.
- Those able to pay for none.

Physicians generally agree with the sociol-

ogists in their economic classification of patients. Doctors also agree with their proposal that the community or State, shall provide that part of medical service for which an individual cannot pay. But physicians wish to retain the personal relation of the individual patient to the individual physician which is lacking in the impersonal, bureaucratic methods of state medicine and group insurance proposed by the sociologists.

Investigations by Sociologists: The problem of the medical care of the indigent is comparatively simple. There have always been "poor laws" in the United States, and physicians are actively cooperating with government officials in devising relief methods which shall be of mutual satisfaction to the medical profession and the community. This Journal of the last six months carried accounts of these activities in six states and in four counties of the State of New York.

More complex is the problem of medical service to those able to pay for part of their care, and for whose bencht sickness insurance is proposed. Physicians are suspicious of insurance plans because of the abuses of the system, as in Cuba. (See this Journal August 15, 1933, page 1001.)

The outstanding study by sociologists and economists is that of the National Committee on the Costs of Medical Care, whose report was made public on November 29, 1932; and the remedy proposed by that committee may be summarized as that of a group action by the people, especially in the form of insurance for medical and hospital care during sickness, beginning with voluntary groups.

Investigations by Health Departments: Departments of Health have also conducted studies in the distribution of medical services, especially in the lines of prevention, although they also propose to enter the field of treatment. An outstanding study along this line was that made by the Governor's Health Commission of New York State, whose report was issued in a printed volume late in the year 1931. The report dealt principally with the problems of administrative medicine and discussed the duties of all governmental officials to provide for health protection on the same bases that they provide for education, police protection, and other governmental activities. The report was considered at a special meeting of the House of Delegates of the Medical Society of the State of New York held on January 14, 1932, and nearly every recommendation was adopted, except that making county health departments mandatory.

Investigations by Medical Societies: Few extensive investigations have been initiated and conducted by medical societies; but an outstanding

one is that which was conducted by the Michigan State Medical Society into the medical agencies of Michigan. Its report is described on page 1061 of this Journal. While one may criticize the report as emphasizing the impersonal, the statistical, and the financial aspects of medical service, and for the paucity of its recommendations, yet it is a demonstration of how an investigating group composed of practicing physicians will conduct a study of the problem of health service. As a matter of fact, the report followed the style and content of that of the National Committee on the Costs of Medical Care.

The County Society: The Michigan House of Delegates asserted a principle which will doubtless prevail in establishing any new method of medical service. Physicians are opposed to application of a new method to any large group of persons who are unprepared to adopt it voluntarily and to cooperate in its execution. The method suggested by the Michigan House of Delegates is that a new system shall be approved when the physicians of a county ask for it through their county medical society. That has been the system by which the existing county health departments in New York State have been established. The Michigan physicians voted to approve health insurance for any county in which the doctors shall put it in operation voluntarily.

The Future in Michigan: The physicians of Michigan have set an example of leadership in conducting an investigation of medical services. While the House of Delegates voted to discharge the investigating committee, yet it appointed its members as the personnel of a Committee on Economics to continue the study. The committee will have precedents for some of its investigations, but must do pioneer work in other lines.

The committee has an abundance of precedents on which to base its action for the care of the indigent, for many States and Counties have experimented with their care during the past two years, and have developed methods which are standard.

There are fewer precedents for the care of those who are able to pay some part, but not all, of the costs of medical services. An outstanding precedent is that of New York State, whose Welfare Law has been in operation for over two years.

There is a large group of persons who have sufficient thrift to take out policies insuring medical and hospital services during sickness; but for this group the Committee will find very few precedents in this country.

The action of the Michigan Committee will be awaited with keen interest by the medical profession throughout the United States.



MEDICAL PROGRESS



The Incidence and Severity of Arteriosclerosis in the Organs.-The fact that a common diagnosis is that of "generalized arterioand that the pathologist may sclerosis' encounter difficulties when he attempts to correlate clinical with pathological findings led William B. Wartman to undertake a study of 500 autopsy records to determine the incidence, distribution, and degree of arteriosclerosis in the various organs of the body. The order of frequency with which the arterioles and small arteries of the organs were affected was: spleen, brain, kidney, adrenal, pancreas, heart, gastro-intestinal tract, lungs, liver, and diaphragm. This is in agreement with the observations of most investigators. It was found that those organs which were most often involved were also most markedly affected by an arteriosclerotic process. The arteries of the spleen, brain, and kidney were sclerotic, for example, in 70 per cent. or more of the cases and of these at least 60 per cent, were involved to a marked degree. In the diaphragm, liver, lungs, and other organs which were infrequently implicated, there was a high incidence of the milder forms of sclerosis and a low incidence of the more advanced forms. Perhaps the most striking feature of the investigation was the rarity of sclerosis of the diaphragmatic arteries, 5.6 per cent., and no case showed marked involvement.

The heart, the pancreas, and the adrenal bodies showed an approximately equal incidence of mild and of marked arteriosclerosis. An important exception is the interesting fact that the brain, although it did not show the greatest total percentage of arteriosclerotic cases, did present the highest incidence of marked involvement. It was found that the incidence and degree of arteriosclerosis increased with the age factor; in the age group (60 to 90 years) the spleen and kidney showed sclerosis in more than two-thirds of the cases. A review of the literature as well as the results of this study indicate that a generalized arteriosclerotic process of a degree sufficiently advanced to be of clinical importance occurs infrequently. diagnosis of generalized A arteriosclerosis should be made with caution and only on the basis of adequate evidence. The clinical features in such cases should be carefully correlated with the histological findings at autopsy, for it is only in such a manner that clarity on this subject will be reached.— American Journal of the Medical Sciences. July, 1933, clxxxvi, 1.

The Etiology of Nocturnal Enuresis,- W. H. de B. Hubert presents a study of 100 cases of enuresis treated at the Maudsley Hospital Child Guidance Clinic and also 50 unselected cases attending the clinic for other reasons. The 150 children were divided into three groups: Group 1 consisted of 50 children referred for treatment by care committees and district medical officers from the elementary schools; Group II of 50 cases of enuresis referred from residential schools; Group III of the 50 unselected cases, mostly children having anxiety states, which served as a control group, The most interesting finding was the frequency with which enuresis appeared in the parents or their siblings, 40 per cent, in Group I as compared with 14 per cent. in Group III. In the other 50 cases the family histories could not be obtained. In the enuretic group 8 per cent. had a history of epilepsy in other members of the family; in Group III, 6 per cent. The numbers are too small to warrant conclusions, but the finding appears to be worth mention-The intelligence of the children sent to the clinic for enuresis was very similar to that of children referred for other reasons. The age of onset was variable; 58 per cent. were said to have wet the bed since birth; 32 per cent. had been trained in cleanliness, but from 3½ to 5 years had commenced nocturnal enuresis, while 10 per cent. showed it only later in childhood. Additional diurnal incontinence was shown by 12 per cent, which in 6 per cent. was combined with fecal incontinence. No relationship could be demonstrated between the amount of urine in the bladder and the time and amount of enuresis. depth of sleep was varied by the administration of sedatives, but this produced no variation in the enuresis. In Group I complete recovery occurred in 40 per cent. of the children. The recovery rate in Group II, those from residential schools, was much lower. This may be related to the fact that in these children careful attention and routine had already failed. Results seemed to depend almost entirely on the individual treatment of the child. No special drug appeared to be of particular value. Belladonna did not seem to possess advantage over any other drug prescribed with equal apparent confidence. Similarly, while limiting fluids and instituting a strict régime was often successful, an equally dramatic cessation of such a system produced good results. Adjustment of single factors in the environment, relief from particular strain, such as undue

pushing of a clever child, was sometimes successful. In all cases an alteration, so far as possible, of the attitude of the parent and child to the trouble was attempted, and an endeavor made to increase the child's understanding of the emotional trends related to this abnormality. No definite correlation between improvement with treatment and absence of hereditary factor could be made.—

The Lancet, June 17, 1933, eexxiv, 5729.

Late Sequels in Stomach and Intestine Following Bacillary Dysentery. — Bacillary dysentery, according to Adolf Ohly, who writes in the Deutsche Medizinische Wochenschrift of May 19, 1933, is followed in so many cases by not only early but also late sequels that a knowledge of these disease pictures is of great diagnostic and therapeutic importance. While it is not easy to bring the late sequels together under a single heading, or to classify them into definite groups, for practical purposes they may be divided into a diarrheal and a spastic-hyperalgetic form. The symptomatology may concern either the stomach, small intestine or colon, or all of these simultaneously. For diagnosis a thorough examination of the entire alimentary canal is necessary, since a large proportion of cases assume the form of a chronic recurrent gastro-enteritis, or gastro-enterocolitis. In the majority, disturbances of the colon occupy the foreground of the picture. The diarrheic forms run their course as a rule without pains, in contrast with the spastic hyperalgetic forms, which are relatively frequent and are characterized by presence of eramping pains. Colitic conditions unquestionably play the major part in the picture. These late sequels are much more stubborn than similar nonspecific conditions, and hence offer a less favorable prognosis, having a tendency to recur, especially after error of diet or exposure to cold. A sparing diet must be carried out as a permanent measure in a considerable number of cases, especially where there is irreparable injury to the mucosa. In other cases it may be possible gradually to increase the functional capacity of the intestine until a moderately liberal diet can be tolerated. An excess of cellulose must be avoided. Fresh raised bread, very fat meats, and cold drinks are harmful, and only small quantities of food should be taken at each meal. In cases where carbohydrate fermentation and diarrhea are the predominant symptoms, the following regimen has been found beneficial: One day of fasting, on which the patient receives nothing but tea or camomile tea; then a week without any carbohydrate but with small amounts of boiled meat, fresh cottage cheese, and in severe cases albumin water. All milk given must contain lime water. After 3-6 days of this strict protein diet, the patient may have noodles, rice, zwieback and buttered toast for a week. Then,

cautiously, small amounts of cooked and strained fruit and vegetables may be given. Not until another week has passed may the patient have potato in the form of a puree, this being the stareli least tolerated. In cases of achylia, hydrochloric acid pepsin combined with pancreon in large doses may be administered. In the spastic-hyperalgetic cases antispasmodics (atropine, papaverine or eumydrine) are indispensable. Hot applications, such as mud packs, hot Priessnitz bandages, and diathermy are useful. In addition, the value of mental suggestion must not be overlooked, since these patients are prone to suffer with fears of tuberculosis and cancer.

Ninth Day Intertherapeutic Erythemas.— It has been usual, says M.G. Milian, writing in the Bulletin de l'Académie de Médecine of May 23, 1933, to regard as toxic any eutaneous eruption that appears during a course of medication. This conception, however, is inexact, and must give place to the view that 2 types of eruption exist under such conditions, one toxic and the other not. A toxic eruption is always the same for any given medicament, its appearance invariably recalling the toxic symptomatology belonging to that medicament. Nontoxic eruptions, on the contrary, have the characteristic of being multiform, that is, for any given medicament they may assume the most varied aspects, resembling now scarlatina, now measles, now roseola, etc., or even assuming a polymorphic form. They appear ordinarily about the ninth day, and for this reason they are called by Milian "ninth day erythema," in order to register in their title this essential chronological character. The nine-day interval is the same, irrespective of whether the medicament in question is given by mouth or intra-muscularly or intravenously. The same eruption may follow multiple and very different medicaments, such as pentavalent arsenics, trivalent arsenics, salts of gold, nirvanol, barbituric compounds, etc. These eruptions reproduce none of the toxic accidents due to a given drug: for example, none of them cause the vasodilator and edematous phenomena observed in arsenical intoxication. They cease after one or two mild recidives, notwithstanding continuation of the treatment in identical or even larger dosage, 3 or 4 times the first. It can be shown that they are infectious erythemas started up by the medicament. This is proved by numerous arguments; for example: (1) They are scarlatiniform, morbilliform, rubeoliform, roseoliform, or polymorphous, more rarely purpura-rheumatoid. (2) To each variety there corresponds a train of febrile and functional phenomena resembling, in attenuated form, those of the disease of its eruptive type. Thus the scarlatiniform erythema is preceded by an angina, headache, and vomiting; the morbilliform, by coryza, conjunctivitis, and bronchitis; the rubeoliform by multiple and often

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quite marked lymph gland engorgements; the polymorphous, in 50 per cent of cases, by rheumatism and arthralgia. (3) These erythemas are nothing else than attenuated eruptive fevers appearing in individuals who harbor latent halfimmunized microbes. Such findings are of great practical and biologic interest. They make it permissible, with certain precautions, to continue a treatment with the same medicament in the same patient, and they absolve from suspicion a product which might be incriminated for accidents which are unrelated to its toxicity. They show the frequency of latent microbism in the human organism, the stimulation of this under multiple influences, and the possibility of controlling these infectious attacks by employing, not the antidote of the medicament, as one might be tempted to do, but specific remedies directed to the infection, when such are available, as for example, sodium salicylate in the arthropathies of acute rheumatism.

Cure of a Case of Acute Yellow Atrophy of the Liver.—In a case of acute yellow atrophy of the liver described by Tellgmann in the Deutsche medizinische Wochenschrift of June 23, 1933, it was impossible to incriminate as the cause any of the usual intoxications or infections known to be the forerunners of the condition. The hepatogenous origin of the feverish icterus was fully established by the chemical findings in the blood, stools and urine. In addition to hemorrhages into the skin, epistaxis and blood in the stools, there was in the first four weeks a variable fever, albumin with icterus cylinders in the urine and complete loss of appetite. The diagnosis of acute yellow atrophy of the liver was confirmed by the evident diminution of the liver dulness, the resistance of this organ on palpation being reduced, and by the finding of tyrosin in the urine in the second and third weeks of the illness. The cerebral symptoms characteristic of acute yellow atrophy of the liver were relatively mild, and justified a favorable prognosis or at least the conclusion that only a small amount of liver parenchyma had undergone autolytic destruction. When the general condition grew steadily worse as the result of insufficient intake of nutriment, and the usual remedies proved ineffectual, Tellgmann gave daily, from the third week on, 20 cc. of 50 per cent glucose solution intravenously, with 15 units of insulin twice a day, continuing the treatment for two weeks, with the result that the general condition improved and the severe icteric symptoms abated. The intake of nutriment was more satisfactory from day to day, and tyrosin could no longer be demonstrated. The diminished liver resistance continued; but albumin and cylinders could no longer be found in the urine. In the

first days of the attack the clinical picture was complicated by an iritis, for which the author was unable to find in the literature any connection with the disease. The coincidence, chronologically, of the abatement of the severe clinical symptoms with the daily injections of glucose and insulin warrants the conclusion that the process was favorably influenced by these measures, and that fatal terminal symptoms of intoxication on the part of the brain were perhaps in this way prevented from developing.

The Social and Economic Importance of Ocular Examinations.—L. Heine asserts that examination of the eyes by an experienced specialist may give invaluable diagnostic information to the clinician as well as to the neur-Slitlamp examination reveals at ologist. least two layers of the cornea, a superficial and a deep. Clouding of the superficial layers (nubercula, macula, leucoma, irregular astigmatism), points to scrofulosis, eczematosis, phlyctanulosis, whereas those in the deep layers suggest tuberculosis (sclerosing keratitis) or lues, especially the hereditary form (keratitis parenchymatosa). Keratoconus and its opposite, the dystrophies of the margin of the cornea, suggest disturbances of the internal secretions, especially of the genital glands. If dystrophies appear too early they indicate premature old age. One should think of hereditary lues if the vertical diameter of the cornea is greater than the horizontal, especially if this is accompanied by fungous atrophy of the iris. Another sign of congenital lues is found when the sclera is not, as in youth, just slightly bluish, or, as in old age, yellowish, but is blue in youth or slaty gray-blue The iris stroma may reveal conin old age. dyloma, gumma, tuberculosis, tumor metastases, cicatrices following such processes where these have healed, or may show diffuse and atrophies after luctic circumscribed tuberculous processes. The relative contraction or dilatation of the pupil may point to severe organic nerve and brain affections, especially where the reaction to light and convergence is disturbed; this may signify glaucoma, lues, tabes, or paralysis, and always points to disturbances of the whole organism and not merely to functional (hysterical) disturbances. A very small nuclear cataract in the middle of the crystalline lens indicates an endocrine disturbance of the mother during the first or second month of fetal life; a lamellar cataract of 3, 6 or 9 mm. diameter indicates such disturbance in the 3d, 6th or 9th month in utero. If clouding of the lens appears in the early years of life, one must think of tetany, myotonia, and diabetes. Clouding of the vitreous may signify a general constitutional disturbance. All morbid changes of the retina and choroid are likewise signs of general disease, often familial and hereditary. Furthermore, since the eye, as a sensory organ, is a portal of entry to the brain, serious defects in this region are liable to be attended by defects of intellect. It is thus possible, by accurate examination of the eyes, to uncover conditions the presence and propagation of which are a detriment to society, and which thus properly become a concern of marriage and industrial laws.—Deutsche medizinische Wochenschrift, June 16, 1933.

A Clinical Study of Aerophagia.-Julius Friedenwald and Samuel Morrison state that air-swallowing is a normal physiological proc-With each act of deglutition a certain amount of air passes subconsciously into the stomach and is eructed or settles in the upper left portion of the stomach, forming the socalled magenblase, stomach bubble. There is a form of aerophagia-eructatio nervosa-oecurring in individuals of a neurotic type, who have learned to swallow air voluntarily. This type of ractised by patients v · abdominal or cardia relief from discomfo' ordinarily an unimportant condition, it may become so aggravated as to undermine the patient's general health and thus lead to serious manifestations. When air is trapped in the stomaeh, as occurs in pneumosis, it may cause cardio-respiratory symptoms. Aerophagia may occur as the result of various digestive affections, of disturbances of the pharynx and of the salivary glands. It may be associated with gastric carcinoma, ulcer, acute and chronic dilatation of the stomach, gall-bladder disease, abdominal adhesions and intestinal obstruction, as well as with pulmonary and cardiovascular disease. The most common form of aerophagia is eructatio nervosa. In a series of 1,590 cases of gastric neuroses collected by one of the authors there were 54 instances of eructatio nervosa, 42 of which occurred in women. is important that the diagnosis of nervous eructations should be made only after a thorough clinical investigation has entirely ruled out organic disease. In the treatment of the mild types of eructatio nervosa much can be accomplished by explaining the mechanism of the act to the patient and admonishing him to control it. If this is not effective, treatment should be directed toward the neurasthenic state. Nothing will bring about such excellent results as a well regulated rest cure. In cases in which the eructations are violent and continuous, temporary relief may be obtained by placing a cork between the teeth to keep the mouth open. In acute attacks with pneumatosis the introduction of the stomach tube will afford instant relief. Drugs are usually of minor value; among those having more or less effect are the bromides, phenobarbital, and atropine. Boas advises the employment of physostigmine 1/6 of a grain (0.01 gm.), together with the extract of nux vomica, 1/3 of a grain (0.02 gm.) three times daily. In the symptomatic form of aerophagia treatment must be directed to the primary disease.—

New England Journal of Medicine, June 29, 1933, ceviii, 26.

Hibernation of the Common Mosquito .- M. J. Legendre says that in a three-year study of the common mosquito, Culex pipiens, he has observed certain peculiarities with reference to hibernation that appear never to have been pointed out. A dark and a light variety exist, and it is with the dark that his article is concerned. This type, breeding in surface waters, does not, like the light, sting human beings during the estivo-autumnal season, and when it enters habitations, it is not for nutritive purposes. The breeding season begins in the first half of April, and ends in the middle of December. About the end of September the mosquitos begin their entrance of houses, at twilight. During a 40-minute period the author counted 224 mosquitos in the moment of entering an entresol occupied by day but empty at night. They conspicuously refrained from entering the rooms on the floor above, in which three persons passed the night. They came while it was still light, singly or in small groups, following one another in a straight line as if by a familiar route, and alighting on the walls or hangings, where they remained motionless, appearing to sleep. Not one stung a person who was then sitting in the room. None of the abdomens showed any trace of blood from any kind of animal. All were females, and were characterized by fatty development of the abdomen. Microscopically there was no development of the ovaries, the size of the abdomen merely constituting the alimentary reserve for the winter. As the winter advanced, the fat bellies grew thinner. About February 1 all the mosquitos disappeared. was evident that they were not dead, for the species depended on them for continuance, and in the water receptacles there was no trace of eggs, larvæ, or nymphæ. Clearly the hibernation indoors was to be supplemented by another hibernation out of doors, during the two months that precede the laying of the eggs, one of which, February, is the most rigorous of the winter. Exactly the same behavior was observed in each of the three years of the study. No male was ever seen among the hibernating females.-Bulletin de l'Académie de Médecine, June 13, 1933.



LEGAL



PHARMACISTS-LIABILITY FOR NEGLIGENCE FILLING PRESCRIPTIONS

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The law imposes upon a pharmacist a very high degree of care. Not only is he under a duty to fill a prescription correctly, but he is under the further obligation in cases where he is not certain of the exact meaning of the prescription, to inquire from the prescribing physician as to the contents thereof. A case illustrating the latter principle in which a pharmacist was held accountable for negligence, was the subject of recent review by an appellate court in one of our mid-Western States.

A certain Mrs. Jones called in her family physician to attend her for her complaints of a dull pain in her arm. The doctor examined her, decided the trouble was muscular rheumatism and wrote out the following signed prescription: "Strontium Salicylate four ounces (Wyatt), teaspoonful in water four times a day." A relative of the patient took this prescription to a drug store at about noon and left the same with a drug clerk who told him to call later for it. He stopped by in the afternoon and the medicine was not ready. It actually was delivered to the patient's relative in the early evening, and a dose of the medicine was promptly taken by the patient. She soon became very sleepy and went to bed. During the night she was given three additional doses and she went into a state of coma. Her breathing became slow and labored, and her pulse slow. The next morning, when her doctor called, he realized something had gone wrong and he undertook to eliminate the drug from her body. She remained unconscious for about two days, and when she did improve she went through a severe and prolonged siege of disorders and distresses of her entire system.

It was ascertained, and not denied by the druggists, that the medicine that had been put up consisted of pure strontium salicylate, manufactured by Parke-Davis & Company, and that the patient had taken into her system within sixteen hours about seven hundred and twenty grains of the

Suit was instituted by the woman to recover large damages against the drug company, charging it with having negligently or improperly filled the prescription. The case went to trial and a verdict was found by the jury in favor of the plaintiff and against the drug company.

Upon the trial, the testimony indicated that the substance strontium salicylate, of which seven hundred and twenty grains had been taken in so

short a time, is dangerous in doses of more than about sixty grains a day. The drug, according to the testimony, is a combination including salicylic acid which is used as a corn cure by application so it will eat away the tissue of the corn and soften it. The testimony was that the prescription as filled would irritate the stomach and intestines, cause ringing in the ears, disturb vision, cause dilation of blood vessels and inflammation of the kidneys, and other dangerous effects, and that even death could be produced by it.

Upon the trial, the testimony centered upon what was the proper handling by a competent druggist of a prescription worded as the one in question. The doctor had put after the drug required the word "(Wyatt)," which word may have been intended as a reference to John Wyeth & Brother, the well-known pharmaceutical manufacturing company. According to the evidence, neither the Wyeth company nor any of the other well-known manufacturing chemists, except Parke-Davis & Company, put pure strontium sali-cylate upon the market. The Wyeth company, however, did put out a certain effervescent strontium salicylate compound, composed of about 10 per cent of that drug. According to the testimony, a teaspoonful of the Parke-Davis product was ten or twelve times as powerful as the Wyeth compound.

The defense of the case was conducted on the theory that it was necessary to fill a prescription literally and that that had been done in this case. On cross-examination, however, the defendant's own witnesses made clear that a careful pharmacist would have found it impossible to fill such a prescription accurately without consulting the doctor who made it out, to check the meaning of the word "Wyatt." One of the defense witnesses, when asked what he understood "Wyatt" in a prescription to mean, answered, "Well, I would say it would mean John Wyeth & Bro. or Sons."

The examination continued as follows:

"Q. If you were filling this prescription wouldn't you

"A. Surely.

"Q. You would find out?

"Ã. Yes.

"Q. And if you found that this effervescent strontium salicylate was the only one made by Wyeth and this prescription contains strontium salicylate Wyatt, there might be a contains might be a question in your mind as to whether this was called for or something else?

"A. Well, there is a question in every prescription.

"Q. There is a question in every prescription?

"A. Yes.

"Q. Why is there a question in every prescription?

"A. Sometimes it isn't definitely written or definitely prescribed.

"Q. When you can't read a prescription correctly you take chances and consult the pharmacopoeia to see?

"A. If we can't read it correctly we call the doctor.

"Q. Is there a strontium salicylate Wyatt?

"A. No.

"Q. There is not. Then it couldn't be filled according to the prescription?

"A. The manufacturer doesn't-

"O. It could not be filled according to the prescription?

"A. Say so, if you want to.

"O. This calls for strontium salicylate manufactured by Wyatt?

"A. There isn't such a manufacturer according to the spelling of the prescription there.

"Q. If you received this prescription over the desk in your drug store you would know what was meant by that, wouldn't you?

"A. Not necessarily."

Another of the defense witnesses on cross-examination gave the following testimony:

"Q. Suppose that prescription came to you, what would you take the word (Wyatt) to mean?

"A. Probably meant Wyeth.

"Q. Wyeth & Bro.?

"A. Wyeth & Bro.

"Q. Pharmaceutical manufacturers, are they?

"A. Yes, sir.

"Q. That is what you would take it for, wouldn't you? "A. Yes, sir,

"Q. Have you a right when a doctor prescribes a particular kind of drug, when you find the doctor has made a mistake, to substitute something else in place of that? "A. No."

From the judgment of the trial court, the deiendant drug company took an appeal and the higher court affirmed the judgment of the trial court, holding that liability was properly imposed upon the defendant. In its opinion the appellate court considered the theory of the defense in part as follows:

"The defendant contends that 'the legal duty of a druggiven to a purchaser can go no further than to dispense the identical substance which his prescription calls for.' No authority is cited by the defendant in support of this contention. In its brief it states: "We have searched the books and have been unable to find a case similar to the one at bar.' The instant contention is primarily based inpon the assumption that a pharmacist is obliged to fill any and all prescriptions. Such is not the law. As a

chemist he may know that the physician has erred in his prescription and that to fill it might cause death or serious injury to the patient. The argument interposed, briefly stated, is this, that the proof shows that there was no such pharmaceutical manufacturer as Wyatt, and that therefore Z who filled the prescription had the right to disregard the word 'Wyatt' and to fill the prescription with pure strontium salicylate. It would be a sufficient answer to this contention to say that the jury were fully warranted, under all the evidence in this case, in finding that a competent and careful pharmacist would have understood what was meant by the word 'Wyatt'."

The court further said:

"If a prescription is doubtful as to what drug is really intended, it is the duty of the pharmacist to be alert to avoid a mistake, and if there is any reasonable doubt as to the identical thing ordered it is his duty to take all one thing when another is called for. A contrary rule would tend to make a pharmacy a menace, instead of an aid, to suffering humanity."

In reading its conclusion to affirm the judgment against the drug company, the court quoted as follows from an earlier case, as a summary of the rules governing a druggist's liability for negligence:

"Finally, in applying his knowledge and exercising care and diligence, the druggist is bound to give his patrons the benefit of his best judgment; for even in pharmacy there is a class of cases in which judgment and discretion must or may be exercised. The druggist is not necessarily responsible for the results of an error of judgment which is reconcilable and consistent with the exercise of ordinary skill and care. He does not absolutely guarantee that no error shall ever be committed in the discharge of his duties. It is conceivable that there might be an error or mistake on the part of a qualified druggist which would not be held actionable negligence. But, while, as has been seen, the legal measure of the duty of druggists toward their patrons, as in all other relations of life, is must not be forgotten that it is 'ordinary care', yet it reference to that special and constitution of the special and constitutions. properly expressed by the phrase 'ordinary care,' reference to that special and peculiar business. In determining what degree of prudence, vigilance and thought-fulness will fill the requirements of 'ordinary care' in compounding medicines and filling prescriptions, it is necessary to consider the potential necessary to consider the poisonous character of so many of the drugs with which the apothecary deals and the grave and fatal consequences which may follow the want of due care. In such a case 'ordinary care' calls for a degree of vigilance and prudence commensurate with the dangers involved. The general customer ordinarily has no definite knowledge concerning the numerous medicines and poisons specified in the U. S. Dispensatory and Pharmacopoeia which registered apothecaries are by our statutes expressly allowed to keep, but must rely implicitly upon the druggist who holds himself out as one having the peculiar learning and skill and conceptions of legal duty necessary to a safe and proper discharge of that duty. 'Ordinary care' with reference to the business of the druggist must therefore be held to signify the highest practicable degree of prudence, thoughtfulness and vigilance and the most exact and reliable safeguards consistent with the reasonable conduct of the business, in order that human life may not consistently be exposed to the danger flowing from the substitution of deadly poisons for harmless medicine."

ALLEGED INJURY TO TOOTH DURING TONSILLECTOMY

A physician who specialized in ear, nose and throat work was consulted by a young man, complaining of throat trouble. About two years before the doctor had opened a peritonsillar abscess for the same patient. An examination of the patient revealed that the patient was suffering from hypertrophied and diseased tonsils and the doctor advised their removal. A few days later the patient entered the hospital for the purpose of the operation. Another physician was called in to administer a general anesthetic to the patient. The anesthetist inserted a Jennings' metal mouth gag in the patient's mouth which held the mouth open about one and one-half inches in order that the operation might be performed. The tonsils were removed uneventfully by the operating surgeon and the operation seemed to be in all respects uneventful. The patient remained in the hospital over night and the following morning the physician examined him and found his condition to be excellent and allowed him to return to his home. About a week after the operation the doctor again examined the patient and found his throat healing very well. The man had no complaints at that

time. However, about a month later the patient returned to the doctor's office and complained that a certain false tooth in his bridge work had become loosened by reason of the operation. He demanded money from the doctor for the purpose of having new dental work done and the doctor refused to comply with his request.

A suit was thereafter brought against the surgeon, charging him with negligently applying an iron brace in the plaintiff's mouth with the result that one of his teeth became loosened and his upper gums became abscessed, diseased and infected, necessitating dental treatment and causing him other injuries. The plaintiff claimed that he had been incapacitated by reason of the alleged negligence for a period of about a month and had lost a large amount of earnings.

The case was brought on for trial before a judge and jury and after all the evidence had been introduced on behalf of the plaintiff and the defendant the court submitted the issues to the jury and the jury returned a verdict in favor of the defendant doctor. The court denied the plaintiff's motion to set aside the verdict.

BROKEN ASPIRATING NEEDLE

A general practitioner was called to the home of an 18 year old girl and found her in bed, suffering from a cough. He prescribed certain medication and about a week later he recognized symptoms of fluid in her chest and decided to aspirate for diagnostic purposes. He caused the patient to get out of bed and sit on a chair. After having sterilized an area between the seventh and eighth ribs he inserted a hypodermic needle of heavy gauge between said ribs. Just at that moment the patient coughed and the needle broke at the hub. She had been warned beforehand not to move. The doctor immediately attempted to recover the needle but was unable to locate it, so he took the patient to the hospital in his car and had x-rays taken which showed the presence of the needle.

A surgeon on the staff of the hospital made an a incision at the place the needle had been inserted

druչ Suı. large da. ing it with . the prescription verdict was found plaint d against ial, the mii sanc only grains and probed, but was unable to locate it. After waiting a short time the surgeon obtained the assistance of a fluoroscopic expert and with the aid of the fluoroscope the surgeon recovered the needle. The patient remained in the hospital for a few days and returned to her home without any complications. The general practitioner never saw the patient thereafter.

A suit was thereafter instituted against the general practitioner, charging him with malpractice in connection with the breaking of the needle.

The case came on for trial before a judge sitting without a jury and at the close of the plaintiff's case a motion was made by counsel for the doctor to dismiss the complaint on the ground that the plaintiff had failed to prove a cause of action against the doctor. The motion was granted.



NOTES NEWS



SURVEY OF MEDICAL SERVICE AND HEALTH AGENCIES OF MICHIGAN

A special committee of the Michigan State Medical Society, authorized by the House of Delegates on September 22, 1931, to study the medical service and health agencies of Michigan, issued its report in a volume of 200 pages in June, 1933. This report was considered on July 12 by the House of Delegates assembled in a special meeting whose stenographic minutes fill ten pages of the Journal of the Society of August, 1933.

The movement which resulted in the survey seems to have been initiated on May 19, 1931 at a meeting of the Council of the State Society at which the representatives of five public health agencies gave detailed reports of the activities of their organizations. (N. Y. STATE JOURNAL OF MEDICINE, Aug. 15, 1931, page 1056.)

On Scptember 22, 1931, the House of Delegates authorized the appointment of a special committee to investigate all the health organizations in Michigan, and to make its report at a special meeting of the House of Delegates within a few months. The resolution authorizing the committee enumerated 19 organizations and groups to be investigated, and also 15 other groups whose activities touched the practice of medicine. (N. Y. STATE JOURNAL OF MEDICINE, Dec. 1, 1931, page 1480.)

The Committee that was appointed met on December 2, 1931 and voted to seek funds from lay organizations in order to carry on its studies. (N. Y. STATE JOURNAL OF MEDICINE, Feb. 15.

1932, page 246.)

It was evidently the intention of the House of Delegates that the special committee should complete its studies and make its report to a special meeting of the House of Delegates within a few months. The House, in fact, met on January 22, 1932, but its proceedings were not published in the Michigan State Journal, nor its action reported, except that it expected the special committee to continue its studies and to report to the regular meeting of the House in September, 1932. (N. Y. STATE JOURNAL OF MEDICINE, May 15, 1932, page 638.)

The special committee soon found that the work to be done required an immense amount of time and coordination of efforts, and it therefore engaged Professor Nathan Sinai, Ph.D., of the Student Health Service and Department of Health and Hygiene, of the University of Michigan as Director of the Investigation. The committee then authorized a lengthy program and plan for the study. (N. Y. STATE JOURNAL OF MEDICINE, June 1, 1932, page 694.) Dr. Sinai was assisted by fifteen subcommittees composed

of thirty-seven representatives of the State Medical Society. There were therefore forty-four persons officially appointed to make the survey.

The cost of the survey was announced to the House of Delegates in itemized tables amounting to \$9,764.06, of which \$3,750.00 was the salary of

the Director.

THE REPORT

The report of the Special Committee is in twelve chapters, as follows:

The Evolution of Medical Care. A historical study of the development of medical practice generally, pages 1-7.

2. Geographic Features of Michigan, pages 8-14.

3. Population, Income, and Costs of Living, pages 15-28.

Illness, Its Incidence, Care, and Costs,

pages 29-45.
5. Physicians, Distribution and Practice, pages 46-68.

б. Physicians, Income, pages 69-77.

Hospitals, pages 78-89.

The University of Michigan Hospital (State controlled) pages 90-102.

9. Public Health, its organization state-wide

and locally, pages 103-129.

- 10. Miscellaneous reports, including the Detroit clinics, cancer, laboratories, tubereulosis, negroes, the indigent, and medical licensure, pages 131-159.
- 11. Summary, with 16 sub-headings, pages 160-169.
- 12. Conclusions and Recommendations, pages 170-174.

The Report gives one the impression that it reflects the point of view of its director rather than that of the practicing physicians. Its style and content are similar to those of the Report of the National Committee on the Costs of Medical Care; in fact, Chapter 4, on illness, is frankly stated to be an abstract of publication 26 of the National Committee.

Many of the definitions are those of an undergraduate college classroom. For exmaple, on page 29, an illness is defined as any disorder which either

- disables an individual one or more days; (a)
- (b) any experience for which medical service of any kind is received; or
 - (c) any condition, symptom, or disorder for

which drugs costing fifty cents or more are pur-

Another example is the definition of a hospital on page 78, in the first paragraph of Chapter 7, which reads:

"In the modern system of medicine the hospital is the concentration point of patients and the personnel and facilities for their care. hospital are 'beds.' The occupants are served through a combination of medical, social, and economic functions. Ideally, then, the hospital is a social institution, economically operated, to provide the benefits of science."

The table on page 45 is based on a study of a large group of patients, and compares the medical services received with those needed,—the need seemingly being availability regardless of the practical usefulness of the procedure to the particular patient. The implication of the table on page 45 is that patients are not receiving the services which they might expect their doctors to give. For example, the table gives the following details:

"Days of hospital care, received, 937; needed,

"Health examinations received, 81; needed, 941.

"Number of refractions or glasses received, 41; needed, 175.

"Special nursing of hospitalized patientscases receiving it, 180; needing it, 578.

"Patients receiving laboratory procedures, 71; needing them, 581."

However, the report has a special value in its study of the statistics regarding the geographic features, populations, physicians and hospitals throughout Michigan, and their comparison with conditions which are considered to be standard in other states.

The recommendations of the report are few and of a general nature, and are contained in the three closing pages of the report.

ACTION OF THE HOUSE OF DELEGATES

The House of Delegates received the report of the Special Committee in a special meeting whose proceedings were reported stenographically in the Journal of the Michigan State Medical Society of August, 1933, beginning on page 465. The House adopted the following resolution:

"Resolved, that the report of the Special Committee-be accepted; and that the Committee be discharged. And be it further

"Resolved, that a permanent committee of five on Medical Economics be appointed by the speakers, this committee to study this report—and report at the annual meeting (of the House of Delegates) on September 11, 1933."

The Speaker appointed the members of the Special Committee as the permanent committee on Medical Economics.

The House then took up the specific recommendations of the Special Committee, which embraced the following subjects:

- 1. Health insurance.
- 2. Indigents.
- 3. Subvention of medical services.
- 4. Public health.
- 5. University Hospital.

Health Insurance: The Special Committee had recommended that the general principle of health insurance be approved. The House voted the following resolution unanimously:

"Resolved, That the Committee on Medical Economics be directed to study, prepare and present for the consideration of the House of Delegates a plan or plans for health insurance, provided, however, that such a plan or plans shall be based upon the following policies:

"'(a) Free choice of physician by the insured; "'(b) The limitation of benefits to those of

medical service;

"'(c) The control of medical service benefits

by the profession; and
"'(d) The exclusion of individuals or organizations that might engage in health insurance for profit."

The Indigent: The House adopted the recommendation of the Special Committee regarding the care of indigents, as follows:

"'1. That the committee and the medical profession undertake the medical care of the indigent as a joint responsibility.

" '2. That the costs of medical care for the indigent be met through a contribution of funds by the community and a partial contribution of services by the medical profession.

"'3. That the community funds be used to compensate in part the physicians for services rendered to indigents and that such compensation be

in proportion to the amount of services provided.

"4. That the community centralize in one agency the social and economic appraisal of the individual's or family's right to such medical services.

"5. That the local committees on medical economics institute studies and develop plans in accordance with the above recommendations.

"6. That the State committee on medical economics analyze data pertaining to the costs of medical care for indigents and plans for providing service, and that these data be made available to local committees."

Subvention of Medical Scrvices: There was a long debate on the principle of subvention, or State aid, to local communities which are unable to secure adequate medical services, especially in times of epidemic or calamity. The Special Committee had recommended "The approval of the principles of subvention, through State or local funds, to assure reasonably adequate medical care

for residents in the sparsely settled areas, and reasonably adequate incomes and facilities for medical personnel" This recommendation was adopted with the added words "Wherever and whenever it is approved by the local county medical society

Public Health The recommendations of the Special Committee favoring county health departments and State aid for them, were adopted

The University Hospital There was a brief dis cussion on the State Hospital of the University of Michigan, and the recommendation was carried that the authorites use the hospital for teaching purposes only

The House adjourned after authorizing the newly appointed committee on economics to report to the regular meeting of the House on September 11, 1933

INTER-STATE POST GRADUATE MEDICAL ASSOCIATION OF NORTH AMERICA

One of the most practical, interesting and extensive of medical meetings is that of the Inter-State Post Graduate Medical Association of North America which will hold its annual assembly on October 16 20, 1933, in Cleveland, Ohio Association was founded about ten years ago by a number of national medical leaders, among them Dr William J Mayo, the present President Any physician is welcome at the meetings, and is en rolled a member for a fee of five dollars

The assemblies have been popular, about five thousand physicians attending each one number on the program is given to all the members who assemble in one large auditorium equipped with loud speakers Patients are brought on the platform and their conditions

demonstrated to the entire audience

The program is conducted on the uniform plan of a diagnostic clinic at eight o'clock in the morn mg, with a noon intermission, an afternoon session at one o'clock, consisting of addresses with a dinner intermission, and an evening series of addresses beginning at seven o'clock. The program of each session is varied, some addresses be ing on medicine, some on surgery, and some on the specialties So far as the programs are concerned, the physicians are considered to be a group of general practitioners who are interested in the broader lines of the specialties

New York City is well represented among the speakers among those already announced being Drs Harlow Brooks, John F Erdmann, Burton J Lee, Joseph F McCarthy, and John J Moor-

THIRD DISTRICT BRANCH

The twenty seventh annual meeting of the Third District Branch of the Medical Society of the State of New York, will be held on Tuesday, September 5, 1933, in the Catskill Mountain House, Haines Falls The program will be as follows, listed in standard time

10 A M County Presidents' Round Table, led by Dr C G Rossman, Hudson

"The Interpretation of Abdominal 11 A M Signs and Symptoms, a Practical Study of Visceral Neurology "-Illustrated Edward M Livingston, M D, New York City

12 M Luncheon Introduction of Guests

"Certain Forms of Increased Intra 2 P M cranial Pressure and Their Treatment "-Illus trated with lantern slides Gilbert Horrax M D Neurosurgical Department, Lahey Clinic, Boston, Mass

3 PM "Some Varieties of Delayed Speech in Cluldren"-Samuel T Orton, M D, New York City

The Catskill Mountain House is reached

By those from the north taking Route 23 A out of Catskill to Haines Falls, there turn right for 2⅓ mıles

By those from the south taking Route 32 from Kingston to Palenville, from there Route 23 A to Haines Falls and turn right

By those from the west taking Route 23 A at Prattsville and turning left at Haines Falls

SEVENTH DISTRICT BRANCH

The twenty seventh Annual Meeting of the Seventh District Branch of the Medical Society of the State of New York will be held on Thursday

September 21, 1933, in the Strong Auditorium, on the River Campus of the University of Rochester, Rochester, N Y

The program is as follows, standard time: 10.30 A.M. "Effects of Breathing Dust with Especial Reference to Silicosis," Dr. Royd R. Sayers, Washington, D. C. Discussion by Dr. William S. McCann, Rochester, N. Y.

11.30 A.M. "The Mechanism and Clinical Interpretation of Jaundice," illustrated with lantern slides. Dr. Chas. Gordon Heyd, New York City. Discussion by Dr. Alfred K. Bates, Auburn, N. Y.

12.30 to 1 P.M. Short business meeting and

remarks by Officers of the State Society.

1 to 2 PM. Luncheon (\$.75) at Todd Union, the dining hall adjoining Strong Auditorium.

The State Institute for Malignant Disease in

Buffalo, will stage an exhibit for the day in the Hall at the entrance of the meeting place.

2 P.M. "Diagnosis of Pulmonary Tuberculosis," Dr. Byrl R. Kirklin, Rochester, Minn. Discussion by Dr. Sol. C. Davidson, Rochester, N. Y.

3 P.M. "Medical Ophthalmoscopy, the connecting Link between the Physician and the Specialist," Dr. Arthur J. Bedell, Albany, N. Y. Discussion by Dr. Albert C. Snell, Rochester. N. Y.

"Bacteriophage in Wound Treat-4 P.M. ment," Dr. Fred H. Albee, New York City. Discussion by Dr. Edward T. Wentworth, Rochester,

THE PUBLIC RELATIONS OF MEDICINE

Abstract of an address given to the fourth year students of each of the nine medical schools of New York State between March 21 and May 16, 1933, by William H. Ross, M.D., under the auspices of the Committee on Public Relations of the Medical Society of the State of New York.

Scientific knowledge alone will not enable you to cope with all the problems which will confront you as practicing physicians. practice of medicine has been profoundly affected by the rapid evolution in sociology and economics during the last decade or two, so that personal health is considered in practically every plan for the improvement of society. The practicing profession is under an obligation to assert its leadership in all the plans for bringing all forms of medical service within reach of all classes of people. The medical school will teach you to recognize diseases and to prescribe for abnormal conditions of the body; but the ability of the people to carry out your directions will depend largely on the impersonal attitude of government officials, civic groups, and the people generally. The civic-mindedness, which is characteristic of the present year, is reflected in the numberless plans for making medical service available to all persons at all times, the most radical of which is that the government shall provide medical service for all its citizens, and that every doctor shall be the salaried servant of the state. You should be informed regarding your future relations to the newer movements in the practice of medicine, and be prepared to direct the development and evolution of the modern methods of practice.

The activities of health departments and voluntary health and welfare organizations, the increasing enactment of laws affecting the practice of medicine and the relation of the physician to public welfare, workmen's compensation, and the changing methods of medical service in industry, have caused economic problems for the physician which will increasingly need the leadership of medical organization for proper solution.

The State Society carries on constructive activity in its relations to public problems. It forms contacts with governmental and lay organizations working in the health field with the purpose of establishing cooperative and harmonious activities under the leadership of the profession. It is probable that there is a more satisfactory working relationship between the medical profession on the one hand, and departments of the state government and lay

organizations on the other, than ever before. The State Society has a legal department

which defends its members in lawsuits for alleged malpractice. It studies the subject

You are entering the practice of medicine at a time when the people are educated regarding what to expect in the way of disease prevention, and what the duties of government officials and the public are in the distribution of efficient medical services to all who need it.

The people have also been educated regarding the costs of sickness, and the inequality of the financial burden which it imposes. You will be expected, or compelled, to take action regarding the many health insurance schemes which are proposed.

The State Medical Society is a great school of medicine which you will soon enter for life. You should know what the Medical Society of

the State of New York is doing.

The State Society carries on graduate education under the joint administration of its Public Health Committee and the County Societies of the State. One of the recent reports of the Public Health Committee said that in the continuous education of the practicing physician, organized medicine makes its greatest single contribution. This service is now brought to the doctor in his own locality through his county medical society.

of medical economics and seeks to establish a system for the delivery of medical services on the principle that what is best for all the

people is best for physicians also.

The State Society maintains a Legislative Bureau to protect the science of medicine against legislation harmful to medical progress, to protect the public against untrained practitioners, to establish a desirable relation to health activitics administered by the state, and to mect constructively whatever problems of medical service depend upon legislative action.

Preparation for your future careers will be advanced by your becoming familiar with medical society meetings. They will continue your education and keep you informed of important problems in medicine, such as medical care, the trends in medical practice, the changing character of practice, proposals to meet the sickness problem, and the "public aspects of

medicine.

The great progress, however, in medicine carries with it profound changes in its application. Great socio-economic change carries with it great medical needs. It is necessary to be more than just a good doctor nowadays. The profession of medicine will always live up to its traditions of medical scrvice, but more and more it will have to take part in the ever widening public responsibilities of medicine which arouse public interest.

When the time comes to join your influent to that of other physicians, you should seemembership in your County Society. To this just speak to any member that you hapen to know, give him your qualifications, as he will give you a blank application; then give endorsement of two physicians, and trest will be attended to for you. There is difficulty for a well qualified physician will live up to the ethics of medicine in becoming a member of a county medical societ Membership in a county society automatica carries with it membership in the State Societ of which the county society is a constituent pa and it also carries with it membership in the Association.

American Medical Association. The profession looks to you to use yo idealism, your energy, your vitality, and your s perior training in the science of medicine to me the increasing responsibilities of the profession medicine in dealing soundly with the med cal problems of present day society. In all t modern efforts to solve the problems of me cine, the profession supports those whi improve human welfare. If human activity like a game in which the player receives t ball, keeps it or advances its position, as then passes it to the next player, the game the practice of medicine will soon be in yo hands for you to carry on the ideals, and expand the services of the profession mcdicine.

THE SARATOGA SPRINGS DEVELOPMENT

The laying of the cornerstone of the Hall of Springs at Geyser Park on July 12, 1933, marked the beginning of the final stage in the development of the great health resort at Saratoga Springs by the State of New York. The exerciscs began with a luncheon sponsored by the Saratoga Springs Rotary Club, at which special mention was made of the work of Dr. Simon Baruch who promoted the initial effort in the development of the spa twenty-three years ago, and whose son, Mr. Bernard M. Baruch, laid the cornerstone of the new building.

The principal address was made by Governor Herbert H. Lehman, who spoke of the peculiar interest of the State of New York in the development of the spa, and of its future services to those with arthritic diseases and

cardio-vascular conditions.

The Hall of Springs is the first of the latest group of physical evidences of the spa development. A complete research laboratory and an administration building are already under construction. The third and most impressive

structure, a hotel-sanatorium, made possibly the recent loan of the Reconstructive Finance Corporation of \$3,200,000, will conplete this monumental group embraced in the program for the new spa. Included with the buildings will be an outdoor gymnasium wis swimming pools, tennis courts, golf courses scientific design for therapeutic and recretional use, together with a bottling plant the will bring the minimum distribution of Geyst Hathorn and Coesa waters to 400,000 cases, 1,200,000 gallons of mineral spring water pyear.

The State has a capital investment at Sar toga Springs of \$5,500,000, which includes the Washington and Lincoln Bath Houses now operation, with a daily capacity of 5,000 tree

ments.

The official committee of physicians appointed by the Governor to cooperate with the Sarator Springs Commission consists of Dr. John Wykoff, New York, Dr. L. Whittington Gorhan Albany, and Dr. G. Scott Towne, Sarator Springs.



THE DAILY PRESS



SUBWAY NOISE

The New York City Subways are perhaps the noisiest places in New York City, and certainly the most annoying; but the railroad officials are developing a car that excludes noise; as is told in the following item in the New York Herald Tribune of August 16:

"Commissioner Wynne's Noise Abatement Commission, appointed several years ago, found that three-fourths of the unpleasant noises in the city were caused by speeding subway trains.

"The first noiseproof subway car, recently developed by engineers of the I. R. T., made a test run over the Lexington-Fourth Avenue Line yesterday morning, carrying officials of the company, Dr. Shirley W. Wynne, Commissioner of Health, and a group of newspaper and camera men as passengers. The car, its windows tightly shut, doors closed and cracks sealed, was ventilated by seven noise-eliminating exhaust fans, which reduced mechanical sounds by 99 per cent. It rolled over switch points, around curves and through normally noisy sections of the tunnel with all the ease and silence of a new Pullman car.

"The mechanical details of the noiseproof installation are relatively simple. The seven exhaust fans, each with a capacity for moving 714 cubic feet of air a minute, are fitted at intervals of about six feet along the roof of the car. Five are in the car proper and two in the vestibules. Four

fans operate at all times, while the rest are controlled by a load switch, automatically going on when the number of pasengers in the car increases. The four regular evaporation fans force the fresh air downward to the level of the passengers.

"In principal the chambers through which new air is drawn into the car are similar to the mufflers used in automobiles, but details of construction differ. The vents are covered with baffle plates, and the air passes through several acoustic chambers and many yards of pipe before it finally is admitted to the car. This filters out most of the noises from the tunnel.

"Mr. Murray said that the air in the subways, although the fact is not generally known, is much purer than street air. Since the air in noiseless cars is 155 per cent purer than regular subway air, he figures that the public will not oppose the plan to make all cars in the system noiseless.

"Dr. Wynne, commenting on the car, said that he thought noiseless subway operation would be a great boon to the nervous systems of all traveling New Yorkers. He indicated that medical opinion regards sudden, loud noises as very dangerous to persons suffering from heart ailments and high blood pressure. Metrically, the sound in the noiseproof cars measures 61.50 decibels, only 1.5 decibles more than in the latest Pullmans."

GENERAL PRACTICE

The New York Sun of August 17 contains an editorial opinion which reflects the attitude of

many thoughtful citizens when it says:

"Two distinguished members of the medical profession have recently given medical students the same advice—to become general practitioners. Dr. William J. Mayo, returning from medical meetings in Europe, expressed the opinion that medical schools in the United States are now turning out too many graduates who desire to be specialists. In an address to pre-medical students at Wesleyan, Dr. J. F. Fulton of the Yale School of Medicine said:

"In most large cities today the heart specialist refuses to see anything but cardiac cases and is quite unable to cope, for example, with an epidemic. The general public have already rebelled against this state of affairs and are looking more and more for the man who will assume responsibility for their general health, in short, the old-

time general practitioner or, perhaps one should say, for the "new-time" general practitioner." "General practice still attracts able young phy-

"General practice still attracts able young physicians, in some cases by the easy lure of necessity, but not in sufficient numbers to give every community its quota. If medical students are to follow the advice given by Drs. Mayo and Fulton there will have to be a change, not only in the attitude of the public toward the profession but in the economic arrangements between society and the physician.

"Perhaps part of the change is already visible. The medical specialist is not inevitably a man who has learned more and more about less and less, but there is a growing conviction that too many physicians have withdrawn into a narrow field of activity and that the practice of medicine calls for a broader and more comprehensive responsibility on the part of a majority of practitioners of medi-

cine.'

INSURANCE FOR HOSPITAL CARE

The New York Sun of August 15 comments on hospitalization insurance as follows:

"In an effort to reduce the cost of hospital care, and to make it available for wage earners and office workers in New York city in the form of a health insurance plan, a committee of hospital superintendents and others studied similar schemes of operation. They drafted a plan for this city in which a non-profit corporation would solicit and arrange for membership among employees of New York business and industrial concerns. The workers who joined would authorize their employers to deduct \$10.80 a year from their pay, in monthly installments, which would entitle them to three weeks of semi-private hospital care, under treatment of their own physician. Hospitals enrolled in this plan would admit patient members only on recommendation of personal physicians.

"This group plan cannot be put into effect, however, under the existing State insurance laws. Superintendent of Insurance Van Schaick has expressed his sympathy with the object of group payment schemes for hospital care, but has ruled that the law must be amended either to exempt such plans or to provide for their supervision by

the State. The sponsors of the plan in question intend to introduce at the next regular session of the Legislature a bill opening the way to its operation.

"The experimental nature of group payment plans for medical care, especially in large cities where they would not be restricted to any one industry or company, justifies caution in their enactment and suggests the desirability of close study. The committee on costs of medical care, of which Dr. Wilbur was chairman, included some discussion of these 'health insurance' plans in its report. Discussing voluntary health insurance, it pointed out that families with low or irregular incomes cannot usually be covered by this form of plan. They reported that voluntary health insurance has been succeeded by compulsory insurance in western Europe.

"In their comment several committee members urged 'the broadest sympathy toward experimentation in promising fields.' An insurance plan for hospital care in New York would obviously be an instance of such experiment, and its results would be likely to influence action on general health insurance schemes in other areas."

THE CULT OF PLUMPNESS

The time is at hand for the replacement of the cult of slimness, with that of plumpness, as was done in Turkey a generation ago. The change will come through the creators of fashions in clothes. Commenting on the change which is apparently coming, the New York Times of August 7 says editorially:

"The name of Dr. H. R. C. Rutherford should be known to all women struggling for slenderness—that is, to all women. Not that he would give them a prescription for going scrawny. In an address to the British Medical Association he said: 'I would emphasize the importance of rest and preach the gospel of fatness.' All his women patients will probably leave him, but let them wait a few months. He is on the side of the Paris fashion arbiters, who have fallen en masse, with the rest of Parisian femininity, for one of our plumper movie stars. The considerable curves, the large, dashing hats, the very jewels of this houri are being copied all over Paris. How long will it be before women are flocking to Dr. Rutherford or to physicians who agree with him?"

ALIEN DOCTORS IN GERMANY

The following item regarding the practice of medicine in Germany by alien doctors was carried by the New York Sun of August 15:

"German doctors were divided by official decree today into 'German and alien races' and were forbidden to exchange cases or to consult each other.

"The decree, issued by Medical Commissioner

Wagner, forbids German physicians to send cases to non-Aryans or to treat cases sent by non-Aryans. They are forbidden also to consult with non-Aryans.

"An official health insurance list will be published, it was announced, to enable insured persons to distinguish non-Aryans from German doctors.



BOOK REVIEWS



THE DUODENUM. Its Structure and Function, Its Discases and Their Medical and Surgical Treatment. By EDWARD L. KELLOGG, M.D. Large octavo of 855 pages, illustrated. New York, Paul B. Hoeber, Inc., 1933. Cloth, \$10.00. (Hoeber's Surgical Monographs.)

For twenty years Professor Kellogg has studied and written on duodenal problems. The present volume is the result of these years of study. It is the first American book upon this subject and may be considered authoritative. Its twenty-six chapters form a complete study of the subject. Evidently the study of duodenal problems has been a hobby with the author. His wealth of clinical experience adds to the readability and value of the book.

No better review of this work could be made than is comprised in the foreword to it by George David Stewart, that rare and lovable man. "The older surgeons will find it stimulating and practical, the younger will find that, and further, that it is time-saving. To look up this knowledge from the magazines today requires not only intelligence and industry but an amount of time at one's disposal, greater than most can command in this age of hurry, when there are 'no more spacious afternoons and when the clock never ticks slowly of a winter evening."

The original drawings for this volume were made from presidents in England and from material in the Heister.

The original drawings for this volume were made from specimens in England and from material in the United States. The wax casts by Thomas White of Harvard form part of the illustrations. The chapter on Physiology was reviewed by Professor A. C. Ivy of Northwestern University Medical School. Professor Bailey K. Ashford wrote the chapter on Parasitology. Professor A. Judson Quimby contributed the section on x-ray diagnosis. Professor F. M. Jeffries reviewed the text dealing with laboratory procedures.

The entire work is excellently written and illustrated. The book work is in the usual fine Hoeber style. There is a very extensive and valuable bibliography.

The book is recommended to the physician as well as to the surgeon.

Russell S. Fowler.

CRITERIA FOR THE CLASSIFICATION AND DIAGNOSIS OF HEART DISEASE. By JOSEPH H. BAINTON, M.D., ARTHUR C. DEGRAFF, M.D., ROBERT L. LEVY, M.D., and HAROLD E. B. PARDEE, M.D. Third Edition. 12mo of 131 pages, illustrated. New York, New York Tuberculosis and Health Association, 1932.

This useful little book in 66 pages defines in clinical language the 139 terms included in the American Heart Association's Nomenclature for Cardiac Diagnosis. It is a model of brevity but is comprchensive enough to assure a reasonable degree of uniformity in the use of these descriptive terms. The new edition is offered in order to include the recent additions to the nomenclature.

An appendix provides a practical guide to radiological diagnosis in heart disease, with diagrams illustrating shadow outlines in various common heart lesions, and a key for the interpretation of electrocardiograms. The latter gives 48 sample tracings, which include examples of all the well known electrocardiographic faults. It is interesting to note that since this section was distributed to members of the Association, the committee has decided to accept the so-called "new terminology" of bundle branch block, with the left axis deviation denoting left bundle branch block, the other criteria being met, instead of leaving the question unsettled.

THE HARVEY LECTURES. Delivered Under the Auspices of The Harvey Society of New York, 1930-1931. Series 26. Octavo of 186 pages, illustrated. Baltimore, Williams & Wilkins Company, 1931. Cloth, \$4.00.

The female sex hormone is already beyond the realm of mystery. Dr. Frank of the Mt. Sinai Hospital has contributed no small part towards its solution and his argument is presented in simple language.

Able clinicians well realize that it is a fatal mistake to separate mental processes from physical ones and that we should at all times accept this permanent interrelationship. Modern medicine has often erred in emphasizing but one phase of this dual concept. One contributor discusses four common types of error to prove the importance of this principle. These may be summed up as tactlessness and lack of common sense or diplomacy.

It is interesting to read about immunological reactions of certain plants to specific fungi. In certain instances, such as the sugar cane, the mosaic disease will recur in regular cycles. Then again in other instances a plant disease may be exterminated by influencing the nutritional affinities of its specific offender.

The chapters on coronary thrombosis, tissue immunity and mass action in cerebral function should prove of equal interest.

EMANUEL KRIMSKY.

Hookworm Infection. By Clayton Lane, M.D. Octavo of 319 pages, illustrated. New York, Oxford University Press, 1932. Cloth, \$6.25.

A masterly treatise on this seourge of the tropies and subtropical regions. The zoology of the Anchylostoma, as well as the mode of infection, the clinical picture and the treatment are discussed most completely.

Notwithstanding the apparent remoteness of the subject to the majority of physicians the reviewer recommends this volume for study to one and all. It is exceptionally well written and leaves one with a feeling of literary and scientific satisfaction. Geo. Webb.

THE PELVIS IN OBSTETRICS. By JULIUS JARCHO, M.D. Octavo of 365 pages, illustrated. New York, Paul B. Hoeber, Inc., 1933. Cloth, \$6.00.

Its fine bibliography alone should make this book worth while. Devoted to pelvimetry and cephalometry, the author states that there has been no book in English covering these subjects in detail. Of doubtful praetical value, much space has been given over to tabulations of racial variations in normal pelves. The illustrations are admirable and helpful. The chapter on Roentgen ray pelvimetry is good, opening up the whole subject in a very practical way. It is interesting to note that the author, discussing external pelvimetry, states that it is his practice to make several readings, and strike an average. His new methods are better.

CHARLES A. GORDON.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, etc. Vol. 1, 43rd Series, 1933. Edited by Louis Hammann, M.D. Octavo of 305 pages, illustrated. Philadelphia, J. B. Lippineott Company [c. 1933]. Cloth, \$3.00.

This issue, the first under a new editorial staff, is ushered in with the ever-important problem of when to supplement a clinical examination with laboratory tests. The author takes the viewpoint that many laboratory measures undertaken in the wards are superfluous

1069 BOOKS

and reflect an incapacity to rely on one's own observations. He fortifies his stand by listing the indications for

the more important tests.

More recently certain workers have reported greater successes with gentian violet than with tannic acid for the treatment of burns. The method of application is

herein described in detail. Then there is a valuable article on the uses and limitations of radium therapy. The practitioner may profitably refer to the many conditions for which the writer specifically advises radium pro and con. In those conditions where radium is of value the writer is quite frank in advising the reader when any other agent is of even

more certain benefit.

Tuberculin therapy has managed to continue as a therapeutic weapon for tuberculosis of the eye. The basis for its survival for ocular use is more on empiricism than on actual fact. Ocular tuberculosis is not often a clear cut clinical condition and many of the supposed successes from its use are in reality allergic conditions which depend on a non-specific protein rather than on tuberculin to reap success. This the writer fails to mention.

There is a chapter on the progress of medicine and while we do not read of new recent discoveries we are reminded of something that is often far more important, namely, the intelligent usage of those medicaments which have not as yet established themselves too firmly.

Other chapters on familiar topics should find their practical interest for the physician. EMANUEL KRIMSKY.

THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgcry. Series 1932. Chicago, The Year Book Publishers [c. 1933]. General Therapeutics, edited by Bernard Fantus, M.D., and Louis B. Karloon, M.D. 12mo of 448 pages, illustrated. Cloth, \$2.25.

This issue as others in this series has its usual fill of interesting news-some of which are novel; others falling in the category of skepticism; still others revolutionary; a few contradictory; and some based on blind empiricism. Let us summarize just a few:

1. One writer submits evidence based on many tests to show that Pirquet-positives are much more resistant to tuberculosis than Pirquet-negatives. Not long ago it was taught that a Pirquet-positive in a young infant was usually of fatal significance.

 Desensitization for preventing anaphylactic shock by increasing fractional doses of serum is now regarded as a dangerous procedure. A substitute method is de-

- scribed.

 3. Bastedo still recommends colon irrigations for mucous colitis and gives detailed reasons which appear convincing. There is an article immediately following which flatly objects to colon irrigation. It is a sign of progress to read of free, individual expressions rather than of the "yes-man" policy so long oppressing medical thought.
- 4. Sterile mineral oil instillations are found to exert soothing effect on painful lesions of the bladder.
- There are a number of valuable "Don'ts" for the physician to observe in the injection treatment of hemorrhoids.
- The injection treatment of hydrocele has gained considerable impetus of late and is winning increasing
- 7. Mercurochrome is again subject to scathing criticism for its inertness. For the layman it is still a 'reliable antiseptic."
- 8. A hacteriologist tells us that vaccines are of especial value in the treatment of sinusitis and otitis media. That of course is laboratory theory edia. That of course is laboratory theory.

 9. As was expected the BCG vaccine is becoming the
- subject of increasing controversy. The babies will continue to suffer as long as this controversy lasts and longer

10. During the recent polioniyelitis epidemic convalescent serum was endowed with curative properties. Now that it's over, its value is doubtful.

11. The controversy of the relative value of organic and inorganic iron is still alive. And when we humans fail to satisfy either school in our blood reactions, the

mice may be depended upon.

12. One writer has had gratifying results with ovarian therapy in cases of hemophilia. Others who use it will probably learn differently. As long as nobody will contradict this writer on paper it will continue to stand out as a recognized procedure or one "worthy of trial."

13. Foreign protein therapy for carbuncles is recom-mended unequivocally as a wonderful therapcutic measure superior to any other method. It sounds too

good to be true.

14. After due delay we already read of the Ether Treatment as being worthless and often harmful for whooping cough. One wonders why it was a treatment in the first place.

EMANUEL KRIMSKY. ment in the first place.

ROENTGENOGRAPHIC STUDIES OF THE URINARY SYSTEM. BY WILLIAM E. LOWER, M.D., and BERNARD H. NICHOLS, M.D. OCLAVO of 812 pages, illustrated. St. Lonis, C. V. Mosby Company, 1933. Cloth, \$16.00.

This single-volume work of some eight hundred pages represents a valuable contribution to the study of Uro-logical Roentgenology. The major portion of it is de-voted to cystography, ureterography and pyelography based upon individual cases giving the history, x-ray findings and films. It is really more of an encyclopedia of case records which include practically all lesions.

The first few chapters are devoted to the technique

of urographic study, as applied to each portion of the genito-urinary tract. The authors emphatically stress the need for complete cooperation of the urologist and radiologist in considering the clinical data together with

the study of films.

The reviewer is pleased to note the presentation of the many variations of the so-called normal, as well as the many and varied anomalous deviations. These are particularly essential to a working-knowledge of clini-cal interpretation. The history and bibliography are purposely omitted. The authors recommend the radiographic study of gross specimens removed at opera-Augustus Harris.

DISEASES OF THE HEART. By SIR THOMAS LEWIS, M.D. Octavo of 297 pages, illustrated. New York, The Maemillan Company, 1933. Cloth, \$3.50.

The work of Thomas Lewis is known to American students of cardiac problems as that of a pioneer investigator. This book introduces him to a much wider circle in the role of a master clinician. It is an eminently practical work which can be consulted and utilized by the general practitioner in his daily rounds. Here he will find his problems discussed with the same clear vision and logic-that is the same scientific attitudethat is evident in the author's reasearch publications. This provides as sound a basis for practice as is obtainable. No references are quoted and no disputed points are discussed beyond a statement that they are in doubt and the explanation that seems the most acceptable in the light of present knowledge. The small amount of space devoted to the electrocardiograph is significant. This instrument is of great value occasionally, and of some help many times but it is of minor importance in practice, however valuable it is as an aid to research.

Lewis has probably pushed the frontiers of cardiology further into the unknown than any student since Mac-kenzie. He returns to Mackenzie in emphasizing the predominating importance of cardiac function over cardiac morphology from the standpoint of the doctor. book is a simple and sound guide to cardiae practice.



OUR NEIGHBORS



MEDICAL ECONOMICS IN PENNSYLVANIA

The Philadelphia County Medical Society met on May 17 and discussed Medical Economics, particularly the reports of eleven subcommittees of the Committee on Economics. These reports fill nine pages of the June issue of the Pennsylvania Medical Journal, and were on the following subjects:

1. Contract Practice. The report states a general principle.

"In general, it may be said that any plan by which a financial profit is made from medical services by an individual or agency other than the physician is unethical; and is, therefore, not only unfair to the physician but is inimical to the best interests of the public. It may be said further that many contract schemes not only exploit the physician practicing under the contract, but also force him to enter into unfair competition with his fellow practitioners. To protect the public and to prevent exploitation of the physician, it is recommended:

"That the President and Board of Directors of The Philadelphia County Medical Society appoint a Medical Court of 6 members, 3 from the Board of Directors and 3 from the membership at large, each to serve 3 years, 2 to be appointed annually, 1 from the Board of Directors and 1 from the membership at large. The duties of this Court shall be to examine all existing medical contracts between any member of the Society and an intermediatory to determine whether the principles mentioned

above are being infringed.

"That since exceedingly unfair contracts are now in force between several hospitals in Philadelphia and the Board of Education, wherein the lay Boards of Trustees of those hospitals, without consulting the physicians and surgeons on the staff, have contracted to give free medical and surgical treatment to teachers and other employees of the Board of Education upon the payment of a room endowment fee to the hospital, it is recommended that the County Medical Society investigate this glaring example of unethical contract practice and urge immediate abrogation of every contract of this type."

2. Prescribing and Dispensing Practice. The report says:

"Physicians should prescribe and recommend, as far as is possible, products included in the U.S.P., the National Formulary, and in New and Nonofficial Remedies.

"Physicians should familiarize themselves

with the proprietary names and nonproprietary equivalents, as well as with the relative cost of commonly used remedies.

"We recommend full cooperation with and confidence in the conscientious pharmacist who has no desire to exploit patent medicines or to encourage self-medication, much preferring to preserve his ethical professional status.

"The practice of hospitals that sell medicine to charity patients for a profit is condemned.

to charity patients for a profit is condemned. "Exploitation of the practice of medicine through direct advertising to the laity by pharmaceutical manufacturers must be discouraged. This aim can be achieved by refusing to prescribe preparations so advertised and by ceasing to distribute to patients samples of controlled products distributed for that purpose by detail men. A consciousness of our own superiority in medical education should protect us from our human gullibility."

3. Dispensary Abuses and Social Service Departments. The recommendations are as follows:

"As the dispensary of any hospital is a place for the efficient treatment of the deserving sick-poor, except for emergencies, none but this class of patients should be admitted at any time. Our city possesses a sufficient number of indigent sick at all times to tax the facilities and professional staffs of every dispensary without treating patients, who are able to pay for medical service, in free dispensaries.

"To avoid exploitation of the indigent, the drug departments in hospitals should be regulated so that prescriptions are dispensed at

"Another abuse is the hospital optical department. There is no excuse for the maintenance of an optical department in any hospital. Every hospital conducting such a department is unethical; and all, with the exception of the Pennsylvania Hospital, show a decided profit from the sale of glasses. This profit pays for the maintenance of the department, the salary of one or more refractionists, a clerk, and a fee to the optician who provides the glasses and fits them to the patient.

"Any doctor not licensed to practice in the State of Pennsylvania, who is employed by any hospital dispensary and paid a salary for his work, should immediately be dismissed, and a "regular" appointed to fill the vacancy. The practice of medicine by unlicensed and unregistered physicians is contrary to the law of

(Continued on page 1072-adv. xii)

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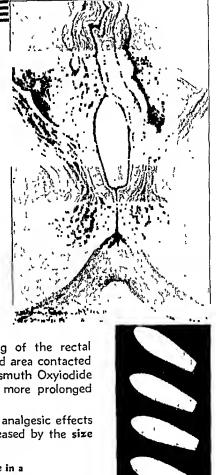
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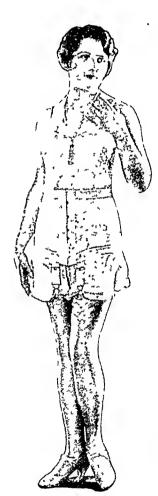
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the State of Pennsylvania, and if necessary, the law should be invoked.

"Hospitals should be compelled to comply with any regulations for dispensary management adopted by The Philadelphia County Medical Society, which are equitable to the patient, the hospital, and the doctor.

"The basic function of the Social Service Department of the hospital is to aid in assigning the patient to the proper department in the hospital, and to follow up the case after discharged from the hospital in order that the recommended treatment may be carried out. Because of the activity of lay boards of many of our hospitals to conserve expense, the Social Service Department in many hospitals has degenerated into a clerical force concerned chiefly with the collection of fees from the patients on admission. The staffs of our hospitals rarely show any interest in the social service department. It is therefore recommended that they become familiar with the working of this department in order, by intelligently directing its work, to restore it once more to its proper function. Eventually supervision of the Social Service Department should be removed from the lay board and returned to the medical staff where it belongs.

"A list of reputable physicians in each neighborhood of the city, who are willing to assume treatment of patients on their discharge from the hospital, should be furnished to the Social Service Department of each hospital.

"The public should be informed that doctors are not paid for their services in wards and dispensaries of hospitals. Many laymen have the erroneous impression that doctors are well paid for this work, therefore have no hesitancy, not only in asking but in demanding free service. Many also believe that because they have contributed to one of the welfare agencies, they may demand free treatment in any hospital, because the welfare contributes to the maintenance of the hospital. They believe that such contribution places them in a preferred class.

"It is the desire of every physician to give to the public the best possible medical care, but the cost of the care of the indigent must not fall upon the doctor. It must be met by civic or other agencies, so that in due time physicians who are now giving their services free to hospitals for the care of the indigent will be compensated for this service."

4. Encroachment of Lay Workers on the Professional Field.

The groups to which this report refers include the following:

(a) Untrained charity workers.

(Continued on page 1074—adv. xiv)

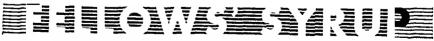


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(Continued from page 1072-adv. xii)

(b) Unskilled laboratory assistants.

(c) Visiting nurses and nurse anesthetists. The recommendations are—

"That all hospitals be advised that the practice of allowing any lay person to give medical advice while aiding in social service, vocational work, etc., be discontinued.

"That a committee of this Society be formed to investigate all medical laboratories, both hospital and privately conducted, the investigation to include both the laboratory director and the personnel of each, to the end that the work shall be done by qualified persons.

"That this committee consult with the medical schools in an endeavor to obtain more ample instruction in all its phases, both theoretical and practical, under qualified teachers, in anesthesia for the undergraduate medical student.

"That this committee visit and consult with the hospitals with the view of establishing a Department of Anesthesia in each hospital, this department to be under the direct charge and supervision of a trained medical anesthetist, the head of the department to have authority as such, and to be a member of the major staff."

5. Free Information Service to Insurance Companies. The basic recommendation is that fees should be paid physicians for all medical services to the companies.

6. Health Department Cooperation. The committee reports:

"Numerous people able to afford a moderate fee for the care of their children have become educated to go to the Health Centers for the following reasons: The solicitous form letters sent out to the laity by the Department of Public Health and other propaganda of the Health Department which have directed them into these channels.

"The failure of the school nurses and visiting nurses to remember the existence of a fam-

ily or neighborhood physician.

"The charge of prohibitive fees by many physicians and their failure to report promptly findings to the health authorities and to cooperate adequately with them.

"The committee recommends the adoption of a plan similar to the Detroit Plan, and the cooperation of the Health Department in educating their nurses and clinic workers to refer able-to-pay patients back to their family physicians for treatment.

"The discussion concerning the present unsettled question of the efficacy of scarlet fever The Department of Public immunization. Health intends to organize a city-wide cam-

(Continued on page 1075-adv. xv)

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(Continued from page 1074-adv. xiv)

paign for scarlet fever immunizations. A committee of pediatricians, appointed by The Philadelphia County Medical Society, is not favorable to this plan. This committee feels that scarlet fever immunization is still a moot question and should not be endorsed by The Philadelphia County Medical Society. On the other hand, the Department of Public Health is of the opinion that its experience in the City of Philadelphia justifies the inauguration of this campaign.

"The Committee recommends that the opposing pediatricians and officials of the Health Department should be invited to a round table conference at which the problem should be freely discussed and a final decision gracehold."

freely discussed and a final decision reached.

"Demonstrations by the Department of Public Health at The Philadelphia County Medical Society Building should be annually repeated for the purpose of demonstrating the approved methods of performing the Schick and Dick tests to the members of this society so that an approved system may be adopted.

"All new patients accepted for treatment at Health Centers should have a signed statement from their family physicians or neighborhood physicians substantiating their inability to pay a private physician for services rendered."

7. Hospital Abuses. The report says:

"This section recognizes that the major abuses in hospital administration occur in the dispensaries and social service departments, and this phase of medical economics has been thoroughly covered by the Committee on Dispensary Abuses.

"The Philadelphia County Medical Society should oppose the policy of all hospitals that engage in any form of contract practice with

any individual or corporation.

"Your committee believes that the publication by hospitals of lists of patients referred by its individual staff members, and in some instances the actual monetary returns to the hospital, is not in the best interest of a harmonious relationship between the hospital and its staff.

"Hospitals are charitable institutions which depend largely upon the public for their support. The public, however, rarely meets the hospital superintendents or other executives responsible for their management, but they do come in daily contact with reception clerks, telephone operators and desk clerks. Kindness courtesy and consideration on the part of these individuals in their relations with hospital visitors is just as essential as kindness and courtesy and consideration on the part of

(Continued on page 1076-adv. xvi)

(Continued from page 1075—adv. xv) the medical and nursing personnel to the patient."

8. Industrial Medicine. The committee discusses several points of workmen's compensation and says:

"The employment of physicians at fixed salaries either on part or full time. This, we believe, constitutes contract practice and falls in the group placed under the ethical ban by the American Medical Association, as defined in their specifications of contract practice.

"Insurance compensation clinics established for the treatment of employees of those insured under the Workmen's Compensation Act. These we believe are forms of contract practice and hence should be treated as such according to the standards of the American Medical Association."

9. Medical Representation on Hospital Boards. The report says:

"At present there is no uniform relationship between these groups in Philadelphia hospitals. These relations range from those that work well and in which all interests are represented to those which result in inefficiency and produce bad feeling. There is no disposition on the part of staff members in general to deny the right of the hospital Board to the last word in hospital management, but there is an almost universal demand that it should be made impossible for Boards to make medical appointments and to decide medical issues without obtaining the official opinions of the medical staffs. The recommendations of this Section apply to many different hospital set-ups, and must be subject to modification to meet individual conditions.

"The medical staffs of a hospital should have an easy and acceptable way to bring matters to the attention of the Board of Trustees.

"The medical staff should be informed of all Board recommendations on medical matters before final decision is made and put into effect"

10. Workmen's Compensation. The committee reports:

"The report of the Section on Workmen's Compensation embodies: (a) An agreement entered into between The Philadelphia County Medical Society and the Insurance Carriers; (b) a schedule of fees has been ratified; (c) a Board of Arbitration to be appointed for the settlement of all matters of controversy between members of The Philadelphia County Medical Society and the Insurance Carriers.

"It is important to note that under the terms of the agreement a general practitioner can

(Continued on page 1078-adv. xviii)



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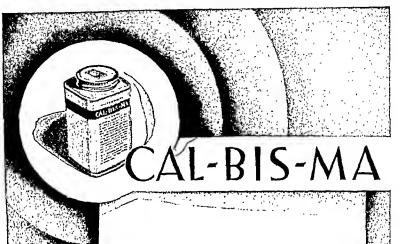


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(Continued from page 1076-adv. xvi)

treat his own case provided he is a member of The Philadelphia County Medical Society."

The report closed with a column of fees for a great variety of operations and treatments.

11. Coordination of Medical Service.

"Pay clinics were investigated and found to be of 2 kinds: (1) Pay clinics in Out-Patient Departments of the various hospitals accepting any fee from a few cents to several dollars for services rendered, the average being approximately 25 cents for a visit. This practice is widespread in the various dispensaries and would in no wise appear to jeopardize the private practice of medicine throughout the community, except in so far as patients are admitted to these clinics who could afford to be attended by private physicians. (2) Pay clinics organized for the purpose of diagnosis and continued treatment of patients able to afford the services of a private physician. So far as the committee is aware there is but one pay clinic in the city. While a great many patients are referred to this clinic by private physicians, others are accepted on personal application. The committee is cognizant of this situation and believes it would be possible to establish a more amicable relationship between the clinic and the private physicians involved.

"Modern hospitals are and should be diagnostic centers where the difficult cases which private physicians are unable adequately to care for can be studied and treated. Patients may be bedridden or ambulatory. All hospital staffs are groups of physicians organized in an institution in which detailed and specialized medical studies and diagnostic and therapeutic procedures are carried on. One of the major problems of the present committee is to clarify the relationship between group practice in hospitals and the private physicians not associated with these groups. When this relationship has been satisfactorily defined and is agreeable to all concerned, the principles thereby indicated should be steadily adhered to by hospital In-and-Out-Patient Departments in the care of free, ward, semiprivate, or private horizontal or vertical patients.

"This is a move to coordinate the medical activities within the profession. It would also seem desirable to coordinate the activities, interests, and aims of the various health organizations and councils in Philadelphia and bring their interests and activities into proper relationship with The Philadelphia County Medical Society. The duplication of effort which now exists, might be eliminated. The Committee on the Coordination of Medical Service is at

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HOSPITAL AID IN WEST VIRGINIA

The August issue of the West Virginia Medical Journal contains the following editorial on State Aid for Hospitals, through the appropriation of \$25,000 by the Legislature:

"Any hospital (other than state hospitals) doing charity work within the State may file with the Board of Control itemized bills for all charity cases treated during the three months period ending October 1, 1933, and each three months period thereafter. Such bills are to be made out in the form prescribed by the Board of Control. Sixty days shall be allowed for the filing of such bills, after which time all bills shall be audited and scheduled for payment.

"If the aggregate of all claims filed exceeds one-fourth of the amount appropriated for the year, then the Board of Control shall apportion the one-fourth appropriation so that each claim

will receive its pro rata share. No claim shall be considered by the Board unless the Board has received notice from the hospital at the time of receiving the charity patient, said notice to be on forms prescribed by the Board. The Board is authorized to limit the number of charity cases that may be received in any one hospital and also to prescribe its own general rules and regulations regarding forms, methods of distribution and payment for services.

"The success of the administration of the present appropriation, as we see it, lies in the limitation of patients at each hospital by the board of control. Better still, we would like to see a limit of hospital days rather than a limit of patients. Otherwise the hospitals are liable to find themselves receiving only 25 to 50 cents per day for charity patients under the appropriation."

REFERENCE COMMITTEE IN SOUTH CAROLINA

The President's address at the House of Delegates of the South Carolina Medical Association on April 8, printed in the July Journal of the Association, contains the following proposition regarding a reference committee:

"Many times the work of this House of Dele-

gates has slowed up and has been unnecessarily prolonged. Dr. Hines has mentioned to me a plan which I believe will help in facilitating the work; that is, that we appoint a committee from our number here tonight which will serve as a

(Continued on page 1081-adv. xxi)

(Continued from page 1080-adv xr)

reference committee, any proposition proposed here to be submitted to this committee. The committee will retire and discuss it fully, then come back in here and give us their appraisal of it. Then the House will consider the matter and aet upon it, not necessarily taking the committee's appraisal, but acting upon it on its merits plan is followed in the American Medical Association and several state medical associations. Of course, if we met for several days it would have more value; but even meeting only one night as we do, we think it will be helpful. It is not proposed with the idea of making the meeting any less democratic, but to let these men study the propositions and give us the benefit of their opinion."

CERTIFICATION OF SPECIALISTS IN RHODE ISLAND

The July number of the Rhode Island Medical Journal records the following action taken by the House of Delegates of the Society on

May 18, 1933:

"Your Committee recommends that the President of the Rhode Island Medical Society appoint a Board of nine members, including the President, the first Vice-President and the Secretary ex-officio, whose duty it shall be to classify each and every member of this Society under the following headings:

1. General Practitioners

2 Internists

3. Pediatricians

4. Neurologists

5. General Surgeons

6 Orthopedists

7. Urologists

8 Gynecologists

9. Anesthetists

10 Eye, Ear, Nose and Throat Specialists

11. Roentgenologists

12 Obstetricians

13 Dermatologists

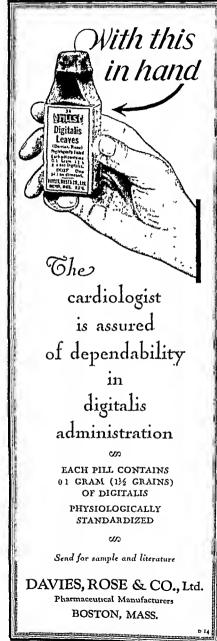
14. Pathologists

"This Board of Classification shall be empowered to formulate the standards for the classification

"It is recommended that the members of the Board of Classification be appointed as follows.

"Two for three years, two for two years, and two for one year and thereafter two each for three-year terms

"The Committee shall have full power to act, and its duties shall include classification and publication. It is further recommended that no member of your present Committee be appointed a member of the Board of Classifieation except the President and Secretary, who would be members ex-officio."



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DENTAL SERVICE FOR DIABETICS

By HAROLD A. KENT, D.M.D., BOSTON, MASS.

Part of a Symposium on Denial Conditions as They Affect General Health, presented at the Annual Meeting of the Medical Society of the State of New York, at New York, on April 4, 1933.

During the past six years my assistant, Mrs. Clifford, and I have had the opportunity to examine the months of more than five thousand diabetic patients; we have also treated a substantial percentage, 50 per cent, of this number. The diabetic group provides a sat-isfactory field of study for the oral specialist, not alone because of the interesting clinical findings which have come to light, but also because they are one of the most cooperative groups of patients with whom the doctor comes in contact.

From the standpoint of clinical findings, some of my observations have been substantiated by Drs. Elliott P. Joslin, Howard Root and Priscilla White, who have cared for these patients at the New England Deaconcss Hospital; certain conclusions are derived from statistical calculations, as well. It is my hope that I may direct your attention to some new observations, which, in my opinion, warrant further study and confirmation.

The Metropolitan Life Insurance Company has likened diabetes to "a lion caged." "A diabetic must be reminded," it says, "that if he lets the lion get out of control, he runs a risk which may be fatal." With the help of insulin, what was previously a wearing and spirit-breaking existence is now one of promise and assurance. "He should be warned, however, that with the use of insulin, he is not cured, and that grave danger still remains."

Can dentistry help to keep the lion caged? Are oral conditions and diabetes in any way inter-related? It is my purpose to turn the spotlight upon these possibilities, and examine them more closely.

The fact that disease most often attacks the body by gaining entrance through the mouth has led to the dictum, "Shut your mouth and save your life!" George Catlin, a London lawyer and a keen observer of human habits,

said fifty years ago "There is no animal in nature, excepting man, that sleeps with its mouth open. If, like other animals, he used his nostrils to warm and purify the air in its passage to the lungs, respiratory infections would be nil." The more recent statement of Dr. Percy R. Howe of the Forsyth Dental Infirmary for Children in Boston, "Open your mouth and behold an index to the health o your whole body," is now regarded as an in disputable truth; for the mouth and the body are extraordinarily interdependent in health and disease.

In surveying the common field, we can find the two extremes: first, the fanatics who believe that "all ills are either mental or dental"; and, second, fanatics who refuse credence to the focal infection theory, and who deny that oral disease may be closely linked with general disease. If, however, we add these two groups together and divide by two, we might arrive at the following summary:

1. Improper assimilation of food affects the tissues of all parts of the body.

2. Lowcred resistance, attributable to the above condition, invites infection, especially in the oral tissues.

3. Oral infection must influence other parts of the body.

 Any infection makes diabetes worse—an axiomatie assertion.

5. Loss of tooth structure and impairment of masticatory function must likewise affect other parts of the body.
6. The diabetic is dependent upon a re-

stricted diet.

7. A good masticatory apparatus is necessary to the diabetic.

8. A healthy mouth and the diabetic's chances to keep the lion caged are interdependent.

If we accept, as a working hypothesis, that oral conditions and diabetes may be interrelated, let us proceed to examine the oral conditions which are most commonly found in the diabetic patient; let us see if we can detect any association between oral diseases and diabetes; and let us consider measures for the treatment of oral disease and their relation to general efforts to keep the lion caged.

For purposes of study and presentation, I have divided all diabetics into three age

groups, as follows:

Group 1: Cases under twenty years of age. Group 2: Cases from twenty to fifty years of age.

Group 3: Cases over fifty years of age.

These divisions correspond to those used in analyzing groups of non-diabetics, who, so far as can be determined, never have restricted their food intake. In all cases the diabetics studied statistically had had the disease from one to twenty-five years before the oral examination.

In the series of cases designated as Group 1, we found that a child who has been on a rigid diabetic diet during the tooth developing years is usually free from dental caries. This observation is not startling because such a diet is notably similar to the diets suggested by the scientific workers interested solely in the control of the prevention of decay. Despite this relative freedom from decay, however, there is a marked tendency toward tartar deposit—and this is true of all our age groups. Children of no more than eight or ten years of age who have had diabetes for over a year will invariably exhibit inorganic salt deposits about the lingual surfaces of the lower incisors and the buccal surfaces of the maxillary molars. In such a child the calculus seems to be entirely of salivary origin rather than derived from the blood, although, as we shall mention later, we found an abundance of both salivary and serumnal deposits in the other two groups.

In diabetes, the precipitating processes appear to occur readily in the calcium-containing body fluids. An abnormal deposition of calcium appears in the arteries as arteriosclerosis; in the gall bladder and kidneys as stones; and sometimes in the skin and veins as calculi. In untreated diabetes, there is a noticeable loss of calcium and phosphorus from the bones of the body by way of the urine and feces. It is not unreasonable, then, that a marked precipitation of salts should be noticed in the mouth of serumnal as well as salivary genesis. The prevalence among diabetics of mouths which are handicapped by heavy tartar deposits is a striking observation.

I am of the opinion that without a physician's insistence upon adequate mouth health, and without the health education so essential to diabetic treatment, larger numbers of these Group 1 cases would be obliged to wear full dentures before they reached the age of twenty years. Fortunately, because of the dangers to diabetes from infection, the physician in charge demands that mouth health be maintained, and the patient is made to thoroughly appreciate its importance. Regular appointments and adequate dental supervision ensue, and an opportunity for actual prevention is at once established.

The soft-tissue picture in the patients of the first group is not unlike that of any healthy child: the gums are pink and free from peridental lesions, provided, of course, that inpinging tartar deposits are not allowed to remain. Here, dental care and treatment are largely confined to hygienic measures, perhaps more energetically pursued than in the average non-The cooperation of the diabetic patient. parents, as well as the child, is enlisted, and careful prophylaxis should be performed at least every three months. The regulation of malposed teeth, the development of the arches, and the correction of malocclusion are also preventive measures whereby oral health can be maintained. If, perchance, carious teeth are disclosed, they should be promptly treated and all non-vital teeth should be removed.

Group 2, encompassing diabetics between twenty and fifty years of age, presents a different problem from Group 1. Diet, heredity, and individual hygienic habits have largely determined the condition of their mouths, so that it is difficult to disclose how far the condition of diabetes has complicated the mouth picture. If their diet has been restricted from early youth, their oral health may be good. If, however, their diet has been unbalanced in favor of carbohydrates and against fresh fruits and vegetables, a more likely situation, they will exhibit many carious teeth; a marked absorption of the alveolus, generally more advanced than in the non-diabetic of the same age; and a number of peridental pockets, some of which may be exuding pus.

Tartar of serumnal origin is more prevalent than in the cases of Group 1. Peridental lesions respond less easily to treatment than in the case of the average non-diabetic. Here, as with all diabetics, we should never be forgetful of the axiom that any infection makes diabetes worse, and be prepared to advise accordingly. Following the initiation of general diabetic care, there should be a noticeable abatement of dental caries in the young adult, although a continuance of tartar deposits and

peridental damage. These eases demand more immediate and careful treatment than those of Group 1. Peridental lesions should be accurately charted and treated according to their severity. No discharging pocket should be allowed to persist.

This second group is the one which is likely to develop cardiac insufficiences, kidney disabilities, and other organic changes if we, who who are charged with treatment, do not appreciate the potential danger of neglected foci of infection. It is not unlikely that we may lessen arterial degeneration by maintaining a healthy mouth in the diabetic patient by eliminating oral foci; and, under such conditions, we can sometimes permit liberties in the living regime that would otherwise be tabooed.

Group 3, or diabetics of fifty years or over, is comprised largely of patients who are wearing full dentures. Several interesting hypotheses were suggested from a study of this group. Noticing that most of these patients were toothless, we found, on further inquiry, that a majority of them had lost their teeth before they became diabetic. They invariably said that their teeth were so loosened from pyorrhea that they were forced to have them removed years before. I believe that we can safely assert that these teeth were lost because of some disease condition probably attributable to a serious metabolic disturbance. Hence, we wonder whether both the diabetes and the peridental lesions were not the common consequence of the same metabolic deficiency. The fact that their mouths were bad enough to warrant complete extraction before the diabetic onset, made it reasonable to suppose, also, that the earlier condition of extensive oral disease might have been an indicator or warning of the diabetic condition to come. Might not, then, the carlier care of these extensive oral lesions have acted to delay or even prevent the incidence of diabetes, in so far as the metholic disturbance was thereby revealed? This is a question worthy of deeper study.

Of the total number of diabetics examined in 1932, fifty per cent could be classified as giving their months poor home care; twenty-five per cent pay fair attention to this matter, while only the remaining twenty-five per cent could be regarded as giving anything like adequate home care to their teeth and soft tissues. Among these twenty-five per cent who properly care for their teeth at home, and who make and keep regular dental appointments, there are a few, who, though over sixty—and diabetic for a number of years—have been able

to avoid becoming toothless without jeopardizing their health. Lower dentures are more effectively managed if a few healthy, well-located teeth are present. To preserve even a few is often possible; to save many, not an improbability. I have had one patient of sixty-eight years of age who has had diabetes for three years and possesses twenty-eight teeth. Many of these teeth are heavily filled to be sure, but there are no foci present as she has taken excellent care of her mouth. These facts are another indication that on the whole good dental care is a necessary part of every one's life.

It ought to be fairly obvious that the physician should insist upon adequate dental attention for his diabetic patient. The dentist should appreciate the diabetic's increased susceptibility to peridental disease and make every effort to control it. The patient should cooperate with both physician and dentist. These are the prerequisites for the retention of healthy teeth in the diabetic patient.

The physician is usually the first to see the patient ailing from diabetes. Unless that patient is forcibly impressed with the importance of a healthy mouth, he or she will undoubtedly be wearing full dentures before long. Of all the edentulous diabetic patients we examined in 1932, we found that sixty-six per cent were either infrequent visitors to the dentist, or had no care at all. Dental care is imperative, otherwise focal infection, with its attendant general dangers, will freely attack the mouth.

Can dentistry be of service to diabetics? The answer to that question is patent. But the other question—is there a prediabetic stage, discernible by oral changes which, if discovered early, might delay or even prevent the onset of diabetes—must remain as yet unanswered.

The marked susceptibility to oral changes before and during the disease, together with the number of diabetics who are endentulous before the onset, I feel to be more than a mere coincidence. Dentistry hopes to extend its service to all the people. Sugar tolerance tests and various other metabolic determinations, when applied to patients with progressive or persistent peridental pathology, may produce valuable data. Such a study should contribute information which may help in the control of diabetes; but from a broader point of view it will provide a new and interesting connecting link between dentistry and medicine, whose aims are, after all, the same-maintenance of health and prevention of disease.

NUTRITIONAL CONTROL OF DENTAL CARIES

By EWING C. McBEATH, M.D., D.D.S., NEW YORK, N. Y.

Part of a Symposium on Dental Conditions as They Affect General Health, presented at the Annual Meeting of the Medical Society of the State of New York, at New York, on April 4, 1933.

ROBABLY the commonest of diseases which afflict civilized man is dental caries; its ravages are more widespread in each succeeding generation. Statistics show that today probably 95 per cent of school children suffer in varying degrees from tooth decay. It has been recognized of late, moreover, that dental caries, while a disease in itself, is also very often a symptom of serious or potentially serious systemic conditions. The continual increase in its prevalence constitutes a menace that grows more threatening, almost from year to year. The ultimate aim in the study of this disease is, of course, to discover a means for its prevention as well as for its control. It is an involved problem, going much deeper than local manifestations. A systematic and comprehensive study of the problem was made possible at the School of Dental and Oral Surgery, Columbia University, in February, 1930, through the generous aid of the Commonwealth Fund. The special Caries Research Advisory Committee and the special Caries Research Staff of the School divided the problem into five phases: biochemical, bacteriological, histological and pathological, animal experimentation, and clinical experimentation. This is a presentation of the phase of human nutrional work from February, 1930, to June, 1932.

Much work had formerly been done by others, and a great deal written on researches in this field. In order to discover what was authoritative and pertinent, much of the literature on this phase was reviewed before experimentation was begun. It was evident that metabolism plays a prominent and effective role in establishing increased or decreased resistance to dental caries. None of the dietary studies to date, however, clearly indicate whether the influence of diet is on the environmental factors or on the ability of the tooth structure to resist the attack of the environmental factors. Each view has its advocates; it is possible that the sum of the dietary factors may function in both the ways cited above.

It seemed desirable, then, first to observe the effect of a well balanced so-called "protective" diet on the teeth of children in which caries was already present. If such observations indicated a nutritional control in operation, the next step, obviously, would be to analyze and evaluate its makeup. The results obtained by Doctors C. L. Drain and J. D. Boyd of the University of Iowa in groups of hospitalized children under dietetic manage-

ment lead us to select the so-called "protective" diet suggested by them for our preliminary observation. They found that carious dental tissue became very hard and there was no further spread of dental caries. We finally selected three institutions just outside of New York City which are conducted on the cottage plan. Under this system it was possible for us to segregate children for dietetic management. These homes are designated as A, B, and C. In each of these we had an experimental group of about 30 children and a control group averaging about 20 children, the ages ranging from 9 to 14 years, boys and girls.

At Homes A, B, and C the general dietary experiments were conducted. The work involved the feeding of children in three homes over a perod of from six to seven months, during which time the experimental diet was contrasted with group feeding of control groups on the unsupplemented basal diet of these homes. These basal diets were of themselves of a high standard, built on recognized principles of nutrition, hence the contrast between the experimental groups and the control groups is of a lower degree of difference than might otherwise have developed. The experimental diets insured the following ration of protective foods per day:

- 1 quart of milk
- 1 or 2 eggs
- 1 serving of meat, fish, chicken or liver
- 2 vegetables (½ cup considered as a medium serving)
- 1 orange or apple or tomato
- 1 fruit besides the above
- 6 teaspoons of butter
- 3 teaspoonfuls of cod-liver oil

In addition to the general dietary experiments we also conducted an experiment to determine, if possible, the specific relation of vitamin C to the control of dental caries. This experiment was conducted at a state institution for children designated as Home L. One hundred fifty-two children were selected, eighty-eight in the control group and sixty-four in four experimental groups of sixteen each. This experiment was conducted, uninterrupted, for nine months. The large control group was kept on the unsupplemented regulation diet of the home, which was of a fairly high standard. The experimental groups were also kept on the regulation diet of the home,

the supplemental feeding of the best sources of vitamin C as follows:

Group II—Juice of 3 oranges and 3 ripe bananas daily
Group III—8 oz. orange juice daily
Group IV—6 oz. tomato juice daily

The dental examinations in all homes were as thorough as possible. Any abnormal condition of the gums no matter how slight, was recorded as to its degree of severity. teeth were carefully examined as to the character and color of the enamel, stains, cleanliness, abnormal conditions, and caries. cavities were noted and recorded on special charts. Any fissure deep enough to catch the explorer was reported as a cavity; these were carefully noted. The compound cavities were also outlined on the charts according to their location and involvement of tooth structure. The precentage of carious dental surfaces was determined by calculating the number of tooth surfaces in each case, five surfaces for each tooth. The carious dental surfaces were then counted and the percentage of the total number of surfaces presented computed. It is shown from our findings that at the conclusion of the studies there was, consistently, in Homes A, B, and C less caries in the experimental groups. In two of the homes the final examinations showed dental caries to be 61/2 times more prevalent in the control groups than in the experimental groups. In the other home the control group showed dental caries to be 11/4 times more prevalent than in the experimental group.

In Home L, where the vitamin C experiments were conducted, it is doubtful that the differences were significant, either as to dental caries incidence or changes in gum conditions.

In order to more accurately evaluate the results obtained during the year 1930-31, we decided to repeat our dietary experiments in the same homes during 1931-32, using the same groups for our observations, and reversing them; that is, making the controls of the previous year the experimentals, and the experimentals of the previous year controls. The diets used, the sizes and personnel of the experimental and control groups, and the time involved were approximately the same as during the previous year.

In addition to the general dictary studies, an attempt to observe closely the effects of the administration of the best sources of vitamin D in the control of dental caries was undertaken at Home X. an institution just outside of New York City for the reclamation of boys and girls, private and public charges. The experiment consisted of the addition of these sources to the regulation diet

of the institution. No changes whatever were made in the daily routine of any of these chil-Three groups of boys were selected, carefully paralleled as to age and caries incidence, the age range being from ten to fourteen years. The control group numbered 23 and the experimental groups numbered 21 and 19, respectively. The usual dental examination was made of these groups in December, 1931. Arrangements were then made to administer to one group consisting of 21 boys, 15 drops of Viosterol to each child per day. The other experimental group, consisting of 19 boys, was given light radiation twice per week from a Burdick quartz mercury solarium lamp installed in the hospital for this purpose. Experiments were begun in January, 1932. There was no interruption whatever in the administration of Viosterol to one experimental group and the light radiation to the other group. The final dental examinations at this institution were made the latter part of May, 1932. An analysis of the representative menus selected at random from the files of Home X showed the diet at this home to be a close approach to accepted standard diets for children in the age range of nine to fourteen years. The children were all well, or fairly well nourished, no cases of poor nutrition being found in any of these groups.

The findings after the final dental examination in May, 1932, were very similar to those of the 1930-31 experiment. In two of the homes at which we conducted the general dietary experiments, Homes B and C, the control groups again showed dental caries to be about 6½ times more prevalent in the control groups than in the experimental groups. The findings at Home A, however, after the final examinations, showed that the experimental group did not have any new dental caries from the time of the first dental examination in December, 1931, until May, 1932. The control group in this home showed a percentage increase of 1.6 per cent, 1½ new cavities per child.

The findings in Home X, in which we conducted the vitamin D experiments, were extremely interesting. After the final dental examination in May, 1932, our data showed a difference in the caries index of the control group and the group receiving 15 drops of Viosterol per day of 1.7 and 28, approximately 1 to 1.6. However, the irradiated group showed an increased resistance to dental caries, namely, .32 per cent increase as compared with 2.8 per cent increase in the control group, approximately 1 to 9. In other words, the Viosterol group showed 5½ times more new cavities than the irradiated group at the final dental examination. The increase of dental

caries in the irradiated group at Home X was slightly less than the increase in the general dietary experimental groups at Homes A, B, and C. The protection afforded by the quartz mercury lamp radiation is apparently as good or better than that afforded by the protective diet.

An outstanding effect of the experimental diets in our series was to increase the bulk of food eaten, with only a slight decrease in calorie intake and a very slight increase in actual grams of carbohydrate consumed. In spite of the fact that carbohydrate intake was actually increased, it did reduce the cane sugar and cereal forms and increased the fruit and vegetable forms. In so doing it may have affected the oral bacterial flora. Our observations did not measure such bacterial changes.

In none of these groups was there inadequacy of calcium intake. Since we have no retention data on these cases, it is impossible to say whether utilization was better in one group or the other. In spite of this lack of data on utilization, there are two features of the diet which suggest a possible difference here. Increase in fruit juice aids in the absorption of calcium. Decrease in fat also lessens the danger of the elimination of unabsorbed calcium soaps in the feces. The fact that experimental group at Home C, however, actually increased its fat intake over the conexprimental group A, tends to reduce faith that variation in fat intake was significant trol and yet had the same caries reduction as here.

It is, of course, obvious that the increased amounts of milk, egg, cod-liver oil, fruits, and vegetables would be expected to produce very marked differences in vitamin values. A, B, C, and D vitamins were all much increased in this series of experimental groups.

If one sought confirmation of Mellanby's views as to the importance of vitamin D, our series would tend to support this view. It was the vitamin most tremendously increased by the diet. The increase in A is next greatest and in B and C next in order.

The studies at Home L were devised to

evaluate the effect of added vitamin C in three forms, orange juice, tomato juice, and bananas. From the data one cannot draw support for the view that vitamin C was of prime importance in the differences observed.

Variations in caries in the groups fail to show vitamin B as the significant single responsible agent. The vitamin B work does suggest, however, that total caries incidence may be correlated to a degree with total vitamin B intake. We get less incidence with dosages of over 400 units than under this amount; and when these vitamin B figures are compared with those obtained in another connection to establish the human requirement, it appears that 400 or better are needed for full normality of human gastro-intestinal function.

Our findings in the Home X experiment corroborates our claims of the previous year regarding the importance of vitamin D in the control of dental caries. More concentrated work will be done to determine the relative effects-from the administration of vitamin D from its best known sources.

Conclusions

1. They tend to confirm the theory of the importance of diet as a factor in the nutritional control of dental caries.

2. They supply a set of differences corre-

lated with reduction in caries.

- 3. The regulation diets were most deficient in the foods known as the best sources of vitamin D. These were most increased in the experimental diets.
- 4. There is a striking difference in the effects of the administration of the different sources of vitamin D, the quartz mercury lamp radiation apparently affording much greater protection than Viosterol, in fact, quartz mercury lamp radiation would seem to be as effective as a protective diet in the nutritional control of dental caries. Further study of the effects of quartz mercury lamp radiation will probably disclose many factors involved and make possible its proper evaluation for comparison as a vitamin D source.

PYORRHEA ALVEOLARIS:—ITS RELATION TO ORAL AND GENERAL HEALTH

By ARTHUR H. MERRITT, D.D.S., NEW YORK, N. Y.

Part of a Symposium on Dental Conditions as They Affect General Health, presented at the Annual Meeting of the Medical Society of the State of New York, at New York, on April 4, 1933.

PYORRHEA alveolaris is a chronic disease affecting the supporting tissues of the teeth, the chief characteristic of which is suppuration and a progressive destruction of the alveolar process. This destruction does not occur uniformly throughout the mouth nor around the individual teeth; it may be quite

extensive about certain teeth, while others in the same mouth, remain unaffected.

Coincident with this bone loss, pockets are formed about the teeth the depth of which will depend upon the extent of alveolar destruction. These pockets are bounded on the one hand by the gums which remain at approximately their normal level at the cementoenamel junction, and on the other, by that portion of the root surface from around which the alveolar process has been destroyed an examination be made of these pockets, it will be found that the inner wall of the gum tissue presents a more or less raw and granulating surface, while the root, forming the other wall of the pocket, is covered with the remnants of the necrotic pericementum plus a It has been considerable calculary deposit said that a ease of pyorrhea in which the pockets average one quarter meh in depth, presents seven and one-half inches of ulcerating surface from which bacteria may be absorbed 1 Pollowing the formation of these pockets infection and suppuration occurs. The organisms engaged in the infective process are principally the fusiform bacilli, vibrois, spirochetes, and cocci acting in symbosis They are all normal inhabitants of the mouth but under conditions of disease their numbers are enormously mereased Tirst place among these the organisms is usually given to group,3 though this is questioned by Smith2 who expresses the belief that cocci alone cannot invade and destroy the periodoutal tissues He gives preemmence to the fusospirochetal organisms which he says produce powerful necrotizing enzymes and prepare the way for the symbiotic action of the different groups, none, however, can be regarded as in any sense specific

Pyorrhea is chiefly a disease of adult life and has as its principal cause two factors First, some disturbances in metabolism apparently connected with avitaminosis and affecting the acid base balance of the hody, in such a way that the basic elements are increased, and secondly, invasion of the periodontal tissue by bactern. The first may The first may be regarded as the predisposing and the second as the local active cause though there are also local predisposing factors which explains why it is that some teeth become serlously involved while others in the same mouth remain unaffected In any study of pyorrhea, these two major factors in etiology need to be clearly understood if one is to correctly appraise its local and systemic effect

LOCAL EFFECT

The local effect of pyorrhea is the establishment of a chronic infection which unless interfered with by treatment, may continue throughout most of adult life or until the entire alveolar process is destroyed and the teeth exfoliated. In the study of six hundred individual cases. Blick, reports hiving found pyorrhea to be present in 13% of those be tween the ages of twenty and twenty-four and

mereasing up to 88% in patients over fifty. Because it is usually not painful and in its carly stage gives little evidence of its presence, it is generally overlooked by patient, dentist and physician The result is that in adult life it is one of the most common of chronic infec-To further complicate the situation, there is an impression abroad that it is an incurable disease, about which little ean be done. The end result is an obscure infection which slowly destroys the alveolar process, the finale of which is the complete loss of the While it is true that there are still unsolved problems in its etiology, failure in treatment is not so much due to this fact as it is to neglect to make use of the knowledge already at hand, the application of which would make the prevention and treatment of pyorrhea one of the most satisfactory procedures of dental practice, for it can be said without fear of contradiction, that pyorrhea is a eurable disease needing only expert care to affect a permanent cure, though like many other diseases it may reach an incurable stage

Prognosis depends upon the extent of alveolar destruction the number of teeth remaining and No attempt at the nature of the occlusion diagnosis and no expression regarding prognosis, should be made until a careful study of all three has been made. To attempt to do this from roentgenograms alone as is sometimes done, cannot be too strongly condemned, for they reveal only a part of the evidence upon which both diagnosis and prognosis depend Loss of alveolar process as shown by the roentgenogram is not necessarily pyorrhea A thoroughgoing clinical examination, plus experience in its treatment, are essential in making a correct diagno-

sis and in outlining treatment

INFLUENCE ON GENERAL HEALTH

One of the puzzling questions concerning pyorrhea and one of the most important is, What, actually, is its relation to general health?

We have seen that it represents a chronic localized infection which may continue for many years; that the pockets about the teeth are always filled with a teeming mass of mixed bacteria, and that in adult life it is one of the most common of all foci of infection What, then, is its status as a possible cause of secondary infection?

Many answers have been given to this question, varying all the way from complete indifferences to accomplete indifferences indifferences to accomplete indifferences to accomplete indifferences indifferences to accomplete indifferences indif

ferences to over exaggeration

With a view to ascertaining the truth, a group of research workers at the Mayo clinic undertook a series of experiments to determine as far as possible, just what its status as a cause of secondary infectious might be?

They found that when rabbits were inoculated with streptococci obtained from patients having pyorrhea, plus some secondary infection suspected of being caused by the focus in the mouth, these same secondary infections were reproduced in certain instances in the experimental animals. In arthritic cases for example, they were found to be as high as 30%; in lesions of the colon resembling colitis, 25%; in cases of ulcers of the stomach and duodenum, 42%; in iritis, 37%, and in cholecystitis, 25%. These results have been confirmed by Rosenows, who states that primary cultures taken from pyorrhea pockets have a wider range of localization than do those of periapical infections—a fact contrary to general belief.

The conclusions reached by this group are that "we are as much justified in considering purulent and septic conditions around the teeth as sources of disturbed states of health as we are purulent processes found in the urethra and tonsils." This opinion is held by others, notably by Black⁵, Hartzell¹, Haden⁹, and Cook¹⁰. My own experience in the treatment of pyorrhea abundantly confirms these observations, for in many instances there is a noticeable improvement in general health following treatment of which the patient is conscious.

The symptoms produced by pyorrhea will depend somewhat upon the portal by which the organisms gain entrance to the body. These are three in number: First and most common, through the gastro-intestinal tract, which explains the frequency of gastric and

duodenal ulcers reported in these cases. Secondly, direct infection of the blood stream by organisms from the pyorrhea pockets, also a common portal of entry, and thirdly, through continuity of tissue by which the sinuses and respiratory tract may become the seat of secondary infections. "Whatever may be the exact mechanism of infection," says Sir Kenneth Goadby11, "or what actually determines the production of symptoms, there is overwhelming evidence that diseases of many varieties, or better, disease symptoms of many kinds are directly referable to the unhealthy state of the oral mucus membrane. Oral focal infection is one of the best fields for the investigator in the elucidation of the problem of gradual lowered resistance and the induction of remote disease through bacterial invasion. It is true that the correlation of the microorganisms in the infected focus with the remote symptoms is not always easy, and frequently highly unsatisfactory from a strictly laboratory view; at the same time, the gradual deterioration in the function of organs continually subjected to mild but frequent doses of poisonous substances must finally materially effect the general body metabolism." The answer then to our question is that all evidence, clinical as well as laboratory, points to the fact that pyorrhea as a cause of metastatic infection should be given serious attention by both dentist and physician and that it is only through their cooperation that the problem can ever be satisfactorily solved.

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ORAL CONDITIONS AS AIDS IN DIAGNOSIS OF SYSTEMIC DISEASES By LESTER R. CAHN, D.D.S., NEW YORK, N. Y.

Part of a Symposium on Dental Conditions as They Affect General Health, presented at the Annual Meeting of the Medical Society of the State of New York, at New York, on April 4, 1933.

E can divide patients into two classes. Those that are driven to the dentist because of subjective symptoms and those that come conscientiously for routine examination.

The subjective symptoms are: pain, blccd-

ing and consciousness of a growth or swelling.

Pain may be due to:

- 1. Ordinary toothache.
- 2. Reflex odontolgia from sinus disease.
- 3. Burning and sore tongue and mouth.

- 4 Gingivitis and stomatitis
- 5 Painful loose tooth or teeth

Bleeding from the gum and oral mineous membrane may be caused by

- 1 Local inflammatory conditions
- 2 Blood dyserastis
- 3 Avitaminosis or cudocrine disturbance Swelling or growth may be due to
 - 1 Tumor or cyst
 - 2 Osteitis fibrosa cystica
 - 3 Pagets' disease of bone
 - 4 Atypical guiuna 5 Tubereuloma

Objective symptoms are those discovered by the patient in self examination or during routine 1-ray and clinical examination. These are

- 1 Dental caries
- 2 Paradentosis (Pyorrhea)
- 3 Secondary syphilides
- 4 Lichen planns
- 5 Leukokeratosis
- 6 Geographic tongue
- 7 Pigmentation
- 8 Foul breath

Subjective Symptoms

Pain In this discussion we can immediately dismiss evident odontalgia. If it is of local origin it is easily discovered and relieved If it is caused reflexly from sinus disease there is little difficulty in determining this fact.

The sore burning tongue and mouth are not infrequent problems confronting the dentist. Many times the pain and discomfort far exceeds any visible lesion. This condition is seen in Addison's Anemia and may be present for some time before any blood changes can be demonstrated. If, coupled with this mouth soreness, there are digestive disorders and numbness of the finger-tips, permierous anemia should be strongly sus-ected A clean, polished looking tongue with atrophic pipillae is also suggestive of primary anemia.

Sprue manifests itself in a sore tongue and digestive disturbances but as a rule there is free hydrochloric and in the gastric junce and less atrophy of the lingual papille. The blood changes also differ from those found in permicous menna.

Herpetic inlers (conker sores) are frequently observed by dentists. They have a complex origin and present difficulties in diagnosis. They are most frequently associated with digestive disorders but are also seen in pernicious anemia. Avitanimosis plays a part in their formation. In severe cases oral pempligus must be considered.

Acute gingivitis is a common oral condition I should say that practically all cases of acute

gingivitis are of bacterial origin. What may be the underlying cause that has so lowered the resistance of the gingival tissue that infection can take place, is a different story.

Of late years we have heard a lot about "Vincent's Gingivitis". The term has been used "ad maneam" and it is about time it was discarded. The finding of the fusic-spirillary combination means nothing, they can be found in practically every inflammatory area in the gim. For that matter, they can be demonstrated in normal gim. They increase in number, however, as the parts become inflamed.

I am happy to see that recently careful observers are calling attention to the folly of making suicars from gingival and oral lesions and basing diagnoses on them. Lichtenberg, Werner and Lueck state after clinical and experimental study on this problem that, "The value of diagnostic sinears for Vincent's organisms as a means of establishing a pathogenic relationship of these organisms to a suspected lesion is questioned." Becks recently wrote "On the basis of present knowledge the sinear test does not afford any information concerning the etiology, the diagnosis, the therapy or the prognosis of the disease."

Acute guignitis especially where there is a gaugrenous or illectous picture, is a frequent accompaniment of many serious systemic conditions. Permicious anemia, the linekemias and agrantifocytosis exhibit an ulcerous ginguitis during some phase of the disease. This is especially true of the last two conditions.

Diabetes, avitaminosis, drug absorption, pregnanes and endocrine disturbances also predispose the gum to secondary infection. It should be borne in mind that the gingivitis accompanying any one of these conditions is usually dependent in its severity on the amount of oral sepsis or lack of hygiene present.

An acute gingivitis demands, at all times, a thorough examination to find whether a contributing cause exists This examination should include besides a thorough questioning as to diet, etc., a red, white and differential blood count and a urine analysis Sometimes a Wassermann test is indicated Where no serious contributing cause can be found we feel that we are dealing with a simple local infection and these are readily amenable to treatment If systemic complication is discovered consultation is imperative. Where the gingivitis is secondary to a general disease, such as any of the blood dyscrasias, all that can be done in the mouth is to keep it in as antiseptic a condition as possible

It is at times most astonishing to watch the

cessation of the gingival lesions when the systemic condition is righted. I have seen this occur where liver therapy was given in anemia, or the diet corrected in avitaminosis and in one instance small doses of thyroid extract proved most efficient.

We come now to a not uncommon cause of discomfort, the loose and painful tooth. On the surface this is an apparently easy condition to diagnose. The vast majority of loose painful teeth is due to acute paradentosis, but there are some cases in which such a simple cause is not responsible. I know of two instances where the first symptom of acute lymphatic leukemia was a loose painful tooth. These teeth, strangely enough, were in the mouths of dentists and both cases ended fatally.

Neoplastic invasion may loosen teeth and is sometimes the first signal to warn the patient that something is amiss.

Bleeding from the Gum and Oral Mucosa.—Bleeding from the gum often sends the patient for advice and relief. The greatest cause of bleeding gum is a simple gingivitis due to tartar and lack of oral hygiene.

Gingival bleeding is seen occasionally during menstruation and in pregnancy, especially in

the early months.

The type of bleeding that occurs in the above conditions is not constant and is usually noticed during some such trauma as tooth-brushing. The advertisement of "pink tooth-brush" has made people conscious of a condition that otherwise would have been ignored.

There is, however, a sudden steady oozing from the gum and oral mucous membrane that is alarming and has a serious underlying cause. This bleeding may or may not be accompanied by oozing from the nose and petechial hæmorrhages in the skin. This condition is met with inidiopathic purpura, primary and secondary anemia, acute leucemia and in severe avitaminosis. Blood examination will aid us in making a diagnosis. It must however be remembered that in the early stages of acute myeloid and lymphoid leucemia the white blood count may be within normal limits or show a moderate leucocytosis, and since these conditions, in their incipiency, suggest an acute infection the blood count may be misleading. search should be made of the stained blood smear for myeloblasts and lymphoblasts and a daily white count is necessary.

Idiopathic purpura usually has a greatly diminished platelet count. The tourniquet clotting time, and clot retraction tests are also

useful in this disease.

Consciousness of a Growth or Swelling.—Patients come to the dentist because they feel a swelling or lump, or some one has noticed a change in the contour of their face. A local-

ized exogenous tumor may present little diagnostic difficulty but in all cases histological examination of the removed growth is demanded. Lymphoid leucemia at times may result in leucotic deposits in the gums, giving rise to either a circumscribed growth or to a hypertrophic gingivitis. The histology in an instance of this kind will give some clue to the true condition, since the oral lesion may precede for some time any definite blood change. Similarly the giant-cell tumor, so insignificantly considered, may be the osteoclastoma of generalized osteitis fibrosa. Recent discussions on this disease have brought out the interesting fact that the first symptom in several cases had been a tumor of the jaws wrongly diagnosed as a giant cell epulis.

A central lesion in the bone expanding the plates calls for a fair amount of diagnostic acumen. We may be dealing with a simple cyst of the dental system. This condition is usually associated with either a pulpless tooth, or a region where a tooth had been previously extracted, or with an unerupted tooth.

When, however, an x-ray examination reveals a cyst not associated with a tooth, further investigation is called for. We must determine whether we are dealing with some such neoplasm as an adamantinoma, giant cell tumor, myeloma or an oral expression of osteitis fibrosa cystica or of the rarer conditions of Gaucher's Disease or Niemann's Disease.

Good x-rays of the lesion must be had. A biopsy and aspiration may help, also a complete blood and urine chemistry and in some instances x-ray examination of the entire skeleton are indicated.

In my experience I have seen two swellings in the mouth that proved to be atypical gummas. In one case the swelling resembled a sub-acute alveolar abscess, in the other a common gum-boil. Both these lesions disappeared on anti-luetic treatment after routine surgical procedures based on faulty diagnosis had failed.

I have encountered tuberculosis in the oral cavity either as an indurated ulcer or a tuberculoma and the lesions followed tooth extraction. The diagnosis was made upon the histological examination.

We now come to a number of conditions that usually give no subjective symptoms and are discovered during routine clinical and x-ray examinations.

The commonest lesions thus discovered are dental caries and paradentosis (pyorrhea). Both of these conditions have a systemic origin, the discovery of which is taxing the ingenuity of physicians, dentists and research workers the world over. When I say caries and paradentosis, I do not mean the occasional

decayed or loose tooth in an isolated field; I mean caries prevalent thoughout the mouth or diffuse alveolar dystrophy. Both these diseases are closely bound up in the problem of calcium and phosphorous metabolism, and just what is causing the imbalance is at all times difficult to find out. Dietary, metabolic and endocrine dysfunction are either singularly or in combination involved.

Soft tissue lesions are also discovered during routine examination. While the syphilides are not so commonly seen in daily practise all nucous patches and excoriations of the mucous membrane should be considered suspiciously at least as a safeguard to the operator.

Lichen planus is not uncommon and may be present in the mouth without associated skin lesions. Leukokeratosis is also frequently

seen.

The geographic tongue is a source of worry to patients and even to dentists. Its cause is unknown but I have observed its most pronounced appearance during a digestive unset.

Fortunately foul breath is not of daily occurrence in practise, but when it does occur its cause must be ascertained as quickly as possible. Oral filth, digestive disorders, nasal and sinus disease are the commonest responsible factors. There is also a condition that has been termed "ozena of the tongue" that causes a most fetid breath. It is believed that a mycotic organism attacking the dorsum of the tongue is the cause. If the tongue is scraped the debris thus removed has the characteristic odor of the breath.

Pigmentation of the gum and oral mucous membrane is not unusual. I have noticed several types of pigmentary change. There is the one that is circumscribed and confined to one spot on the gum, it resembles the color of blue tatoo and is due to a silver amalgam filing impinging on the gum or to a piece of amalgam becoming dislodged during an extraction and embedded in the tissue. Sometimes an x-ray will disclose the presence of a small piece of the metal.

Of course the pigmentary changes due to lead and bismuth are well known. We see little lead symptoms but with the advent of bismuth in the treatment of lues, the bismuth

line is occasionally seen.

Brown melanotic pigmentation is common in the mouth. It is characteristic in the negro,

Hindu, some Latins and Hebrews.

Dr. Laidlaw and I have shown that melanoblasts are present in varying numbers in all
gum. When they are activated melanin is made
and for this reason we occassionally find this
type of pigmentation in the field of a chronic
gingivitis. Diffuse brown discoloration of the
oral mucosa, coupled with bronzing of the
skin is seen in Addison's Disease.

Before closing I should like to briefly mention the atypical symptom of numbness. I have seen two striking examples of this complaint and in each ease the result was different. In the first instance the numbness was in the region of the distribution of the infra orbital nerve. This was the precursor of multiple sclerosis. In the second case the patient complained of numbness in the chin and anterior teeth. This girl turned out to be a schizophrenie.

In the foregoing I hope I have been able to demonstrate to some degree the close relationship between mouth symptoms to disease.

CONGENITAL ATRESIA OF THE ESOPHAGUS

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From the nose and throat service of St. Luke's Hospital, New York City.

CONGENITAL atresia of the Esophagus presents one of the problems which medical science and ingenuity has as yet been unable to solve. The condition is by no means rare, but is so distressing to the patients and physician that ever since Durston in 1670 recorded the first recognized case, it has been considered worth while publishing one's experience with this anomaly.

Congenital atresia is due to a developmental error and must arise at a very early stage; because in the 4 mm. embryo the trachea is already separate from the Esophagus. To explain the most common type of atresia in which a tracheo-Esophageal fistula also occurs, many theories have been advanced, the one most

widely accepted being that of Shattock. To put it simply, the posterior wall of the intestinal tube is forced over to the posterior wall of the respiratory tube, forming a fistulous opening, becoming adherent, and forming a closed pouch in the intestinal tube superior to the adherent surface. The tracheal opening varies in size, the edges are always smooth, and the mucus membrane of the two tubes uninterrupted. The muscle walls of the two passages are frequently blended without any line of demarcation. Occasionaly rudimentary tracheal cartilage is found in the tracheal portion.

Atresia of the Esophagus is often associated with other developmental defects such as hare-

lip, cleft palate, and atresia ani. In atresia the upper portion of the esophagus usually ends in a. cul-de-sac at various distances above the bifurcation of the trachea and below the larynx. The pouch is usually but not always dilated. Its walls are often hypertrophied, evidently the result of ineffectual attempts to swallow amniotic fluid. In ninety-six of one hundred and thirty-six cases reported by E. D. Plass and reviewed by I. S. Hirsch there was an esophago-tracheal fistula opening into the respiratory tube.

Classifications of this condition are many but we prefer that of Griffith and Levenson, which with slight changes, so as to be given in the order of the frequency of its occurrence,

is as follows:

- 1. Obliteration of a portion of the Esophagus with tracheo-esophageal (or broncho-esophageal) fistula.
- 2. Congenital dilatation. It is limited to the portion just above the diaphragm. This condition may lead to a secondary diffuse dilatation involving the entire length of the esophagus.
- 3. Obliteration of the esophagus in only a part of its extent unaccompanied by fistula.
 - (a) Only the upper portion may be normal.
 - (b) Both upper and lower portions are patoulous, both portions being connected by a more or less distinct muscular or connective tissue band.
 - (c) Present as a cordlike structure.
- 4. Stenosis. It may be caused either by a fold of mucus membrane or a narrowing involving the entire wall of the Esophagus
- 5. Tracheo-esophageal fistula without any other lesion of the Esophagus.
- 6. Partial or complete doubling of the Esophagus involving the entire wall of the Esophagus.

The usual symptoms are typical and should be recognized. The child at birth may appear perfectly normal and attempt to nurse, but the milk will not be swallowed. It may be asphyxiated at birth due to mucus in the nose The child may have choking and throat. attacks due to an accumulation of frothy mucus-saliva which cannot be swallowed. All liquids are regurgitated after a small quantity has been taken. One is unable to pass even the finest catheter (the length of the obstruction varies but the catheter is usually arrested at a point 9.0-11.0 cm. from the alveolar margin). The stomach is seen to inflate with each inspiration. Meconium is passed, but there is no change in the evacuation even though the child lives for several days. Examination of the meconium does not reveal any lanugo hair. Breath sounds are more audible than normally over the abdomen. Rattling, whistling, or noisy respiration frequently occurs. Cyanosis, which appears periodically, is a constant feature. Urine is voided as usual, but after a few days becomes scanty in quantity. There is a progressive loss of weight frequently marked by elevation of temperature (inanition fever).

These cases invariably terminate fatally, the duration of life depending upon the vigor of the child at birth. Death from starvation is certain to occur if the infant is not operated upon. If gastrostomy is done, they almost always die from shock, hemorrhage suffocation, or broncho-pneumonia, the last probably occuring as a result of food introduced into the stomach being regurgitated into the lungs. Jejunostomy would prevent this latter accident because it obviates back-flow from the esophagus into the trachea.

Sometimes there is an incomplete stricture not recognized until the child is grown up. The lumen in these cases being sufficiently large to transmit liquids and even solid foods, but as a result of that stricture the esophagus immediately above it dilates, due to a tendency of part of the meal to remain at that point. Apfel reports such a case in which a number sixteen French catheter would only go down five inches, and even saline would not flow through the tube. The child died two days

after gastrostomy.

In passing it might be of interest to mention that Neuhoff and Ziegler have developed an operation for accidental stricture of the esophagus which might conceivably be used in children with incomplete stenosis. It is a two-stage operation which aims to produce a bed of granulation tissue around the Esophagus. Into this bed a rubber tube can be inserted and allowed to remain until the cut ends of the Esophagus become adherent to the granulation bed, and the granulation bed becomes covered with overgrowth from the Esophageal epithelium.

Morse says that all cases of congenital atresia should be reported, partly because of their rarity, and partly because the symptoms although characteristic are usually misinterpreted and attributed to some other disease.

Case Report

A child nine months old, a patient of Dr. F. E. Johnson was admitted to the hospital because of difficulty in swallowing. There are no brothers or sisters and the family history was not relevant.

The patient was a full term baby, delivered after a normal labor. Inspection at birth had revealed a well developed baby with no obvious abnormalities. It was breast fed without

1095

Volume 31 Number 18

trouble for a few days, and then the child began to have difficulty in swallowing the milk The mother, not knowing what to make of this, resorted to pineling the child's uose and forcing it to swallow After this ordeal the child would often vonut and frequently the vonitus was tinged with blood

Examination disclosed a fairly well developed but poorly nourished, pale, child D'Espines sign was negative. There was no dulness under the sternum nor over the spinous processes, and air entered both lungs well The heart sounds and rate were normal, the abdomen scaphoid, the skin dry, the urinc The tuberculin test was negative. A 6 m m Esophagaseope was easily passed, and constriction was encountered at a distance of 12cm from the alveolar margin admitting a This was passed number twelve bougie several times to dilate the stricture stricture was apparently congenital membrane The opening in the stricture was about the size of a lead pencil. It was easily ruptured and dilated

Two weeks later a six mm-llsophagascope was again passed, and this time the narrowing was encountered at 12em from the alveolar No induration of scarring was ob-The mucosa appeared paler than served normal but was immterrupted. Numbers fivesix-seven English bongies were passed

The next day the child showed a slight re action as a result of the instrumentation. The pulse became rapid, the temperature fluctuated between 100 and 1011/2 degrees for three days The patient was given 21/2 grains of bismuth subnitrate three times a day and the reaction subsided

A few weeks later dilatation was repeated again The 6 mm-Esophagascope was passed through the stricture. This time the child had no reaction

Two examinations were done at the office and a number six Esophagaseope was passed into the stomach without difficulty

At this stage the child refused to cat because of the habit of being fed. It was hospitalized, its routine changed, and the difficulty was eliminated

To date the child is much better able to swallow and vonits only oecasionally

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TREATMENT OF UNDESCENDED TESTES BY INJECTION OF PROLAN By ALEXANDER GOLDMAN, MD, AND ABNER STERN, MD, BRONX, NEW YORK, NY

Real at a n ceting of the Clinical Society of the Bronx Hospital on March 13 1933

THL testes develop in pairs from the primitive bodies situated behind the peritoneum on a level with the third lumbar vertebra The migration of the testieles from that position on through the inguinal eanal into the serotum, commences about the sixth month of foetal life, and is completed at the time of birth

Retention of the testis is said to occur, if this gland is arrested at any part in its migration from the abdominal cavity to the serotum

Until recent years, the non-descent of the testes was explained on a mechanical basis Treatment of this condition was recommended only in cases where symptoms arose such as tenderness or pain. The treatment obviously was purely mechanical, and consisted of surgical interference namely, of stretching the cord and implanting the testis into the serotum

Other investigaters had noted the great increase in the interstitial cell mass as birth approached and noted that after birth this increase was lost and was not entirely regained until near puberty

In his studies on the action of the anteriorpituitary-like hormones of pregnancy urine (the basis of the A-Z test), Engle observed that the testes of immature monkeys were very similar in structure to the testes of the human new born Under treatment with the hormones from pregnancy urine the testes doubled in weight, with an increase of from four to ten times in the size of the interstitial cell mass. The preparations used have eansed no acceleration of spermato

genesis, the action being mainly directed to the interstitial cells.

When immature monkeys are treated with the gonad stimulating fraction from human pregnancy urine, the testes not only increased in size, but the scrotum became turgose and oedematous. While this was occurring, during two or three weeks, the testes descended from the level of the external inguinal ring well into the scrotum. It was suggested by Engle that under normal conditions, this response was one of the factors involved in the normal descent of the testes in the infant male human.

Applying Engle's work on monkeys to humans, we decided to treat cases of undescended testes by injecting them with the hormones obtained from the urine of pregnant women.

The following is the report of two cases.

Case H. P. Age 12 years. He had measles and tonsilitis as a child. Tonsils were removed at the age of three. Hermiotomy was done at the age of five. At that time was told that "his testicles had not developed."

Physical examination showed a boy whose weight was 132½ pounds, and height 5 feet, 3½ inches. The boy was feminine in appearance, skin fair, well built, stout, shoulders round, chest soft and protruding, fleshy hips, abdomen large and pendulus at the lower parts. He was also phlegmatic. There was scant pubic hair, the scrotum small, the right testis small, the left testis was not in scrotum nor felt in the inguinal canal.

Treatment was started June 12, 1932. Patient was injected with 100 rat units of Antuitrin S (hormone from urine of pregnant women) three times a week. Medication by mouth consisted of three grains of extract of anterior pituitary, and one grain of the whole gland twice a day, as well as 1/10 grain of thyroid once a day.

The boy now weighs 130 pounds, a loss of $2\frac{1}{2}$ pounds, and is 5 feet, 5 inches tall, a gain of $1\frac{1}{2}$ inches. The abdominal fat has decreased considerably, his hips are flattened. There has been a great increase in pubic hair, and the scrotum is greatly increased in size. The size of the right testis is at least three times its previous size, and the left testis is easily palpable, moving freely up and down in the canal, and of considerable size. His general appearance is more masculine, his morale is greatly improved, and he feels encouraged.

Case J. G. A boy of 15 years. As a child he had chronic colitis, measles, whooping cough, German measles, chicken-pox, and he had his tonsils removed at the age of seven. His weight was 88 pounds, and his height 4 feet, 9½ inches. He was fair, blond, slim and small. His voice was high pitched, he was nervous and cried readily. His right testis was undescended, his left testis was in the scrotum, but small. The scrotum was small in size, and there was no visible hair on the pubis.

Treatment was started June 13th, 1932, and consisted of injections of 100 rat units of Autuitrin S, given three times a week. After one week's treatment it was noticed that the scrotum had increased considerably in size, and the right testis was now palpable in the scrotal sac. This boy failed to appear regularly for the injections, sometimes missing treatments for several weeks at a time. He now weighs 92 pounds, a gain of four pounds, and is 5 feet tall, a gain of 2½ inches. Both testis are now in the scrotum, his left testis considerably enlarged and there is a great amount of pubic hair. His voice is not so high pitched, and he is not so emotional.

The results obtained in these two cases are very encouraging. Not only was there a descent of the testicles in both of these cases, but there was an increase in the size of the testicles, and a definite change in the secondary sexual characteristics. By analogy with Engle's work on monkeys, it seems very likely that the increase in the size of the testicle was due to a hypertrophy of the interstitial tissue of the testis and the change in the secondary sexual characteristics was a result of the increase in the interstitial gland substance, with an ensuing increase in male sex hormone.

Why is it important to cause these retained testes to descend? What particular harm is there in permitting these retained testes to remain where they are arrested?

First, evidence has accumulated to show that these ectopic testicles are apt to become the seat of malignant growths later in life.

Secondly, spermatogenesis will never take place in a testicle that is not in the scrotum.

Thirdly, testicles that are ectopic are apt to atrophy, and the interstitial gland secretions are diminished, or may entirely disappear. These effects are probably due to the higher temperature in the abdomen than in the scrotum. This difference in temperature may be as great as 8° C. Degeneration of the testes is known to occur where they are subjected to a constant temperature of 38° C.

Surgery, in our experience, has been very unsatisfactory. In those cases where the testicle was brought down into the scrotum, atrophy of the testis usually occurred.

While it would be fool-hardy to generalize from the results obtained in just these two cases treated with prolan, the results have been so striking that we felt a preliminary report was justified.

A larger series of cases is at present under treatment at the Endocrine Clinic of the Bronx Hospital, and we hope to report the results of treatment of the member of this group in the near future.

The authors wish to thank Dr. Earle T. Engle, and Dr. Raphael Kurzrek for their kind cooperation in the study of these two cases.

ASPIRIN TEST TO DETERMINE THE ADVISABILITY OF REMOVAL OF FOCI IN RHEUMATIC CONDITIONS

By HEINRICH F. WOLF, M.D., NEW YORK, N. Y. From the Department of Physical Therapy at Mt. Sinal Hospital.

OR several years I have, in connection with the Laryngological and Dental Departments of Mt. Sinai Hospital, carried on studies into the relation between focal infections within the mouth, and rhenmatic diseases, and they have led to the development of a method of determining whether or not the removal of infected tonsils or teeth would be likely to give relief from rheu-Such an indication was found in the reaction of the patient to aspirin.

These investigations have revealed many rheumatic patients whose tonsils had been removed, or teeth extracted, without any relief from their When these patients were given rheumatism.

aspirin, not one was relieved.

No one would expect relief from pain by aspirin in a case of tuberculosis of a joint, or a gonorrheal or syphilitic infection, or a metabolic, static or traumatic arthritis. On the other hand, aspirin is known to give relief in infections due to the streptococcus viridans and hemolyticus, and to the staphylococcus group, which are the pathogenie organisms most frequently found in the foci above the neck.

It is now our rule that any patient complaining of a condition called rheumatic receives 10 to 15 grains of aspirin once. If he does not react with relief of pain within an hour, the extraction of a tooth or a tonsillectomy is not advised, no matter what the oral pathology may be. This does not mean that abscessed teeth should not be extracted as a positive danger, but the patient in such cases should be told that a relief of his pain is doubtful.

Many physicians advocate the extraction of devitalized teeth without visible pathology as a routine procedure in all cases of arthritis. It is well known, however, that these extractions often prove futile. We do not advocate an extraction if the patient does not respond to salicylates. If he does, and if a number of teeth are devitalized or show improper root fillings without abscesses or rarefications, we advise removal of the fillings of the roots and the examination of the root bacteriologically. If an infection is present the tooth should be extracted, if it can be replaced easily. If the tooth is technically important (bridge work, plate), an effort should be made to cure the infection without removing the teeth. It is obvious however that in those cases which already show structural changes in the joints, no cure can be expected from extraction alone without further treatment, but the exacerbations are likely to subside.

THE EXTERNAL EXAMINATION OF THE EYE IN THE DIAGNOSIS OF GENERAL DISEASES

1. VISION, POSITION OF THE EYE IN THE ORBIT AND THE EXAMINATION OF THE EYELIDS.

By CONRAD BERENS, M.D., and JOSHUA ZUCKERMAN, M.D., NEW YORK, N. Y. The first of a series of three papers read before the Dallas Southern Clinical Society, Dallas, Texas, April 1, 1931.

A. Vision

B. Position of eye in the orbit

 Unilateral exophthalmos (2) Bilateral exophthalmos

(3) Enophthalmos

C. Eyelids

Scars Atrophy and relaxation

(3) Redness

LTHOUGH physicians appreciate the im-A portance of certain eye symptoms and signs in the diagnosis of systemic diseases, professional practice usually prevents their studying the eye in ophthalmologic clinics and reading textbooks of ophthalmology. The purpose of this outline is to point out those phases of the external examination of the eye which have proved valuable in the diagnosis of general diseases.

- (4) Edema
- (5) Pigmentation
- (6) Hemorrhage (7) Motor anomalies
 - a. Inability to close eyelids
 - b. Inability to open eyelids blepharospasm-t witching
- (8) Narrowed palpebral fissure
- (9) Widened palpebral fissure

A. Vision

It is always important to determine whether vision is present, whether it is normal or defective; if defective, what is the cause. In young children the closure of the eyelids which occurs when a bright light is projected into their eyes may be utilized to determine whether vision is present. Poor visual acuity is not necessarily due to local or general pathologic conditions but may be due to

near-sightedness, far-sightedness, or a combination of both. To determine whether glasses will improve vision, have the patient read the test chart at a distance of twenty feet through a one millimeter pinhole. If the vision is improved practically to normal with the pinhole, glasses are usually indicated. If the vision is not improved, a careful search should be made for corneal opacities, lens changes, and diseases of the media or fundi produced by local or general diseases, such as tuberculosis, syphilis, diabetes, hypertension, focal infection or brain lesions.

B. Position of the Eye in the Orbit

Special notice should be taken of the position of the eye in each orbit and the relation of one eye to the other. Normally the position of the eyeball in the orbit is such that a vertical line dropped from the upper to the lower orbital margin is tangential to the cornea. Variations have been found in apparently normal individuals

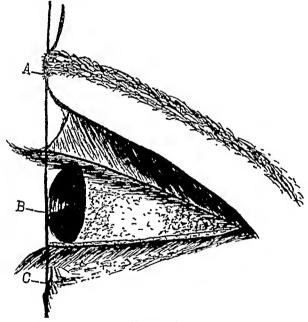


FIGURE 1

This diagram shows that in the normal position of the cye a vertical line dropped from the upper to the lower orbital margin is tangential to the cornea. A, upper orbital margin; B, cornea; C, lower orbital margin.

in which the cornea was one centimeter anterior and in other cases one centimeter posterior to this position. If one eye or both eyes apparently protrude it is important to exclude unilateral or bilateral high myopia (near-sightedness), for in this condition the anteroposterior diameter of the eyeball may be six or eight millimeters longer than normal and will give the impression of prominence of the eyes.

(1) Unilateral Exophthalmos.—This condition is usually caused by disease of the orbit or it may

occur as a secondary manifestation of disease of the surrounding structures.

- (a) Syphilis and tuberculosis of the orbital bones and periosteum may cause exophthalmos. We have seen one case of displacement of the eyeball downward, nasally and somewhat forward as a result of tuberculosis of the lacrimal gland.
- (b) Tumors of the orbit, particularly sarcomas, may displace the eyeball forward. Papilledema (edema of the optic nerve head) is a common sign in tumors of the orbit. The deeper the tumor is placed in the apex of the orbit, the more marked is the visual disturbance and the more common are limitations of movement of the eyeball.



Figure 2

A case of unilateral exophthalmos produced by angioma of the orbit.

- (c) Extension of inflammation from the uasal accessory sinuses causing unilateral exophthalmos is not uncommon. In acute cases there is redness of the eyelid, edema of the conjunctiva, and occasionally papilledema or papillitis. In chronic cases little, if any, inflammation may be noted and it is possible for a marked displacement of the eye to occur without serious disturbance of binocular vision, i. e., simultaneous vision with both eyes.
- (d) Thrombosis of the cavernous sinus produces a varying degree of exophthalmos which is first unilateral and then bilateral. The cause is usually infection or traumatism and the communication between the vascular sinuses by means of the circular sinus explains why exophthalmos is so often bilateral. Exophthalmos is caused by venous engorgement and edema of the loose cellular tissue in the orbit.
- (e) Thrombophlebitis of the orbital veins may be responsible for protrusion of the eyeball. It is sometimes metastatic in the course of or after scarlet fever and other infectious diseases. In some cases it seems to be associated with infection of the nasal accessory sinuses and dental

infections. Inflammation of the orbital vein may be associated with injury. Terrien reports a case in which unilateral exophthalmos seemed to be secondary to thrombo-phichitis, the result of the lodgment of a revolver bullet in the roof of the left orbit.

(f) Inflommotion of Tenon's eapsule, sometimes noted in influenza and rheumatism, may

also produce unilateral exoplithalmos.

(g) Hemorrhages in the orbit, both traumatic and nontraumatic, may give rise to unilateral exophthalmos.

(h) Ponophthalmitis (inflammatory involvement of the entire eye) usually produces rather

marked protrusion of the eyeball.

(i) Pulsating exophtholmos is often attributable to rupture of the internal carotid artery into the cavernous sinus, creating an arteriovenous aneurysm.

(j) Intermittent exophthalmos2 is noted when varicose veins are present in the orbit and may lead to prolapse of the eyeball following physical strain either with or without hemorrhages in the orbit.

(k) Tenotomy and parolysis of the oeular muscles may produce a mild degree of exophthalmos.

(1) In Basedow's disease unilateral exophthalmos may occasionally be seen.

- (2) Biloterol Exophtholmos. Probably the commonest cause of bilateral exophthalmos is (a) Basedow's disease, although (b) myopia, (e) cranial anomalies, and (d) bilateral tumors of the orbit should be considered. Bilateral exophthalmos related to (e) sinus thrombosis has been mentioned. Associated symptoms in Basedow's disease are lagging of the upper eyelids when the patient looks down (von Graefe's sign), infrequent closure of the eyelids (Stellwag's sign), and tendency to divergence of the visual axes with insufficiency of convergence (Moebius' sign), i.e., inability to bring both eyes to fixate an object held at three inches from the eyes.3
- (3) Enophthalmos or sunken eye may be produced (a) by operations on the ocular muscles and is associated with decrease in width of the palpebral fissure. It also occurs in (b) the aged, (c) extreme emaciation, (d) paralysis of the sympathetic (e) congenital defects and (f) as the result of traumatism.

C. The Eyelids

(1) Scors, just above the nasal angle of the eye unless they are due to trauma, are usually the result of infection in the ethmoid cells. the scar lies just below this point it is probably due to inflammation of the lacrimal sac. Scars along the upper outer margin of the orbit sometimes result from tuberculosis of the orbital bone.

(2) Alrophy and relaxation of the upper eye-

lid so that the skin extends down over the eyelashes of the upper eyelid (called blepharochalasis) is usually a late sign in angioneurotic edema of the eyelid.

(3) Recurrent attacks of slight redness and swelling, particularly of the upper eyelids with slight scaling and itching, are often associated with chronic infection in the nasal accessory sinuses and may be an expression of bacterial allergy.

(4) Edemo of the eyelid is frequently caused Noninflammatory by a hordcolum (stye). edema may be of diagnostic importance in beginning heart failure, nephritis and myxedema.

(5) Marked pigmentation of the lower eyelid is a common finding in elderly people but may also be an early sign in Basedow's disease and Addison's disease.

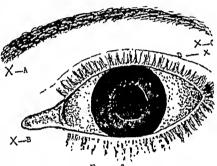


FIGURE 3

Scars in the region of the eyelids produced by: A, discase of the ethinoid cells; B, disease of the lacrimal sac; C, inflammation of the Lacrimal glands; D, tuberculosis of the margin of the orbit.

(6) Hemorrhage into the eyelid is commonly caused by direct traumatism. It also occurs in at least one-third of all cases of fracture of the base of the skull,

(7) Motor anomalies of the eyelids and their differential diagnosis.

Inability to close the eyelid is due to paralysis of the facial nerve which supplies the orbicularis " : splincter muscle of the is the result of an injury

and cause win be apparent. Blepharospasm, i.e., spastic closure of the eyelids, is often noted in inflammations and injuries of the cornea. Dental infections, disease of the nasal accessory sinuses and of the mucous membrane of the upper respiratory tract, snow blindness, chorea, epilepsy, hysteria, and tetanus are common causes of blepharospasm. Central causes of blepharospasm are meningitis and tumors. Clonic spasin (twitching) of the fibrilla of the orbicularis palpebrarum muscle, especially of the lower eyelid, is commonly seen in overworked, nervous people,

especially those who have poor converging power or uncorrected or improperly corrected refractive The blinking which is often noted in children has, in our experience, often been associated with chronic conjunctivitis and chronic nasal infections. The proper correction of refractive errors (i.e., proper glasses), the treatment of local and focal infections, and the correction of anomalies of the eye muscles have apparently given relief in certain cases.

If inability to open the eyelid has existed from birth, congenital ptosis, which is usually bilateral,

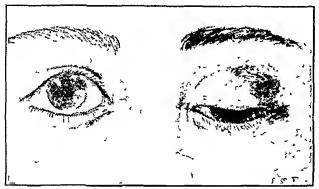


FIGURE 4 Congenital ptosis of the left eyelid.

will be thought of, and absence of the levator palpebræ superioris muscle will be suspected. Acquired ptosis is usually the result of lesions of the third nerve which supplies the levator palpebræ superioris muscle. If the branches of the third nerve to the extra-ocular muscles are also involved, the eyeball will be turned downward and outward by the unopposed action of the ex-

ternal rectus and superior oblique, which are the only two extra-ocular muscles not supplied by the third nerve. Syphilis and traumatism are common causes of lesions of the third nerve Unilateral ptosis or drooping of the upper eyelid may be produced by injuries, abscesses, hemorrhages, tumors and syphilitic periostitis which directly affect the levator muscle of the upper eyelid. Cortical, as well as nuclear lesions, may produce unilateral ptosis. The nuclear lesions may be brought about by hemorrhage, multiple sclerosis, infectious diseases, tabes, cerebial syphilis, and progressive paralysis. Chronic progressive ophthalmoplegia externa is a condition which often commences in childhood with unilateral or bilateral ptosis and usually progresses to complete paralysis of all the extra-ocular muscles In myasthenia gravis pseudoparalytica and in hysteria, ptosis is usually bilateral.

(8) Narrowed palpebral fissure.—Ptosis of the eyelid caused by lesions of the sympathetic and third nerves should be differentiated from apparent ptosis in patients with trachoma, vernal catarrh, syphilitic involvement of the farsus, and

edema resulting from nephritis. (9) Widened palpebral fissure.—Psychic influences may cause a change in the size of the palpebral fissure. Everyone is familiar with the stare due to widening of the palpebral fissure in Increased size of the palpebral fissure may be caused by a large myopic eyeball, abscess in the orbit, retrobulbar tumors, tower head, and arteriovenous aneurysms affecting the cavernous Overaction of the superior palpebral muscle of Müller or paresis of the orbicularis palpebrarum muscle may also result in a widened palpebral fissure.

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FOOD HYPERSENSITIVENESS

By W. C. SPAIN, M.D., NEW YORK, N. Y.

From the New York Post Graduate Medical School and Hospital of Columbia University Presented before the Cumberland County Medical Society, Portland, Maine, November 25, 1932

FEW years ago it would have been a rash individual indeed who would have thought Food Hypersensitiveness a subject which concerned greatly those working in such diverse fields as pedriatics, rhinology, internal medicine, surgery and ophthalmology. And yet we know today that all these branches of medicine and many more are concerned, with food sensitization.

So great has been the interest in this phase of immunology, that the idea has been overworked with the consequence that many clinical condi-

tions, whose etiologic basis is vaguely understood, if at all, are classed as "allergic" for want of a better diagnosis. A great deal of confusion has thus arisen concerning such terms as hypersensitiveness, allergy, atopy and anaphylaxis.1 first task that confronts us therefore is the somewhat didactic one of giving definitions. broad term of hypersensitiveness under which are grouped allergy, atopy and anaphylaxis is used to describe the characteristic condition which arises in a small percentage of individuals, from contact with a minute amount of specific excitant

usually protein.

Hypersensitiveness occurs both in man and in lower animals, the condition in man being termed allergy or atopy; and in the animal, anaphylaxis. The reasons for this separation of the human and animal forms need not be discussed here. However, it may be stated that anaphylaxis is quite different from hypersensitiveness in man in that it is always artificially produced, never occurs spontaneously, is temporary, and is never inherited.

The recognized forms of hypersensitiveness in man are hay fever, bronchial asthma, allergie coryza, urticaria, angioneurotic oedema, migraine, certain forms of eczema and of acute gastroenteritis. All of these conditions are classified un-

der the designation of "allergy."

Hay fever, bronchial asthma, allergic coryza and certain forms of gastroenteritis, also are classified under the term "atopy," largely because in them a definite familial tendency has been proven, the majority of cases having a family history positive for hypersensitive complaints in the antecedent and collateral members of the family.2, 2, 4, 5 The study of a great number of individuals with lustories positive for asthma or hay lever has made it possible to estimate not only the number of children in a family who may develop hay fever or asthma, but the approximate age at which symptoms will appear. Allergie eczema (neurodermatitis) slould probably be classed under "atopy," since also in this condition inherited tendencies have been demonstrated.

With the exception of seasonal hav fever. which is in reality, a form of allergic coryza, all of the clinical allergic conditions mentioned may be manifestations of food sensitiveness. erally considered atopic, are the acute gastrointestinal symptoms so easily mistaken for those of a surgical abdomen, with nausea, vomiting, distension, epigastric or abdominal pain, diarrhea and collapse, these symptoms following the ingestion of a specific food excitant. Vague, less well defined chronic abdominal complaints, such as bad breath, anorexia, constipation, dull abdominal pains, have also been classified as allergic.7 Epilipsy,8 arthritis,9 acute bladder disturbances,10 uterine irregularities,11 herpes simplex,7 gastric ulcer,12 episcleritis,13 pruritus ani,7 fever,7 malaise, malnutrition, and many other complaints have been classed by varied investigators under this heading.

Age Incidence.—The majority of cases of food sensitiveness occur in early life. From a study of 200 cases of bronchial asthma it was found by intracutaneous test that only individuals of three years or younger developed symptoms from foods alone. After that age the inhalant substances such as pollens, dusts, feathers, etc., gradually replaced the food sensitiveness, so that by the age

of 10 to 12 the majority of patients had lost the food reactions elinically, although the skin sensitiveness often remained. In only five per cent of adult astlimatic patients was it possible to demonstrate a food sensitiveness as the sole offending factor. Stuart and Farnham,14 studying infants and children, found that in the second year of life, the greatest incidence of food sensitiveness occurred, the percentage rapidly decreasing after that age. In a study of 160 cases of infantile eczema, of which 110 gave positive reactions to food tests, Smythe, Bain and Stallings15 found that 105 patients or 65% had onset of symptoms before the sixth month and 14% before the twelfth month. These figures agree closely with the findings in similar cases by O'Keefe and Rackemann.18

The explanation for this sensitization to foods early in life is unknown to us. Formerly it was thought that this condition was due to a defective gastrointestinal membrane which allowed unaltered protein to be absorbed into the circulating blood, thus sensitizing the individuals. That such absorption occurs normally however, has been shown by several investigators, chiefly by Du Bois, Schloss and Anderson,17 who found strong proof of the absorption of unaltered protein in the blood of nonsensitive infants, and by Brunner and Walzer18 who showed that unaltered protein could be normally absorbed into the circulation within a half hour of ingestion of the food.

Diagnosis .- The methods used in determining sensitiveness to foods are (1) the history, (2) the cutaneous tests, and (3) the elinical tests. An accurate history is of great importance since often it furnishes the chief means of diagnosis. Several points particularly should be emphasized. First, the establishment of the atopic nature of the attacks, since it is in this condition that the cutaneous tests are of greatest value and the results of treatment more likely to be successful. The presence of bronchial asthma, hay fever. atopic coryza, or eczema, in the patient or in the antecedent or collateral family history, furnishes strong evidence of the atopic or inherited nature of the food reaction. A comprchensive family history should therefore be obtained.

A second point of importance is a description of the attacks—the frequency, intensity and duration, and relation to meals. The attacks may be acute or explosive in nature, with periods of normal behavior between paroxysms, their occurrence depending on the occasional contacts with the specific excitant, or they may be cumulative, being due, not to foods infrequently eaten but to the gradual storing in the body of toxic products from some food substances present daily in the diet, but not apparently irritating until the limit of tolerance has been reached. Any periodicity or regularity of the attacks should be obscryed, and their relation to daily, weekly or monthly rou-

tine of the patient noted. In a young woman who had suffered for years from migraine each Monday, the causative factor, egg, was established not by skin test, but by discovering that only at Sunday breakfast, were eggs eaten. In the acute type of attacks the reaction time between ingestion of the food excitant and the symptoms varies in different individuals from a few seconds, to several days, a condition which adds to the difficulty of diagnosis. Generally, however, the more acute the attack, the shorter the reaction time. For instance, symptoms of utmost gravity, dyspnoea, cyanosis, and collapse, have been known to develop in egg sensitive children the moment a minute amount of egg has come into contact with the lingual and buccal mucosa, long before ingestion could possibly occur. Indeed actual contact with the excitant is unnecessary for the development of symptoms in exquisitely sensitive cases. The odor emanating from such foods, as fish, celery or onion will alone be sufficient to produce, in susceptible persons, violent asthmatic and coryzal attacks. A patient seen at the clinic was so sensitive to fish, that merely passing a fish market would cause severe attacks of asthma. Another patient, a Michigan physician, would suffer severely from asthma whenever entering a dining room where celery was on the table, or whenever driving past celery fields, even during nonpollenating seasons. There are also food cases so exquisitely sensitive that merely contact of the food with the unbroken skin will produce severe symptoms of asthma, urticaria or dermatitis. A physician working in the Asthma Clinic at the Post Graduate Hospital is so sensitive to egg that rubber gloves are worn whenever the testing of egg extract upon a patient is necessary. Many cases, especially in kitchen workers, have been recorded where it has been necessary to peel potatoes or onions under water, to prevent reactions.

Even in the less explosive types of food intolerance where the reaction time is longer and the symptoms more chronic in type, a close questioning may reveal the causative factor especially in children, where the history of an aversion to a particular food or foods is often highly significant. Such a dislike may frequently indicate the specific excitant, although the child's attitude, nature's protective effort, may be interpreted by the parent or physician as merely a whim or fancy. There are many asthmatic and undernourished children, who, sensitive to milk or egg, are forced to take these foods because they are "good" for them, whereas in reality these substances are the very causes of the complaints.

A third point of importance in the history is the consideration in detail of the patient's usual diet; the amount of milk consumed daily; the number of eggs; the varieties of meat, fish, fruits, vegetables and nuts; the amount of chocolate and cheese; the use of coffee and tea. Any food or beverage used intemperately should be suspected. A young woman desiring to gain weight was recently seen for urticaria of three months standing, coryza and loss of weight. She gave a history of drinking two quarts of milk daily. Cutaneous tests were negative, but with the simple removal of milk she lost her urticaria and coryza and gained rapidly in weight. In another case, a young nurse, suffering from asthma, admitted drinking large quantities of black coffee. Removal of coffee from the diet completely relieved the condition. In this case the diagnosis could be verified by positive skin test.

In chronic food sensitizations such as urticaria and migraine where the history and cutaneous tests offer little aid, it is of benefit to have the patient keep a complete diary of his food intake, which can be studied in relation to the attacks. Frequently in this way only, a clue to the causative factors can be obtained.

Cutaneous Tests .- The importance of cutaneous testing as an aid in determining the diagnosis in allergic conditions is well established, and the procedures employed, both intracutaneous and scarification methods, are too well known to warrant describing them here. Permit me however, to direct your attention to several important facts in this connection: (1) positive food reactions are most frequently elicited in the atopic group of food cases-that is, in those presenting in themselves or in their family, a history of asthma, hay fever, atopic coryza or atopic eczema; (2) negative food reactions upon test, with positive clinical histories are common, particularly in urticaria, angioneurotic oedema, migraine and the vague clinical forms mentioned above; (3) many false positive reactions are obtained which cannot be verified and cannot be explained. The reasons for the negative reactions are only partially known. Cooking may so alter the foods that testing with the unheated protein of the diagnostic extracts may be inconsistent. Extracts of heated protein have been even more unsuccessful. Further, the mechanism of food sensitivenes may differ in the nonatopic group of food cases. skin sensitizing antibody or the reagin, characteristic of the atopic group cannot usually be demonstrated in them. Also the time element or incubation period may be responsible. It is unusual to obtain an immediate positive wheal upon test with the extract of a food that in the patient requires hours to cause apparent symptoms.

In many patients with thickened or eczematous skin the results of the cutaneous tests are unsatisfactory. In these cases the method of passive transfer has been most successful. Prausnitz and Küstner¹⁰ found that the sera of atopic individuals contained antibodies that would specifically sensitize the skin of a normal person to the excitants responsible for the patient's condition. By

employment of this principle it is possible to test local skin areas in the normal individual made sensitive temporarily, with the serum of the susceptible patient. The importance of this method of testing in infants and children was first emphasized by Walzer and Kramer.²⁰

Clinical Tests.—In cases where the skin tests prove negative, but where the history suggests the causative factor, a clinical trial is of value, the suspected food being given after a period of abstinence and when the patient is symptom-free. Care must be taken to avoid excessive amounts of

the foods thus investigated.

The elimination diets of Rower are based upon the trial and error procedure, the patient being placed upon a severely restricted diet until it is proven that it can or cannot be tolerated. If the patient loses his symptoms upon the menu selected, additional foods are cautiously and slowly added. Successful results have been obtained in many perplexing cases by this method, but it is often difficult to secure the complete cooperation of the patient due to the necessary rigidity of the plan.

The Chief Offending Foods.—While experience has shown that all varieties of foods must be suspected as excitants of food hypersensitiveness, there are several that are much more prominent than the rest as regards both incidence and ability to produce clinical symptoms. Investigators generally agree that these are egg, wheat, milk, fish and shellfish, meats, chocolate and nuts.

Egg is probably the most important of all foods in this connection, particularly in infancy and in early childhood, not only because sensitizations are comparatively frequent but also because the symptoms produced may be most severe. Not only asthma, coryza, urticaria and migraine are often caused by this excitant, but also infantile eczema and neurodermatitis, not only from ingestion but also from contact with the unbroken skin, as noted above. Such egg intolerance can apparently be inherited as in the family described by La Roche and Richet, "where gastrointestinal symptoms from egg were known in four generations.

Testing with this substance requires great caution, particularly in infants, since many cases of extreme sensitiveness exist. Dilutions of whole egg white, one part in 1,000,000 and one part in 100,000 are employed, separation of the various protein fractions, albumin, globulin and mucoid, being nnnecessary. Reactions to extracts of chicken meat and of chicken epithelium (feathers) are frequently obtained in egg sensitive cases. Testing with yolk extracts have been generally discontinued, since apparently egg cases are more sensitive clinically and by test, to the white.

Where egg is to be avoided in the diet the difficulties are many, due to the numerous ways in

which it is employed. Pastry, cake, wasses, macaroni, noodles, custard and ice cream are made with important amounts of egg. Pies and breads are glazed with egg. Fondants and soft centered candies contain it. It is often employed in making meat cakes and croquettes. Even the breast fed infant may obtain egg through the mother's milk.²² Egg white is used as a "binder" in a variety of water color paints known as "Tempera." A case is recorded where eczema from egg developed from this source.

Wheat may cause symptoms of asthma, coryza, migraine, urticaria and eczema not only by ingestion and contact as does egg, but also by inhala-Bakers, wall-paperers, grain dealers and millers have been described as cases of such wheat sensitization, asthma and coryza being the usual symptoms. Such inhalant cases are difficult to treat successfully and frequently a change in occupation may be necessary. A patient may have any one or any combination of symptoms as a result of wheat contact. Other cereals similar in action to wheat are rice, barley, corn, rye and oats. Buckwheat, although botanically unlike, is placed here. It should be emphasized that it has been the cause of many severe clinical reactions and extreme caution must be used in testing for sensitiveness to it. Where wheat or other cereals must be eliminated from the diet it should be recalled that coffee substitutes are chiefly cereal. Extracts of the whole grain are used in testing for wheat sensitization.

Milk is an important offender particularly in infants and children. Symptoms identical in variety with those caused by egg and wheat are found, although rarely produced except by ingestion. Of the milk proteins, lactalbumin is the most important, as an excitant. Since heat destroys this fraction, boiled milk can be tolerated by many milk sensitive individuals. Other milk sensitive patients, however, must avoid all forms of milk and milk products, such as cheese, buttermilk, cream, condensed, evaporated, powdered and malted milks. Chocolate products often contain milk. Cream soups, custards, ice creams and varieties of candies must be often eliminated from the diet. In infants, milk substitutes as Soybee,28 or goat's milk, fresh or canned, may be Tests for milk sensitiveness are usually made with decaseinated milk extracts. Extreme sensitiveness is less frequent to milk than to egg.

Fish and shellfish are notorious as causing violent urticaria, angioneurotic oedema, asthma and acute gastrointestinal attacks, although other clinical forms are found. In very sensitive cases, severe symptoms can be produced by inhalation, as in the fish sensitive girl mentioned above. An open -lue pot warming upon the stove has been known to be the source of asthma in a cabinet maker's assistant, sensitive to fish. Tests with the extracts of fish and of glue, a fish collagen, must be performed with greatest caution, since

many cases are very highly sensitive.

Nuts are excitants by ingestion chiefly, causing severe coughing attacks, asthma and skin lesions. Some of the most violent and sudden attacks of asthma have been produced by members of this group, particularly almond, brazil nut, walnut and pecan. Coconut, hazelnut, pistachio and chestnut are less frequent offenders. Peanut is usually classed here, although it is a legume and more closely related to the peas, beans and lentils. There is a common factor present among the nuts, seeds and legumes so that sensitization may exist in nut sensitive cases also to mustard, beans, peas, cottonseed and flaxseed.

Chocolate and cocoa are frequent offenders, causing coryza,²⁴ asthma and urticaria chiefly. Removal of these substances from the diet is

comparatively simple.

Meats, particularly pork, beef and fowl are occasional causes of clinical symptoms. As noted above, egg sensitive cases are frequently allergic in a lesser degree, to fowl. It should be remembered that in pork sensitive cases not only bacon, ham and sausage must be considered, but lard in foods prepared with this shortening.

The vegetables are infrequent causes of allergic reactions except for a small group including celery, onion, white potato, green pea and beans. Asthma, coryza, urticaria, angioneurotic oedema and gastrointestinal symptoms are among the clinical conditions described as developing, not only by ingestion, but by inhalation, as in the case of the celery sensitive physician, previously described, and by contact with the unbroken skin as in the case of those described as sensitive to potato peel. Dermatitis has been reported not only from handling raw string beans and raw tomatoes, but also from contact with the leaves and stems of the plants.

Fruits are generally of minor importance as allergic excitants, although clinical reactions to apple, pineapple, peach, pear, strawberry, melons and the citrus fruits are fairly common. Orange is probably the fruit most frequently responsible for symptoms in children and infants. As in the case of the vegetables, the attacks of asthma, coryza, urticaria or angioneurotic oedema, eczema, migraine and gastrointestinal upsets may occur from inhalation and contact with the skin, as well as from ingestion. Frequently with vegetables, as potato and tomato, as well as with fruits as apple, peach, or pear the rind, skin or seeds may be the offender, the remainder of the vegetable or fruit being harmless to the patient.

Spices, and the essential oils used as flavorings such as oils of wintergreen, spearmint, peppermint, sassafras. clove, etc., must be mentioned. Mustard, blackpepper and vanilla are important excitants in this group. Not only by ingestion but by cutaneous contact in the form of plasters,

mustard is a disturbing factor. As previously mentioned, mustard sensitiveness is frequently associated with sensitiveness to nuts and to seeds such as cottonseed and flaxseed. These latter two substances must also be considered as foods, since the former is used commonly as a salad oil and as a shortening, and the latter as a laxative in some health breads and breakfast foods. In cotton-seed- and flaxseed-sensitive cases, the source of the excitant may be the milk from cows fed upon these substances.

Treatment. - The treatment may be stated simply—removal of the cause. In the adult this may be ordinarily accomplished without interfering with a well rounded diet. In infants and children, however, when egg and especially milk are the specific factors, the treatment is not so simple, since so many articles of diet contain these important foods, and since, in the case of milk particularly, they are so necessary for proper growth. In such instances, attempts are often made to increase the tolerance to a food by repeated carefully determined doses of the offending protein, given either orally or by injection. Schloss²⁵ in 1912 successfully treated an egg sensitive case by oral hyposensitization. Raw egg white may be given daily in water on an ascending scale, beginning with one drop of a 1-1000 dilution. Capsules of egg white, hard boiled, and of egg powder have been used. The injection method is more dangerous since the dosage is difficult to determine and since constitutional reactions easily occur upon overdosage.

Milk sensitive cases and wheat sensitive cases may be treated in the same manner as described for the egg cases, using either the oral or hypodermic method of hyposensitization. the egg cases the dosage should be increased cautiously. It must be recalled that there is a general tendency for the food sensitizations occurring in infancy and early childhood to disappear before puberty, although the positive skin reactions may remain. Frequently, therefore, it is wise not to plan an ambitious and aggressive schedule of oral or hypodermic treatment but to adopt the more conservative policy of regulating the diet; of eliminating or lessening the quantity of the food excitants, and letting Nature slowly correct the condition.

SUMMARY

In conclusion the following facts concerning food sensitization should be emphasized.

1. The clinical forms in which sensitiveness to food may occur are numerous.

2. A comprehensive dietary history is essential to the diagnosis.

3. The positive reactions upon cutaneous test appear chiefly in the atopic group.

4. The principle food excitants are egg, wheat, milk, fish, shellfish, meats, chocolate and nuts.

5 The treatment usually, is to remove the cause

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ANATOMICAL CONSIDERATIONS IN RADICAL PHRENIC EXAIRESIS AND SCALENOTOMY

By SAMUEL A THOMPSON, MD, NEW YORK, N Y

THORACIC surgery is on the increase and jet there is comparatively little in the current literature about the details of the actual technique in the various surgical procedures There is little so far as technique is concerned that might be of value to the surgeon mexperienced in this phase of surgery. It is the intention of this article to review the anatomy and topography of the lateral region of the neck and describe in detail a technique for radical phrenic exairesis and scalenotomy which we have been using as a result of these anatomical considera-This technique was developed on the surgical service of Dr Wm F Honan, at the Metro politan and Sea View Hospitals

Considering first the topography, we have several important superficial and deep landmarks The approach to the mun stem of the phrenic is through the posterior triangle of the neck, the boundaries of which are, the posterior border of the sterno mustoid muscle, the anterior border of the trapezius muscle, and the upper surface of the middle of the clavicle. These boundaries can usually be seen and are easily palpated

Another important landmark is the cricoid car tilage at the level of which the phrenic nerve usually lies about inidway between the anterior and the posterior borders of the sterno mastoid

At the level of the cricoid a line drawn from the middle of the sterno mastoid muscle to a point just external to the middle of the clavicle, represents the upper limit of the nerve trunks forming the brachial plexus. Also at the cricoid

level the inferior belly of the omo hyoid muscle crosses under the sterno mastoid muscle and over the carotid sheath, the phrenic nerve and the scalenus muscle. The posterior triangle is divided into an upper occipital triangle and a lower subclavian triangle by the onio hyoid, and should this muscle join its central tendon at a point lower than the cricoid, it makes the subclavian triangle very narrow

At the level of the thyroid cartilage the external jugular vein crosses the sterno mastoid muscle superficially and runs towards the middle of the clavicle The main stem of the phrenic nerve begins on a level withli the upper border of the thyroid cartilage

The outer border of the scalenus anticus muscle corresponds to the outer border of the sterno mastoid muscle

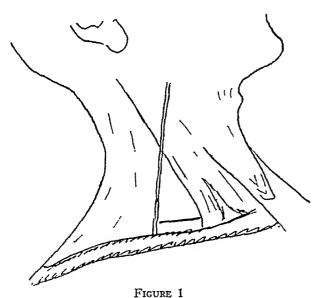
The phrenic nerve arises from the fourth cer vical nerve principally, but has roots from the third and fifth nerves as well, and passes down ward and inward on the anterior surface of the scalenus anticus muscle Occasionally the phrenic has roots from all the cervical nerves and the first thoracic nerve It also may receive accessary fibers from the hypo glossal nerve, from the nerve to the subclavius muscle and from the cer-The phrenic is sometimes a vical sympathetic double nerve and it has been absent in a few recorded instances It is normal, without anomalies or accessary roots in only thirty-five per cent

As the phrenic nerve passes down the neck it it is intiniately associated with the scalenus anticus muscle crossing over the anterior surface

from the lateral to the mesial border. Occasionally it may be found in the substances of the muscle itself.

The brachial plexus emerges lateral to the scalenus anticus, between that muscle and the scalenus medius. The carotid sheath lies medial to the scalenus anticus.

The phrenic nerve in the neck is crossed from above downwards by the inferior belly of the omo-hyoid muscle, the transverse cervical and the transverse scapular arteries and passes behind the subclavian vein to enter the mediastium. From within outwards the phrenic nerve is covered by the prevertebral layer of the deep cervical fascia which covers the scalenae muscles and is a thin aponeurosis in this region. The nerve may be firmly attached to the under surface of this fascia. Superficial to this fascia and overlying the nerve is a layer of fat and loose areolar tissue called the "fat pad." This "fat pad" lies between the middle and deep layers of the deep cervical fascia and contains a few lymph nodes and is transversed by the transverse cervical artery. In this same space but lower down, parallel to, and usually under the clavicle is the trans-



Showing relation of incision to external jugular vein, sternomastoid muscle and clavicle.

verse scapular artery. Superficial to this "fat pad" is the middle layer of the deep fascia which encloses the omo-hyoid muscle, and above this is the superficial layer of the deep fascia which forms the roof of the posterior triangle. It may not be possible to differentiate the superficial and middle layers of the fascia at all times in this region.

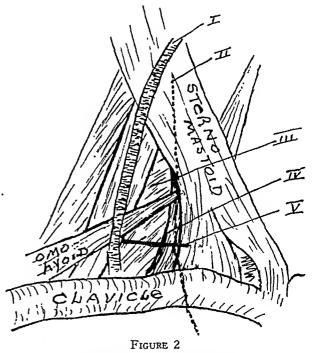
As the scalenus anticus muscle lies behind the sterno-mastoid muscle, this must be considered as a covering together with the skin, superficial fascia and platysma muscle.

Correlating the anatomical points we have the

main stem of the phrenic lying on the scalenus anticus muscle. This muscle lies behind the sterno-mastoid muscle, is covered by the prevertebral layer of the deep fascia, is crossed by the omo-hyoid muscle, the transverse cervical and transverse scapular arteries and the subclavian vein. To the medial side of the muscle lies the carotid sheath, and the brachial plexes is on the lateral side.

The accessary roots of the phrenic nerve may join the main stem either in the neck or below the subclavian vein in the mediastinum. It has been demonstrated that none of the accessary roots join the main stem at a distance of more than 10 to 12 c. m. below the level of the clavicle, so that when 12 c. m. of the nerve is removed it can safely be assumed that all paths of transmission have been interrupted.

In determining the site of operation two factors should be considered—the site at which the main stem of the phrenic is most accessable and the site at which the accessary roots are most accessable. Since paralysis of one half of the diaphragm depends upon interrupting the fibers of not only the main stem, but all contributory fibers as well, which procedure is termed "Radical Phrenic Exairesis," and since the phrenic is without anomalies or accessary roots in only 35 per cent, it would seem that the site where the accessary fibers are most easily reached would be This would place the incision the proper one. low in the neck, below the omo-hyoid and just above the clavicle, whereas the main stem alone



Showing relation of incision to
I. External jugular vein, II. Phrenic nerve,
III. Scalenus median muscle,
IV. Scalenus anterior muscle, V. Line of incision.

is most easily approached at a higher level above

the omo-hyoid. The vertical incision leaves more scar than the horizontal which can be made in one of the nor-

mal creases of the skin. For reasons above stated the incision is made approximately 2 e. m. above the claviele, in a

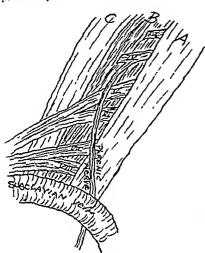


FIGURE 3

Illustrating a narmal phrenic nerve without accessary roots, arising fram the fourth cervical nerve. A.B.C. are the scalenge muscles.

horizontal direction. It begins over the lateral border of the clavicular head of the sterno-mastoid muscle and extends laterally for 2 or 3 c. m. and ends medial to the external jugular vein. If this vein is nearer the sterno-mastoid muscle than usual, the incision may be carried mesially over the lateral border of the sterno-mastoid muscle as there is no necessity for dividing the external jugular vein. The incision is carried through the skin, superficial fascia and platysma to the deep cervical fascia. This fascia is easily recognized as it is dull, thick and yellowish grey in color. Using blunt dissection from this point on, the fascia is incised, exposing the underlying "fat pad."

If the omo-hyoid muscle lies near the clavicle it will be in the field of operation and should be retracted upward.

Passing through the "fat pad" are the transverse cervical, and sometimes the superficial cervical arteries which may give troublesome bleeding if care is not taken in retracting them.

At a slightly lower level somewhat under the clavicle lies the transverse scapular artery.

The thin covering of this "fat pad" is opened and the fat is retracted from the operative field. This exposes the thin prevertebral fascia covering the scalenus anticus and medius muscles, the brachial plexus and phrenic nerve.

The advice frequently seen in the current literature to insert the finger at this stage of the operation and identify the round belly of the scalenus anticus, is misleading as this muscle is very frequently flat and it is sometimes impossible to differentiate by touch alone between the scalenus anticus and medius. The identification

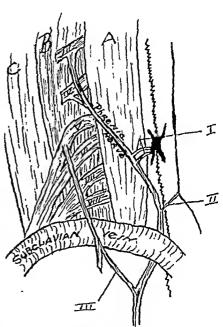


FIGURE 4

Illustrating the phrenic arising from the third and fourth cervical nerves, with accessary fibers from I. Cervical sympathetic, II. Hypaglossal nerve, III. Nerve ta the subclavius.

Nate that III crosses in frant of the subclavian vein farming a laop around it. A. B. C. are the scalenae muscles.

of the scalenus anticus is quite easy if one remembers that the earotid sheath bounds its medial aide and the brachial plexus its lateral side.

Due to the extreme mobility of the tissues of the neck a very wide area may be brought into sight through a small incision by retracting the tissues in varying directions.

Whenever possible the phrenic nerve is found before dividing the prevertebral fascia as otherwise it may be retracted from the field of operation along with the edges of the fascia. It can usually be seen as a white cord beneath the thin fascial covering. Having located the main stem, the fascia is divided and a search for accessary roots is made. The most constant accessary, from the nerve to thhe subclavius which in turn is from the fifth cervical nerve, lies to the lateral side of the main stem. As this accessary may join the phrenic below the level of the clavicle, it is better to divide the nerve to the subclavius even though no accessary fibers are apparent. Roots from the cervical nerves, the hypoglossal and the cervical sympathetic lie to the medial side of the phrenic and should be divided as close to the main stem as possible.

The main stem is then cut high up and the distal end is slowly pulled upwards, by wrapping it around the forceps or re-applying the forceps at a distance of 1 to 2 c. m. If traction is applied slowly and easily the entire length of the phrenic, with its diaphram filaments may be removed. There is a distinct thud when the nerve separates from its attachments. Even when pericardial or mediastinal adhesions exist, more than 12 c. m. of nerve can be avulsed. The traction is somewhat painful but should not be hurried. The cardiac impulse may be felt while applying traction on the nerve if mediastinal adhesions are present. The

respiratory tug may also be felt.

The act of injecting a drop of novocain into the phrenic nerve before it is cut is superfluous, as the phrenic is essentially a motor nerve and can be pinched or cut without pain. The pain is caused by traction and this traction is transmitted

beyond the anesthetized spot.

The greatest danger in phrenic avulsion is damage to the subclavian vein. This is a result of accessary fibers, particularly from the nerve to the subclavius, passing in front of the subclavian vein and joining the main stem of the phrenic which passes behind, thus forming a loop around the vein. If the accessary fibers are divided before traction is applied to the phrenic, the loop being broken no damage occurs to the subclavian vein.

After traction is applied any remaining accessary fibers may be severed as they appear in the incision. This danger applies not only to the subclavian vein, but to the transverse scapular

artery and the thoracic duct as well.

When it is also desired to sever the scalenae muscles this can be done at the same time and the steps of the operation are identical up to this point, with the exception of the incision which is carried laterally 2 or 3 additional centimeters. The external jugular vein is dissected and retracted. The scalenae muscles are exposed, elevated and severed near their attachments.

The scalenus anticus muscle must be severed below the level of the sixth cervical vertebra as part of its origin is from the transverse process of this vertebra. In this region its medial border is in relation with the carotid sheath, the thyrocervical artery and its branches. It is crossed by the transverse cervical and transverse scapular arteries, the phrenic nerve and the subclavian vein anteriorly. To its lateral border on the roots of the brachial plexus and posteriorly it is in relation with the dome of the pleura and the subclavian artery with its costo-cervical branch. Extreme caution must be taken in cutting this muscle, not to wound the pleura or subclavian artery posteriorly.

The scalenus medius is a more powerful muscle than the anticus. It is crossed anteriorly by the subclavian artery and the brachial plexus which separates this muscle from the anticus. The brachial plexus can be retracted outward or downward and the muscle severed, taking care not to wound the pleura.

The scalenus posticus is the smallest of the three muscles and lies posterior and lateral to the scalenus medius. It can be severed at the same level as the medius. Following scalenotomy the first and second ribs have a tendency to sag and the first rib drops away from the subclavian vein and artery. For this reason when scalenotomy has been done as a preliminary to thoracoplasty a much greater length of the first rib can be removed.

The operation is performed under infilteration anesthesia using 10 to 15 c. c. of a .5 per cent novocain solution.

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For list of officers of County Medical Societies, see this issue, advertising page xx

MEDICAL RELIEF

Grave deficits in the administration of the relief provisions of the Public Welfare Law were shown on September 13 during the conference of secretaries of the county medical societies of New York State reported on page 1120 of this Journal It was also demonstrated that the defects can be corrected if a committee

of each county medical society will sit down with the welfare officials and discuss with their the problems of medical relief in that particular community The success of those county societies which have already acted is a challenge to all other societies to develop similar agreements with their welfare officers

THE NATIONAL RECOVERY ADMINISTRATION

A great parade in New York City—the largest in its history—took place on the afternoon of Wednesday, September 13, 1933, for the promotion of the program of the National Recovery Administration. Section 70 of the parade was assigned to physicians, with Dr. D. J. Kaliski as marshal. This recognition of the medical profession leads to a consideration of the place of physicians in the administration of the National Industrial Recovery Act.

The N.R.A. is concerned primarily with industrial and business conditions. It deals with the production and distribution of goods and wares whose value is material in distinction from those whose appeal is cultural and educational, such as art, literature, and music. The forms of industrial organization with which the N.R.A. is especially designed to deal are those in which the methods of mass production are followed, particularly those in which great capital is involved, and a large number of laborers are employed.

The physician does not come directly under the N.R.A., for he cannot be classed either as a capitalist, or as an employer of labor, or as a hired workman. He constitutes only one-tenth of one per cent of the people of the United States, and yet he is universally recognized as a most essential factor in every community, for it is he only who understands the inner workings of the human machinery and can keep it in good working order. His methods are in contrast with those of mass production, for each patient whom he serves is a thinking personality who expects individual attention from the doctor of his own choosing. The doctor's hours of labor are determined by the needs of the sick and the afflicted, and his remuneration is largely in accordance with the financial ability of his patient. His methods are not those of the factory or counting house, but rather of the educator and the ministering angel. To measure him by the standards of trade and industry is to do him an injustice. Yet he wishes to conform to the highest standards of conduct in his dealings with his fellow men and to give his hearty support to the principles of the N.R.A.

The essential feature of the N.R.A. is the code which defines the relations of employers to one another, and to those whom they employ. Representatives of each branch of industry were asked to propose a code defining the standards of action to which those engaged in the industry should conform. Approximately one thousand groups of industries have submitted their codes to the Federal Administrators. The voluntary formation of these codes, representing every kind

of business and industry, is a guarantee of their fairness, and insures their universal observance.

If physicians were required to formulate a code, they could show the oldest one governing any industry or profession. A code devised by the "Father of Medicine," Hippocrates, over 2,000 years ago, had been observed through the centuries until the present generation; and in an elaborated form it is still recognized as the rule and guide of faith and practice by the members of the Medical Society of the State of New York and the American Medical Association. If the N.R.A. does for industry what the doctor's code has done for medicine, it will abundantly justify itself.

A feature of every industrial code is the recognition of the right of the employed to act as a unit in entering into agreements with their employers regarding wages, hours of work and other essential conditions of labor. The object of the agreements is to give every workman a sufficient wage to enable him to obtain the necessities of life in such abundance and of such quality that he and his family can live according to the standards of modern society and without giving offence to his neighbor. Philosophers and economists could not foresee the anomaly of the last few years when men suffer dire want in the midst of plenty; when crops are too large to be utilized, and storehouses are bursting with goods; and when the Federal Government advocates the destruction of agricultural products as a means of improving the finances of the farmer.

Distress and want are largely man-made, and are curable by human effort. The people of the United States recognize their duty to provide the necessities of life for those who are temporarily unable to obtain them. These necessities are food, clothing and shelter; to which health has been added in recent years.

Health is not a commodity which can be bought and sold, or stored for future use. Its impairment usually comes unexpectedly, and the demand for its restoration is immediate and insistent. The doctor cannot control his hours of labor, nor hire others to do his work; yet he is in sympathy with the fundamental principles of the N.R.A., and will work unselfishly to give to others the health and vigor which will enable them to become self-reliant and independent.

The formal attitude of the medical profession toward the N.R.A. is well set forth in an editorial from the Journal of the American Medical Association which is reprinted on page 1118 of this Journal.



MEDICAL PROGRESS



Virus Obtained from Influenza Patients .--During the epidemic of influenza at the beginning of 1933 Wilson Smith, C. H. Andrewes and P. P. Laidlaw made experimental studies with the filtrates of throat washings, the results of which they embody in this preliminary report. The filtrates, proved to be bacteriologically sterile, were used in attempts to infect many different species. All such attempts were entirely unsuccessful until the ferret was used, when a disease was produced showing the characteristics of influenza in man. The disease was transmissible serially in ferrets either by contact or by the intranasal instillation of virus-containing material. The infective agent has, so far, been recovered only from the nasal passages of sick ferrets. The disease was produced by five of eight throat-washings obtained from influenza patients in the early stages of the disease. Throat washings from healthy persons and influenza convalescents caused no illness in the ferrets. The nasal secretions from a subject with a severe common cold caused no illness in ferrets. Human sera, particularly those from influenza convalescents, were found to contain antibodies capable of neutralizing the virus of the ferret disease. Swine influenza caused a disease in ferrets which was indistinguishable from that produced by the virus of human origin, and the pig and human viruses have close antigenic rela-The authors consider that the evidence submitted suggests that there is a virus element in epidemic influenza and that this virus is of great importance in the etiology of the hu-man disease. Their results are consistent with the view that epidemic influenza in man is primarily caused by a virus infection. It is probable that in certain cases this infection facilitates the invasion of the body by visible bacteria giving rise to various complications. Analogous examples of this type of double infection are seen in swine influenza and dog distemper epizoötics. Decisive evidence on this point, and indeed on the importance of the virus here described, can only be secured by intensive study during an influenza epidemic, since direct experiments on man are fraught with difficulties.-The Lancet, July 8, 1933, ccxxv, 5732.

Peripheral Vasoconstriction by Tobacco and Its Relation to Thrombo-Angiitis Obliterans.—In view of the very definite opinions that have been expressed concerning tobacco as a predisposing cause of thrombo-angiitis obliterans, Walter G. Maddock and Frederick A. Coller made a study of the vasoconstrictor action of tobacco smoking in man by means of skin temperature changes. The subjects

were young adult males and patients with thrombo-augiitis. The tobacco was smoked in the form of cigarettes. The investigation demonstrated a consistent increase in blood pressure and pulse rate and a decrease in the skin temperature of the fingers and toes. Control experiments gave definite evidence that these effects were due to active products absorbed from the tobacco smoke. Nicotine administered intravenously in quantities not greater than those absorbed in the smoking of one or two cigarettes produced comparatively analogous changes. More marked effects were noted when the subject "inhaled" while smoking rather than merely "puffing," and also with rapid smoking more than with slow smoking. The decrease in the peripheral skin temperature on smoking must be due to increased vasoconstriction. In a previous article the authors pointed out the value of measurements of the skin temperature of the fingers and toes under well controlled conditions as indication of stimulation or depression of the sympathetic nervous system. By increasing vasoconstriction smoking reduced the blood supply of the fingers and toes. With several subjects the reduction lasted more than thirty minutes from the time of cessation of smoking and generally was of longer duration in the toes than in the fingers. In the cases of thrombo-angiitis obliterans smoking produced the same eardiovascular response as in the normal subjects. The authors do not offer the results of this investigation as evidence that tobacco smoking is the sole etiological factor in thrombo-angiitis obliterans. The occurrence of the disease in individuals who have never smoked precludes that opinion. It is interesting, however, to recall that other vasoconstrictor substances, pituitrin and ergot, have been responsible for peripheral vascular occlusions and gangrene. There is no doubt that prolonged or marked vasoconstriction may initiate organic vascular occlusions. The experimental data presented form a rational basis for the clinical conclusions as to the deleterious influence of tobacco smoking on the progress of thrombo-angiitis obliterans. Its use definitely decreases the already deficient circulation in the extremities of individuals with that disease .- Annals of Surgery. July, 1933, xeviii, 1.

The Three Reflexogenous Zones and the Regulation of the Cardiovascular Tonus in the Erect Posture.—Physiology shows, according to D. Danielopolu and A. Aslan, that although the cardiac rlythm is more rapid in the wart.

cal than in the horizontal posture, the vertical posture exerts a reflex influence resulting in modifications of blood pressure which, together with the accelerated rhythm, has the effect of compensating the displacement of the blood mass of the upper half of the body into the lower half, thus assuring good cerebral circulation in the erect posture. These authors believe that the cardiovascular tonus is the result of the reciprocal action of a direct humoral factor and a reflex factor, the first engendering the second, and the second modifying the first. The direct tonus arises from the action of the humoral milieu exerted upon the sympathetic and parasympathetic cardiovascular nerve terminals and upon the centers; it is controlled and coordinated by the reflexogenous tissue zone. This direct humoral tonus is amphotropic in its effect upon the blood circulation, but with sympathetic predominance. The reflex tonus, on the other hand, is represented by two other reflexogenous zones, the cardio-aortic and the sinocarotid; it is amphotropic with parasympathetic predominance. It modifies the direct tonus by acting upon the cardiovascular centers and the centers of the organs that regulate the humoral milieu, thus diminishing the sympathetic predominance of the latter. Contrary to the conception of Hering, the authors have demonstrated that orthostatic tachycardia is produced even after paralysis of the parasympathetic by large doses of atropine, thus proving that it is due in great part to excitation of the sympathetic. The observation that there is no retardation of the heart rhythm in the recumbent position when the parasympathetic is completely paralyzed proves that the slowing down is due to excitation of reflexogenous zones by the blood mass, which passes suddenly from the lower to the upper half of the body, provoking by way of the reflexogenous zones an amphotropic reflex with parasympathetic predominance. Accordingly, if under normal conditions there is no cerebral anemia despite the displacement of blood into the lower part of the body in the erect posture, this is because the effects of such displacement are compensated by a pressor reflex due to excitation of the reflexogenous tissue zone of the lower half of the body, and by a diminution of the depressor tonus of the circulatory reflexogenous zones, phenomena which tend to raise the blood pressure and accelerate the heart rhythm. In weak or cachectic subjects, however, with vagotonic or hyposympathetic constitutions, a fall of blood pressure greater than normal occurs in the upper half of the body, accompanied by a well defined tachycardia, and sometimes with vertigo or even syncope upon standing erect. In such subjects the pressor reflex of tissue origin is exerted\ in less degree upon the

markedly hypotonic vessels, so that the pressure is not sufficiently equilibrated in the upper half of the body.—Bulletin de l'Académie de Médecine, June 6, 1933.

Dyspnoneurosis. The Importance of the Central Factor in the Physiopathogenesis of Dyspnea.—In addition to dyspneas of pulmonary, cardiac or mixed pathogenesis, says Guido Lami, in the Riforma medica of June 3, 1933, there is an important group consisting of cerebral or "central" dyspneas, caused by anatomopathologic changes or even by purely functional modifications of the nervous, cortical, subcortical and, especially, the bulbar and medullary centers which provide the nervous regulation of respiration. The most typical form is dyspnoneurosis, often, though not always, accompanied by manifestations of hysteria. The attacks, often quite painful for the subject, are as a rule accompanied by perfectly normal organic findings. In a case cited a healthy youth 16 years of age had for 2 weeks attacks of hyperventilation with dyspnea that came once or twice a day and lasted half an hour. Respiration rose to 28-30 per minute, and spirometric examination revealed a respiratory volume of 1000-1100 c.c., the equivalent of 30 liters per minute, and effective consumption of 340 c.c. oxygen in that Between the attacks respiration was normal, and there was no ground for affirming a neurovegetative dystonia. Following a combined treatment by neurotonics and suggestion the attacks disappeared. In every case of dyspnea an organic nucleus is to be presupposed, in which humoral, pulmonary and cardiac factors meet; but it must never be forgotten that to these there are constantly added, in varying proportion according to the individual case, neuropsychic factors that play the leading These cortical impulses, the intensity of which depends on the conditions of the profound somatic-psychic personality, and which, through the subcortical zones that regulate respiration, are transmitted to the bulbar centers and to the nuclei of the anterior cornua, condition on the one hand the degree of dyspneic sensibility and on the other the intensity of the contribution-always in evidence-made by the will to the respiration that has already been increased by the presence of humoral, pulmonary or cardiac factors. The degree of dyspneic sensibility represents the threshold beyond which the respiratory function ceases to be perfectly unconscious and involuntary and becomes conscious and painful, undergoing voluntary intensification through the inevitable superaddition of corfical impulses. This threshold varies with the individual and depends on factors that cannot be defined in an absolute sense. Thus a given pathologic condition that is practically identical in various patients will produce in some an intense dyspnea due to neuropsychie factors, and in others none at all unless the respiration is greatly increased beyond the normal, with marked reduction of the respiratory reserve. Emotional hyperventilation increasing the metabolism is often observed in dystonic individuals. This condition, frequently met in hyperthyroid constitutions, is often accompanied by sensations of dyspnea and as a rule by extreme instability of respiratory exchange.

The Management of the Newly Born .-Dame Louise McIlroy, writing in the Practitioner, July, 1933, exxxi, 781, calls attention to the fact that the highest mortality among infants is within the first twenty-four hours of life, and that the treatment of the newhorn leaves much to be desired. Careful antenatal supervision will to a great extent diminish the risks of labor and birth not only for the mother but for the child as well. the surroundings of the new-born should, as nearly as possible, be made to resemble the intrauterine conditions. The infant should be kept at rest in a warm atmosphere. It is most important that the mucus or amniotic fluid in the child's month should be prevented from entering the air passages when it takes its first breath. As soon as the child's mouth passes over the perineum it should be wiped out with a piece of gauze spread over the finger. The child should be wrapped in a warm blanket and laid between the mother's thighs until the cord is severed. The infant, after a rest, should be rubbed with warm olive oil, and when thus cleansed should be dressed. The skin is oiled daily until the stump of the cord falls off, when a soap and water bath can be given. The loss of heat results in more loss of weight, in the first few days after birth, in the bathed babies than in those who are oiled. In the treatment of asphyxia of the newly born methods such as that of Schultze should be looked upon as barbarous. When the baby is born in a state of blue asphyxia, it may be sufficient to wipe out its mouth or to suck out the mucus with a catheter. If not gentle massage of the chest will as a rule bring about the establishment of respiration. If the condition is that of white asphyxia it is useless to induce respiratory movements until the eardiac function is restored. After all mucus has been removed from the mouth and pharynx, carbon dioxide (5 per cent.) and oxygen (95 per cent.) should be given by means of a mask attached to a pressure gauge and a eylinder. Lobelin given in a 0.5 c.c. ampule is of value in helping to establish respiration in the newborn. Gentle tongue traction may be of value in some cases. Heart massage is also of use in stimulating cardiac function. Baths must not be given in cases of white asphyxia. Mouth

to mouth insufflation in the new-born infant is dangerous. If atelectasis is present after respiration has been partially established, the infant should be given oxygen at intervals. In the care of premature infants, the use of claborate glass cubicles may possibly lead to want of resistance when the child is removed from the hospital. A simple and satisfactory method is to use an ordinary cot with an awning placed partly over it by means of a metal Under the mattress are placed protected hot water bottles, and an electric bulb is suspended under the cage to warm the air. In the feeding of the newly born there is little to be said in favor of any method except that from the mother herself. Failing her, a wet nurse is the best substitute.

Asthma of Childhood.—Writing in the Bulletin de l'Académic de Médecine, of June 20, 1933, A. Haibe discusses the spasmodic asthma of children between the ages of 5 and 15, which is engrafted upon sequels of respiratory infections, especially of the rhino-bronchial apparatus, which create the inflammatory condition serving as the respiratory irritant. Two factors are always present: a general one, constituted by the humoral and vagosympathetic disequilibrium, and a local one, represented by the inflammatory irritant. The general factor, the "soil," is indispensable, but is not sufficient in itself to account for the attack, for which there must be a point of application, a zone of diminished resistance. Analysis of the secretions will reveal the progress of the infec-Bacterial examination of the secretions of the nose, throat and bronchi of several hundred asthmatic children has frequently revealed the presence of Staphylococcus in the nasal mucosa and of Streptococcus hæmolyticus in the bronchi. That these two microorganisms play the essential role in the etiology is proved by the results of vaccine therapy. In its early stages at least the asthma has all the characteristics of a reflex condi-The inflammatory process irritates the nerve terminations and, by the centripetal route, the pneumobulbar center. The centrifugal are of the reflex then makes use of the phrenic nerves to tetanize the diaphragm, of the motor fibers of the vagus provoke tlie bronchospasm and contracture of the inspiratory muscles. When the irritative process is in the nasal stage its route of transmission is that of the trigeminus; when in the bronchial stage, it is the sensory fibers of the pneumogastric. Treatment consists in the application of the appropriate antivirus and vaccine. When it is applied early enough, it hardly ever fails to cure. The attack is cut short, and the asthma does not return if eare is taken to persevere until results are consolidated. In inveterate cases treatment

should be repeated annually until allergy is transformed into immunity. One is readily convinced of the efficacy of the method when the results are observed. The coryza fails to reappear, or yields promptly to the antivirus; the bronchitis is cured and is not reactivated by the descending rhinitis; the crises of dyspnea are overcome or become progressively attenuated. The cure of the asthma of these older children may well be called the triumph of bacteriotherapy.

The Familial Occurrence of Ulcus Ventriculi. - Modern assertions that there is a familial tendency to peptic ulcer led A. Ritter and H. Keller to make a special study of the subject on a material of 378 operative cases recorded during a 10 year period at the University Clinic in Zurich and the Neumunster Hospital. The results of their investigations do not confirm those of other recent writers. In five cases in which a familial frequency was evident, they consider that special circumstances were present to account for the phenomena. An inherited anlage may be accepted as probable in Case 3, where three brothers, one sister, and three persons of the preceding generation had all suffered with gastric ulcer, and in Case 4, in which the patient, his mother, his brother, sister, and daughter had exhibited the same gastric affection. Case 5 was also significant, in which nine persons in three generations of a single family had been similarly affected. In these three families there is every indication that constitutionally weak stomachs were present; the cases seem to confirm Bauer's conception of a constitutional inferiority of a given organ, transmissible to offspring. All five cases support Bergmann's theory of the neurogenous origin of peptic ulcer, and Strauss's concept of a vegetative-neurotic disposition, since in every one there existed what that author termed "vegetative neuro-dysergia." In two of the families the presence of malignant new growths could be determined. In three of the families hyperchlorhydria was found, but with no marked conformity to any given type. Here and there the same localization could be asserted in two members of a family, but no general rule of this kind could be established. As a result of their investigations the authors conclude that the majority of peptic ulcers are unrelated to any familial predisposition. On the basis of their own verified postmortem material they do not hesitate to assert that constitution and heredity play no important part in the development of gastric ulcer, and that these constitute at most only a relative factor, entirely subordinate to other more important etiological factors. — Schweizerische medizinische Wochenschrift, June 10, 1933.

Practical Points in Otology of Special Interest to Pediatrists and General Internists.-William Hewson emphasizes the fact that ear conditions so often explain unexpected temperatures, intestinal upsets, and symptoms referable to the nervous, respiratory and other systems of the body that the examination of a child is no longer considered complete without careful scrutiny of the ears. A boy, 13 years old, was brought to him for a cough which had lasted for three weeks, since his return from the seashore. The examination of the nose, throat and ears was negative, except that a good-sized grain of sand was found in the little cul de sac in the vestibule of his right ear. After this was removed the cough stopped like magic. This cul de sac is likely to be missed if one uses an otoscope or a Hewson advises the more frequent use of a head mirror with reflected light. Impacted wax is best removed by the use of a small syringe with a fine gauge tip. This permits greater force for drilling through the wax. If the stream of water is directed to the margin of the wax, it will separate more quickly and is more likely to come away in one piece. It is rarely necessary to use olive oil, peroxide or bicarbonate of soda to soften the wax in children's ears if this method is followed. Local treatment of an external otitis must be directed only to the affected area or else extension and complications are apt to follow. Douching or much manipulation of the ear is contraindicated. Careful application of iodine, biniodide of mercury or yellow oxide of mercury and cold or hot packs are all that should be used locally. The general resistance may be raised by staphylococcus varcine and other general measures. Colds must be thought of in terms of acute otitis media and vice versa. Early in acute otitis media the disease is confined to the throat and treatment should be directed to the nose and throat. A little local treatment applied to the posterior nares and the orifices of the eustachian tubes can be easily accomplished and benefits the whole ear. Gentle shrinking followed by aspiration and bland oil have worked best in Hewson's experience. Reckless douching and spraying should be condemned. A child with acute nose and throat infection should be placed in the ventral position, as this favors drainage. It is well to remember that tonsils as well as adenoids may obstruct the eustachian tubes. In middle ear infection, after the drum has been incised, the danger of secondary infection should be taken into account, and every effort made to raise the patient's general resistance. After an acute middle ear infection has subsided local treatment should be employed to prevent the formation of adhesions which may lead to conductive deafness.— Laryngoscope, June, 1933, xliii, 6.



LEGAL



INSURANCE—SURGEON'S POLICY AGAINST ILLNESS AND ACCIDENTAL INJURY

By LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York,

Many physicians and surgeous carry large policies of insurance, taken with a view to protecting themselves against financial loss in their professional practice resulting from accidental injury or illness. Before such policy is taken out it is very important that the physician or surgeon should read his policy carefully so that he may be correctly informed as to exactly what is covered by the particular policy purchased. A case recently decided in one of our Federal Courts illustrates very well how a physician or surgeon may find that his policy does not cover his needs, although he may be confident that it does.

A doctor who was well-known as a surgeou not only in his own locality but as well abroad, had taken out a policy in the principal sum of \$50,000, which included what was called "Special Professional Coverage." The policy insured the doctor as a professional man "against dismemberment or complete and permanent loss of use of limb—resulting—trom (2) Disease of physical parts or members mentioned in Article 1 of this policy—." The clause in question provided that for complete and permanent loss of use of a right arm as a result of disease, seventy-five per cent of the capital amount of the policy would be paid to the assured.

While the policy was in effect the doctor was taken with an illness which resulted in paralysis agitans or palsy. The doctor had according to his testimony upon the trial devoted about ninety-five per cent of his work to surgery and had only practiced medicine as such in connection with his surgical practice. He had regularly performed more than one hundred major operations each year.

In applying for his policy of insurance he had filled in the form as follows with respect to his occupation:

4. Member of firm or employed by? B.... & O.... (North Chicago Hospital). In what business? General Hospital.

5. What is your occupation? Surgery and Physician. What are the duties of your occupation, fully described? Operating Surgeon.'

Subsequent to the illness his physical condition was such that it was a physical impossibility for him to participate actively in

any surgical operation. His right arm had developed a weakness, and his right hand shook continually. Occasionally he suffered brief spasms of the right arm. It was con-cededly a permanent condition. Such ordinary functions as tying a necktie, shaving, or raising liquids to the lips could not be accomplished with the right hand. He, however, with difficulty using the left hand together with the right, managed to make the right hand somewhat useful to pick up objects, to cut foods while eating and to write. The doctor after a period of convalescence resumed a portion of his practice under difficulties. He maintained his office and was repeatedly consulted by nationts for diagnosis. He managed to use a stethoscope and to test by percussion, tapping with the fingers of his right hand, however difficult a procedure. He continued to write prescriptions using the right hand, and succeeded to write out the names of medicines, and to sign his name. The doctor made certain bimanual examinations, but also under difficulties due to limited sensation in his right hand.

The insurance company refused to consider that the doctor was entitled to payment under the policy for the loss of the use of his right hand and arm, and he brought a suit in the Federal Court to recover the sum of \$37,500, the amount to which he claimed to be entitled under the policy. The case came on for trial and the plaintiff's evidence was put in, proving in substance the facts above set forth. The trial court at the close of the plaintiff's evidence directed a verdict in favor of the insurance company. From the judgment entered thereon an appeal was taken.

It was urged on appeal that with reference to his occupation as a surgeon the proof showed that the plaintiff had sustained a complete and permanent loss of use of his right hand or arm under the policy. He claimed to have been insured as an operating surgeon, and that for all practical purposes his arm and hand were completely and permanently lost to him for pursning the occupation for which he was insured. The Appellate Court, however, determined the appeal against the doctor and ruled that the record showed that

the plaintiff's arm and hand were of sufficient actual practical use to him in his occupation as to prevent the company from being liable on the clause in the accident insurance policy referred to above. The court found against the doctor. He had been insured as a physician and surgeon; and the fact that ninety-five percent of his work had been surgery was not made part of the insurance contract, or brought to the attention of the company when the policy was taken out.

In deciding in favor of the insurance company the Appellate Court said in part:

"Surgery is commonly defined as the art or practice of healing by manual operation. It is that branch of medical science which treats of mechanical or operative measures for healing diseases, deformities or injuries. It obviously presupposes a knowledge and practice of medicine as applied to surgical cases. It is fair to say from the evidence that it also contemplates examination, manual and otherwise, diagnosis, and preliminary and subsequent treatment. We assume that examinations, diagnosis and treatment in a strict sense are to be considered as the practice of medicine incident to surgery and not as surgery itself, but, be that as it may, all of these things were done by appellant in connection with his operative surgery at the time the policy was issued and they, together with operative surgery, were unquestionably covered by the policy.

"Appellant's testimony discloses that he is now and has been since his sickness, doing everything in the practice of his profession that he did before his sickness with the exception of using the knife in the operations, and in doing those things he uses his right hand and arm-not perhaps as well or with as much ease as he formerly did, but certainly in such manner and extent as to constitute some actual practical use of his right arm and hand in the pursuit of his profession. The use of a stethoscope, the act of percussion, the writing of prescriptions, the bimanual examination for adhesions as a result of abdominal operations, and for other purposes, are all matters in which the right hand and arm perform some actual practical function, and appellant testified that he does these things, although not with ease. As to whether appellant is able to administer surgical aid in cases where the knife is not used, such as the reduction of fractures, the record is silent. If he is able to do such things by the use of his right hand and arm, that, it seems to us, would be some actual practical use of his right arm in the pursuit of his profession as an operative surgeon; and it would defeat liability on the policy.

"There is no doubt that appellant has sustained a very great and serious loss in the use of his right arm and hand, and it is permanent. He has been deprived of that use which no doubt was dearer to him than any other part of his work, but that fact itself is not determinative of his right to recover in this action. This is not a suit for damages, but it is one to enforce a contract right, and we cannot enlarge upon the terms of the contract."

The decision may seem harsh. There can be no question that the surgeon in taking out the policy believed that he was protected against the very contingency which happened in this case, but the court was powerless to construe the policy otherwise than it did interpret it.

ALLEGED IMPROPER TREATMENT OF FRACTURE

A middle aged woman fell on an icy sidewalk, her weight falling on her outstretched hand. She immediately felt severe pain in her wrist and shortly thereafter reported to a local hospital where an x-ray was taken which report showed a fracture of the left radius in the lower third near the joint. There were two fracture lines; an irregular transverse line extending through the bone and a shorter horizontal line extending into the joint with slight impaction and posterior displacement of the distal fragments. A surgeon was called into the case for reduction and subsequent treatment. He put the woman under a gas oxygen anesthesia and reduced the deformity without a large amount of manipulation. The hand was readily flexed at a right angle to the wrist

and antero-posterior moulded plaster splints were applied extending to the metacarpo-phalangeal articulation and to the upper third of the radius and ulna. The splints were applied without constriction at any point, allowing room for subsequent swelling. The patient was allowed to go home after she came out of the anesthesia and was advised to report every day for dressing and to keep the arm continually elevated.

The next day the doctor saw the patient and rebandaged the arm as he found the splints had been slightly loosened. The condition at that time was satisfactory and he continued to see her almost daily for a period of several weeks. Six days following the reduction the anterior splint was removed entirely and the

posterior splint was shortened and straightened at that time. The hand had been flexed to a right angle on the forearm at the time of reduction and at this time was straightened to about ten degrees flexion. During the second week of treatment there was moderate swelling extending down into the fingers and the patient complained of inability to move the fingers or the thumb. The fragments however remained in good position. All splints were removed about four weeks after the injury. The patient, however, from that time on displayed marked unwillingness to attempt any movement of the wrist or hand. Careful instructions were given to the patient as to her exercise and she was referred to the psysiotherapy department of the hospital for baking and massage and the institution of mild passive motion. About seven weeks after the injury the patient reported to the doctor that she was still unable to use her fingers and hand due to pain. The doctor examined her and found that due to her lack of cooperation passive motion had not brought about anv satisfactory results. He therefore made arrangements to put her under anesthesia for the purpose of manipulation but the patient failed to report in accordance with the arrangements and never saw the doctor thereafter.

The patient brought a malpractice action against the doctor charging that by reason of his alleged negligence her hand was bent out of a straight and normal position and that the defendant allowed it to remain in that position so that a permanent deformity had resulted. She charged the doctor with improper application of the east and bandages to her wrist and arm and failure to properly remove or loosen the same at the proper times, and further charged him with improper manipulation and massage of the injured parts. The case was brought on for trial before a judge and jury and at the close of the plaintiff's case a motion was made on behalf of the defendant doctor to dismiss the case on the merits, on the ground that the plaintiff and her witnesses had not proved that the doctor in any manner had departed from proper and approved practice in his treatment of the case. The motion was granted and judgment entered in favor of the doctor, thereby successfully ending the matter.

BURN DISCOVERED SUBSEQUENT TO OPERATION

LEGAL

A specialist in surgery was consulted by a woman complaining of irregular menstruation and bleeding. He recommended that she enter a hospital for observation and there decided to perform upon her a diagnostic dilatation and curettage. The operation was performed and the laboratory report returned a diagnosis of chronic hypertrophic endometritis. The operation itself was uneventful and the woman came out of other anesthesia in an excellent condition.

When the doctor called to examine the patient the morning after the operation she complained to him of severe pains in the region of the lower spine. He examined her and found three large blisters over the eoecyx. He was unable to determine whether the burns were received by the patient moving on the operating table or whether they were hot water bottle or acid burns. They were classified by the doctor as second degree burns. She remained in the hospital for a few days and during that time the doctor treated the patient's blisters. At the time of her discharge from the hospital the burns were clearing up pretty well.

Some time thereafter a suit was instituted against the doctor to recover large damages, charging the doctor with negligently having moved the body of the plaintiff while the operation was being performed and while she was under an anesthesia in such a manner as to cause the skin of her back to be caught and injured by contact with the surface of the operating table or with certain articles thereon. The case came on for trial before a judge and jury; and plaintiff proved that she had sustained blisters but was unable to show that the blisters were connected with any negligent or improper treatment on the part of the defendant.

A motion was made to dismiss the complaint at the close of testimony introduced on behalf of the plaintiff and the court granted the motion. The doctor thereby was successful in the case without being put to his defense and without the issues of the case being submitted to the jury.



NEWS NOTES



PHYSICIANS AND THE NATIONAL RECOVERY ADMINISTRATION

The Journal of the American Medical Association for August 26, 1933, contains an editorial announcement of the relation of physicians to the National Industrial Recovery Act, quoting Mr. Donald R. Richberg, general counsel of the National Recovery Administration, as follows:





WE DO OUR PART

Fig. 1. Emblem to be displayed by employers of labor.

"Hospitals, not engaged in carrying on a trade or industry, do not come within the purview of the National Industrial Recovery Act, so as to come under the ordinary requirement of a code of fair competition.

"There is nothing to prevent any employer of labor outside of trades and industries, any professional man or organization, or any non-profit organization, from signing the President's Reemployment Agreement and conforming to its provisions. This does not mean, however, that they are under any compulsion to do so other than that resulting from a desire to cooperate where appropriate, and so far as possible, with a general program of reemployment at shorter hours and higher wages.

"To the extent that labor is employed in occupations comparable with those engaged in trade or industry, it is of course desirable that similar conditions should prevail."

The editorial continues, as follows, expressing the views of the A.M.A. leaders:

"Outside of the trades and industries, therefore, a hospital, a professional man or organization, and a non-profit organization of any kind are under no legal duty to formulate and adopt a code of fair practice or to sign the President's reemployment agreement. With them the adoption of codes and the signing of the agreement are matters of circumstance and of patriotism. Whether a physician will or will not sign the President's reemployment agreement and display the official emblem in his office, on his automobile and elsewhere may, of course, be determined by the local medical organization in each community."





WE DO OUR PART

Fig. 2. Emblem to be displayed by consumers, which means practically every self-supporting person not an employer of labor.

Unconscious Discrimination

The A.M.A. Journal brings up the points of unconscious discrimination and unfavorable reflection if a doctor displays the agreement, while his colleagues do not:

"Obviously, if a physician whose financial circumstances enable him without hardship to reduce the hours of his employees and to pay the wages specified in the President's reem-

ployment agreement signs the agreement and displays the emblem, indicating to the public that he has done so, he may work an injustice on his financially less fortunate fellow practitioners. He would, perhaps, leave the public in doubt as to whether their failure to display the emblem is due to lack of patriotism or to lack of professional or financial success. This conduct certainly would not constitute fair practice, which, after all, is one of the prime objectives of the National Industry Recovery Act."

The Consumer's Agreement

The editorial ends with the following advice concerning the Consumer's Agreement and Emblem

"If all physicians in a community cannot without induc hardship sign the President's recumployment agreement and conform to its exact terms as they are written, a local medical

society that desires to cooperate with the President without violating the principles of fair practice may follow either of two courses

"Under paragraph 14 of the President's reemployment agreement it may ask for a modification that will permit compliance without hardship, or

"It may advise its members to circll under the consumer's agreement and to display only the consumer's emblem."

The consumer's agreement which each individual is asked to sign is as follows

"I will ecoperate in reemployment by supporting and patronizing employers and workers who are members of NRA'

The official consumer's emblem is similar to that of the producer's or cuployer's, except that it bears the word "Consumer instead of 'Member' as shown in the copies supplied by the NRA headquarters

THIRD DISTRICT BRANCH MEETING

The Iwenty-seventh Annual Meeting of the Third District Branch of the Medical Society of the State of New York was held on Thesdry, September 5, 1933, at Haunes Falls, New York in the Catskill Mountain House on the brow of the mountain overlooking the broad valley toward Catskill The President, Dr Clark G Russman of Hudson, presided, and seventy members were present

The Third District Branch is composed of seven counties extending across the State southwest from Albany. The number of members in the constituent County Societies ou September 1, 1933, was Albany, 250, Columbia, 36, Greene 23, Rensselaer, 108, Schoharie, 20, Sullivan, 38, and Ulster 66, total 545

The meeting consisted of a business and scientific session in the morning, a noon lunch con with after dinner speaking, and an afternoon scientific session

The first number on the program was a County Presidents Round Table at which a representative of each county outlined the particular problems in his County Society and the manner in which the Society was trying to solve them

Dr R A Lawrence President of the Albany County Society, said that his society s greatest problem was the abuse of hospitals and dispensaries. Patients from outside of the county came to the Albany clinics for treatment when they were able to pay their own family doctors at home.

Another problem was the administration of toxin anti-toxin to school children, it being done principally by the Department of Health

free when it should be done by the family

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Dr Louis Van Hoesen President of Columbia County Society, reported that his County Society was emphasizing the public relations of doctors to the community. While pamplilets were being distributed telling what a patient should know about tuberculosis and cancer, another our should be added on the subject "What everyone should know about his physician." Unscrippilons physicians had promised impossible cures and collected big fees in advance, thereby undermining the people's faith in doctors generally

Dr Van Hocsen said that when a baby born in Columbia County reaches the age of six months it is visited by the public health nurse and its parents urged to give it immunization against diphtheria. A further check-up is made three months afterwards

Dr L B Honeyford, President of Greene County Society, said that the County Board of Supervisors had chiminated the two public health nurses of the county on the ground of expense, thereby seriously crippling a great part of the public health work of the county the nurses had secured many diphtheria immunizations, but the doctors will continue to do the work on their own initiative

A public health worker from outside of the county had outlined a plan of an anti venereal campaign based on evaggerated statistics, but nothing further was done

Dr Honeyford said the County Hospital which had opened on August 10, 1933, now has thirty patients although twenty five is its

rated capacity; but he protested against the double burden which had been imposed on physicians in requiring them to treat the indigent in the hospital free, although the doctors already pay taxes for the support of the hospital on the same basis as other groups of citizens support it. Doctors are at the head of all groups in their contributions to charity.

Dr. G. F. Herben, President of Sullivan county Society, said that his Society was undertaking a survey of school children. Although the county public health nurse had been dropped, yet the County Society is making a major effort to carry on her work among the school children, and plans to offer a course on tuberculosis beginning on October 18th for the benefit of physicians.

Dr. F. M. Holcombe, President of Ulster County Society, said that a great problem in his County was to get officials to assume their proportion of the cost of giving medical service to the poor.

Dr. Frank Overton, Executive Editor of the New York State Journal of Medicine, responding to an invitation to discuss the reports, said that the record of the work done by the County Societies and the opinions given by the Presidents were of great value to physicians everywhere in the State, for all County Societies were considering the problems which had been mentioned. A record of the development of a piece of work by even a small society is a great value to all other societies. The New York State Journal of Medicine features the activities of all the County Medical Societies and District Branches from which it can get reports for the items of progress and development in the counties constitute the record of the State.

The scientific paper of the morning was given by Dr. Edward M. Livingston of New York City on "The Interpretation of Abdominal Signs and Symptoms; a Practical Study of Visceral Neurology." Dr. Livingston had conducted an extensive series of original investigations in Bellevue Hospital, New York City, on neurological signs and symptoms produced by irritation of various abdominal organs. The method was to irritate an organ-inflate a ureter for example,—and observe the pain, reflexes, tenderness, rigidity and other abnormal conditions that were produced. The correlation of the signs and symptoms of a patient with the anatomical distribution of the nerves gives reliable information regarding the location and extent of the abnormality.

Dr. Livingston showed lantern slides and moving pictures which demonstrated the newer methods of examination and observation which are now available to the bed-side observer. The illustrations were chosen from the doctor's new book, entitled "A Clinical Study of the Abdominal Cavity and Peretineum."

Two practical papers were presented at the afternoon session, as follows:

"Certain Forms of Increased Intracranial Pressure and their Treatment," by Dr. Gilbert Horrax.

"Some Varieties of Delayed Speech in Chil-

dren," by Dr. Samuel T. Orton.

The after-dinner speakers at the noon luncheon were Dr. Frederick H. Flaherty of Syracuse, President of the Medical Society of the State of New York; Dr. Arthur J. Bedell of Albany, President-Elect; and Dr. A. J. Hambrook, member of the Committee on Public Relations.

SECRETARIES' CONFERENCE

The annual conference of the secretaries of the component County Medical Societies of the Medical Society of the State of New York was held in the Hotel Ten Eyck, Albany, N. Y., on Wednesday, September 13, 1933, beginning 10 o'clock in the morning. Twenty-eight counties were represented as follows:

Albany, H. L. Nelms; Bronx, I. J. Landsman; Broome, G. S. Lape; Clinton, A. S. Schneider; Columbia, H. G. Galster; Cortland, O. E. White; Erie. L. W. Beamis; Essex, L. H. Gaus; Genesee, P. J. DiNatale: Greene, W. M. Rapp; Herkimer, W. B. Brooks; Jefferson, C. A. Prodhon; Kings, James Steele; Monroe, W. A. MacVay; Montales, T.; Charles, New York, Peter Irving; Hale, Jr.; Onondago, E. E. Mack; S. Roach; Otsego, F. J. Atwell; W. J. Ryan; St. Lawrence, S. W.

Sayer; Saratoga, H. L. Loop; Schoharie, H. L. Odell; Schuyler. F. C. Ward; Suffolk, F. Overton; Sullivan, L. C. Payne.

The following representatives of the Medical Society of the State of New York were present

and took part in the discussions:

Dr. Frederic Flaherty, President; Dr. S. J. Kopetzky, Speaker of the House of Delegates; Dr. Peter Irving, Assistant Secretary, who presided; Dr. J. N. Vander Veer, chairman of the special committee on Temporary Emergency Relief; Dr. J. S. Lawrence, Executive Officer; Dr. Frank Overton, Executive Editor.

The program of the conference was as follows:

1, '' Relief under Welfare Programs.

porary 1 of Ad-

C. Old Age Pension.

- 2. Hospital Dispensory Problems.
 - A. Rochester.
 - B. Buffalo.
 - C. Greater New York.

The discussion on all these subjects was led by Dr. J. S. Lawrence, who had made a special study of the Public Welfare Law which became effective on April 12, 1929, and of the manner of the administration of its medical provisions in the several counties. Dr. Lawrence had provided each representative with an official copy of the Law revised to July 1, 1933, and had prepared the following outline of the relation of the welfare officers to the physicians, as set forth in the Law:

I. Medical Care for the Indigent:

1. Each county has a welfare commissioner and each city and town has a welfare officer. (Pages 9 and 10.)

2. Commissioner must provide and with local funds pay for medical care for indigent, except for communicable diseases. (Pages 9, 25, and 26,)

3. He may use his judgment as to who shall furnish it and the amount. (Page 26.)

4. County commissioner is responsible for those who have no town residence or who apply from a town other than that in which they reside. (Pages 11 and 23.)

5. Many cities have charter provisions for salaried city physicians.

6. In a few counties the welfare officer has entire responsibility.

7. In most counties the town or city welfare officer provides home care, while county officer provides hospital service. (Pages 11 and 12.)

8. It is not demanded, but expected, that the

family physician, when there is one, shall be employed. When there is none, then a physician residing near to the patient is to be called. Page 25.)

9. The welfare officer may contract with a physi-

cian for the work. (Page 26.)

10. Physicians should not render service except in emergency (one call) without authorization from the responsible welfare officer. (Page 27.) 11. Bills should be presented promptly

12. Services and fees must be reasonable.

Temporary Emergency Relief Administration:
 The T.E.R.A. will refund to county, town and

- city welfare officers, according to an adopted schedule, 40% of all sums expended in home 2. Ordinarily it will not refund any portion of
- funds expended for hospitalization, mileage or salaries of contract physicians.
- III. Medical Care of Inmates of Public Homes. (Page

IV. Defective Children. (Page 33.)

- V. Children Born Out of Wedlock: (Pages 33 and 34.) 1. Care for such child with its mother.
 - 2. Provide for expert mental and physical exami-
 - nation.
 - 3. Provide medical and surgical care.

VI. Births in Public Homes: (Page 35.)

1. Provide suitable maintenance and medical care somewhere else, if the home is not properly equipped.

Provide Relief and Care of Veterans. (Page 37.) VIII. Old Age Relief. (Pages 43 and 44.)

The Administration of the Public Welfare Law has varied widely in the counties owing largely to the nature of the law itself. The law provides for a county welfare commissioner and for a continuance of local "Poor Officials" in the local towns, while many cities are under special charters. The county may be the unit of administration with the town officials as the deputies of the County Commissioner or, it may be by towns, with the county commissioner performing his duties as he did under the old law. Few of the counties have adopted the county system, and most townships are still independent units. There is, therefore, no uniformity in the method of supplying medical relief, and physicians are confused as to their duties and uncertain as to their pay.

There was a free recital of the difficulties under which physicians labor in giving medical relief under the Public Welfare Law; but it was agreed that the law was administered with a reasonable degree of satisfaction in those counties in which a committee of the County Medical Society had discussed their problems with the local welfare officials, and had entered into agreements with them regarding fees, methods of calling physicians, rendering bills, and other details. The conference adopted the following motion:

Resolved, That each county Medical Society be urged to have a committee which should confer with the county and town welfare officials and work out administrative methods adapted to that county.

The method of employing a physician to treat the poor on a contract basis was condemned, and the conference voted to favor the employment of the family doctor of the patient's own choice.

The conference also voted to approve the principle of giving medical care in the home so far as possible, rather than sending the patient to a hospital.

The afternoon session was devoted to a discussion of the subject of the abuse of free dispensary service. Dr. W. A. MacVey of Rochester told how the physicians and social service organizations of his city had cooperated in establishing a system of investigating all applicants for free relief in dispensaries.

Dr. L. W. Beamis described a similar system that has been adopted in Buffalo; and commented on its failures as well as its successes.

Dr. Peter Irving outlined some of the legal difficulties which prevent the correction of dispensary abuses in Greater New York especially the general principle that there can be no discrimination among the recipients of the benefits of public funds.

Dr. I. J. Landsman described a survey now being conducted by the Bronx County Medical Society of the financial status of every patient applying for relief at one of the large hospitals of Bronx Borough. The survey has already yielded



OUR NEIGHBORS



MEDICAL ETHICS IN MASSACHUSETTS

The New England Journal of Medicine of June 22 contains the presidential address of Dr. H. G. Stetson, before the Massachusetts Medical Society. Discussing the enforcement of medical ethics, Dr. Stetson says:

"In a recent study of the work of the Committee on Ethics and Discipline there is an element of interest, but not, I am sorry to say, one of pride in discovering that this Committee within the past five years has been called upon to investigate the conduct of 104 practitioners, members of this Society, who have been accused of conduct unbecoming a physician in one way or another. It is interesting to note that physicians who have been so investigated are not graduates of any one particular school, but so far as can be learned, all schools are represented without any particular disparagement to any one. Two conclusions came to me in the study of this report, which I feel are of enough importance to place before you.

"First, greater attention should be paid to the admission of candidates to our Society, by the Censors in the different districts. It is not always possible to exclude the undesirable, by this means, but a few cases show definitely that the physician who ultimately comes before the Committee on Ethics and Discipline should never have been admitted. The character of the work carried on since his admission to the Society was definitely shown by the same character previous to his admission, and should have been known to the Censors of the district. The mere fact that he has been able to pass the medical examination for admission to the Society constitutes, as I understand it, only 60 per cent of the requirements for

admission. The remaining 40 per cent applies to ethics, to his standing among his fellow practitioners, and in his more or less public relations in the community in which he lives. One hundred and four studies in the past five years is not large, but I believe that a more careful examination of the ethics and standing of the applicant previous to admission would lessen the number of our undesirable members.

"Secondly, a study of the work of this Committee, together with some evidence that has been produced in the Committee on Public Relations, would lead me to believe that insufficient attention is placed upon medical ethics and upon business No small economics in our medical schools. amount of the medical graduate's success in life depends upon his knowledge of business ethics and business principles and his relationships with his fellow practitioners, and I believe that more time could be devoted in our medical school courses looking toward a more complete understanding and knowledge of these two subjects. The physician is constantly being criticized by the business man for his lack of business knowledge and business principle, and while the practice of medicine is a profession, it should be governed, if we are to be successful in our contacts with others, by reasonable business judgment and business knowledge. The statement is made altogether too often by the younger practitioner when he begins the practice of his profession, that his knowledge of medical ethics is largely obtained after his graduation. The success of our profession depends, I believe, not upon more business but upon better business."

THE INDIGENT IN PENNSYLVANIA

The July number of the *Pennsylvania Medical Journal* contains the following proposal which the Chester County Medical Society will submit to the Board of Supervisors of the County. The circular letter of the secretary of the county society is as follows:

"The medical profession in Chester County is at present, and has for many years, given thousands of dollars of medical service annually to the indigent of Chester County. Our Committee on Economics feels that this is an unfair and unsound policy, for three major reasons:

"1. The indigent do not receive proper or adequate medical attention under such an arrange-

ment as has been so clearly shown by the Committee on the Costs of Medical Care.

"2. The physician is actually deprived of considerable income which he has properly earned and is rightfully entitled to.

"3. The county and hence the taxpayers expend thousands of dollars, caring for bedfast, indigent patients, when illness might have been prevented if proper medical attention had been granted years before.

"We feel that while charitable service will always characterize the profession of medicine, this excessive load for the strictly indigent prevents

(Continued on page 1126-adv. xii)

extri-Maltose Lest we forget

No. 1 Maltose 51%. Dextrins 42%. NaCl 2%. H2O 5%.

No. 2 Maltose 52% Dextrins 43%. H2O 5%. the carbohydrate No. 3 Maltose 51%. Dextrins 41% KCO2 3%. H2O 5%

of choice for thirty years mever advertised to the public

"The dextrin-maltose preparations possess certain advantages. When they are added to cow's milk mixtures, we have a combination of three forms of carbohydrates, lactose, dextrin and maltose, all having different reactions in the intestinal tract and different absorption rates. Because of the relatively slower conversion of dextrins to maltose and then to dextrose, fermentative processes are less likely to develop. Those preparations containing relatively more maltose are more laxative than those containing a higher percentage of dextrin (unless alkali salts such as potassium salts are added). It is common experience clinically that larger amounts of dextrin-maltose preparations may be fed as compared with the simple sugars. Obviously, when there is a lessened sugar tolerance such as occurs in many digestive disturbances, dextrin-maltose compounds may be used to advantage." (Queries and Minor Notes, J.A.M.A., 88:266)

POTENCY MEANS SMALLER DOSAGE



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MILK OF MAGNESIA

I teaspoonful of liquid Phillips' Milk of Magnesia

I tablespoonful of saturated sodium bicarbonate solution

I glass of lime water

The ability of milk of magnesia to neutralize excess addity in the stomach has been established. For over 60 years Phillips' Milk of Magnesia has been a standard agent for use in gostric and intestinal disturbances.

Now you are able to give your patients an added service—milk of magnesia in tablet form. These tablets are concentrated, safe and pleasant to take. They may be carried about on the person and thus permit ambulant patients to take them periodically.

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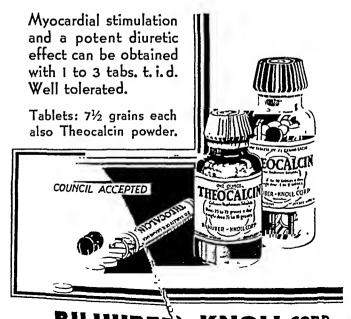
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THEOCALCIN

In Congestive Heart Failure



(Continued from page 1124)

the profession from extending charity, that is undoubtedly deserved to even a larger class of people: those who are endeavoring to maintain their independent financial status despite great handicaps. The average general practitioner of medicine after possibly thirty years of service will leave a net estate of \$15,000; during that same time, he will have given in uncompensated service to the community an amount in excess of \$66,000. We feel that any effort looking toward a better distribution of the cost of medical care for the pay or part-pay patient should be based on the fact that those patients now unemployed and on 'relief' are properly a community charge not only for food, fuel, and shelter, but for essential

and emergency medical relief.

"The Committee on Economics of the Chester County Medical Society, therefore, propose to present its case definitely and concisely to our county commissioners. In brief, we propose to ask the county to appropriate to the Chester County Medical Society \$15,000, to be devoted to the care of patients who are now on the 'relief.' The procedure under the contract between our society and the county commissioners would be definitely specific. The members of our society would adopt a fee schedule for operations under this contract, a copy of the same being mailed to each member. All bills submitted to the society would conform to this fee schedule. Those patients on 'relief' after receiving from the Relief Committee of the county authorization for medical service, would then be treated by the physician of the patient's choice, namely, his family When the physician has completed his treatment of a patient on 'relief,' he mails to the proper agent of the society a statement of services rendered accompanied by the authorization slip. The medical men active under the terms of this agreement would furnish medical, surgical, and obstetric care on the basis of the fee schedule arranged. Our plan does not include hospital care, roentgen-ray photographs or treatments, antitoxins, serum, trusses, lenses, etc. The physician would furnish the ordinary office dressings and drugs. Our committee proposes that the society select one of its members, preferably the secretary, to act as the central agent for the society, whose duties would be to handle the correspondence, telephone messages, etc., connected with this work as well as to keep a record of the work done by the various physicians, using the bills received as a basis for this calculation. The Economics Committee, or perhaps an Auditing Committee appointed by the society, would meet at stated intervals to pass and decide upon any questions which might exist concerning any bills which had been rendered to the secretary. All expenses connected with the plan as well as the society dues of all the members would be deducted from the total sum received from the county. The (Continued on page 1128-adv. xiv)

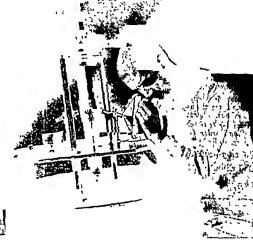
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(Continued from page 1126—adv. xii) balance would be pro-rated on a percentage basi and the proper amount sent to each physicia quarterly in payment for the work done as out lined on bills rendered. There is nothing obligatory in this plan for any physician to treat a patient whom he does not care to treat or for an patient coming to a physician other than the on of his choice.

"Under the terms of the contract, the medical society, through its Committee on Medical Economics, merely proposes to provide a more intelligent arrangement for the care of those patient on county 'relief.' It is obvious that such a plai is only just and fair to the physicians, and we are equally confident that it will be a definite mark o progress in caring for the health of the people of the county."

LEGISLATION IN OKLAHOMA

The July issue of the Journal of the Okla homa State Medical Association has the following editorial on legislation affecting the practice of medicine in the State:

. "The last Legislature is to be congratulated on its very good common sense in taking the sensible and modern view of the various meas ures presented before it. Among its acts were

these:

"The prohibition or sale of marijuana, veronal, barbital, luminal, chloral hydrate, bromi dia or somnos except on the prescription of a licensed practitioner of medicine, osteopathy dentistry or veterinary medicine, which prevention would be almost the equivalent of requiring the purchaser to secure a prescription before buying a sack of common table salt o cooking soda.

"We question the practicability of this law It will at once place the drugs in the 'bootleg class, it will not prohibit the sale of a single

tablet.

"It refused to pass a legislative act permitting a poor, ignorant woman, far out in the western hills of the State, to follow her occupation of 'curing' cancer, by the application of certain compounds she alleged would cure the disease. In this case, too, we all know she has no cure for cancer but probably has a mixture

that is a hundred years or more old.

"It is left in the hands of the Governor as to whether the Post-Graduate Medical Extension work should be continued. Of course every physician in the State who studies these matters knows that this work is good not only for the physician but for the people at large, and should be continued. Its continuation, however, depends upon the amount of cash on or in sight, for, there are many other measures clamoring for continuation of appropriations, which lumped together amount to a consider-

(Continued on page 1130-adv. xvi)

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(Continued from page 1128-adv. xiv)

able sum, which must come from the pockets of the taxpayers of the State. We hope however that the Extension work will be continued, for its cost is a relatively very small sum of money and it undoubtedly does a great deal of good.

'It abolished the Union Soldiers' Home and this we agree to, for the Federal Government has ample provisions in various parts of the United States to care for these old men.

"It refused to pass an act reducing the amount which a doctor might collect for a call to 25 cents per mile. It may be very sensibly

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seen that any physician would promptly refuse to make a call upon any such basis. The same physician, however, will make charity calls or tend the needs of the sick for nothing, if it is necessary, but to fix the amount at 25 cents per mile which one might charge for calling upon a well-to-do person, is pure folly. In the end the act would probably have been held unconstitutional by the State Supreme Court.

"It refused to pass an act permitting Osteopaths to enter a State- and County-owned hospital upon the same grounds as a finely qualified physician is permitted to enter them."

COUNCIL MEETINGS IN MASSACHUSETTS

Committee meetings of medical societies are likely to be so informal that some doctors become impatient, as did one member of the Council of the Massachusetts Medical Society, whose letter in the New England Journal of Medicine of June 29 was as follows:

"The terrific length of the last meeting of the Council and comments on the time consumed in considering petitions for the reinstatement of members lead me, a Councilor since 1902, to speak of certain possible improvements in man-

"Why can the meeting not start promptly at 12:00? It almost never begins before 12:15 or

even 12:20.

"Why must the Secretary read, even in abstract, the record of the previous meeting? It has already been printed and distributed. In most organizations this reading is on motion dispensed

"Should the presiding officer not familiarize himself before the meeting with the names of his

nominees for committee positions?

"At 3:30 P. M. I for the first time in my life went home before adjournment seeing no probable termination of a debate between two distinguished surgeons entirely uncontrolled by the chair.

"When adjournment was finally achieved I do not therefore personally know, but two and onehalf hours had already gone by with an extra hour

for luncheon and a camera interlude.

"Not one-half of those present before luncheon attended the afternoon meeting."

GRADUATE EDUCATION IN MASSACHUSETTS

The New England Journal of Medicine of May 28, 1933, contains the following editorial announcement of post-graduate courses which the Massachusetts Society offers to its members through its District Branches:

"County Societies desiring post-graduate instruction have only to apply to the Massachusetts Medical Society and they will be furnished a

(Continued on page 1131-adv. xvii)

(Continued from page 1130-adv. rri) course of ten exercises. These exercises will be given by a group of carefully selected teachers, and will be clinical in nature. District hospital facilities will be utilized for teaching centers as

far as possible.

"Post-graduate instruction has already been offered by State Societies in other parts of the country. The methods employed have varied in different localities, but on the whole have proved successful in bringing to doctors knowledge or viewpoints that are useful and stimulating. The Massachusetts Medical Society is to be congratulated on beginning this kind of work. The undertaking is a significant one which well may lead to important achievements."

The method of giving the courses is as follows:

"That an extension course consisting of a series of ten teaching lectures be made available.

'That a registration fee of \$5.00 be charged for a course of ten exercises.

"That instructors be paid expenses but no other

honorarium the first year.

"That a local chairman of post-graduate instruction be appointed in each district, this chairman to be nominated by the Executive Committee and approved by the District Society. The local chairman will have charge of the local registration, preparation of clinical material, attendance, etc.

That the courses be given two or three hours

per day.

"That exercises be given once per week or as

often as the District Society requests.

"That a list of subjects be published and sent to every District Society with the idea that they may choose any ten of the list."

The complete list of subjects names 22 topics, as follows:

"1. Practical Medical Principles for Everyday Use. (History taking, laboratory procedures, etc.)

"2. Vascular Disease.

"3. Gastro-Intestinal Disease.

Disease.

"4. Gastro-Intestinal Disease.

"5. Acute Infections.

"6. Diseases of the Blood and Hematopoietic System. "7. Praetical Psychiatric Problems.

"8. Medical and Surgical Emergencies. "9. Normal Pregnancy.

"10. Pathological Pregnancy.

"11. Infant Feeding and Management; Examination of Well Children.

"12. The General Man and the Specialties. "13. Organic Neurology.

"14. Syphilis and Dermatology.

"15. Endocrinology.

- "16. Poliomyelitis.
- "17. Tuberculosis.
 "18. The Use of Vaccines and Sera.

"19. Arthritis.

"20. Genito-Urinary Disease.

"21. Cancer.

"22. Dietary Problems in Certain Diseases."

WHEN THE DOCTOR'S ADVICE MEANS SO MUCH...

16,750,000 Children under 15 have, or have had, Rachitic Tendencies

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ALREADY in England the Ministry of Health is advising an adequate supply of vitamin-D. The Ministry points out that along with sufficient calcium and phosphorus, vitamin-D will prevent or cure rickets. It states further that both for the prevention and cure of rickets and to insure proper development of the teeth, the diet of pregnant and nursing mothers should contain all three of the ingredients mentioned. It asserts that vitamin-D is most apt to be deficient of these three. It states that the rate of progress of caries is decreased by additional vitamin-D in the diet. It advises all medical officers, especially at infant welfare centers, antenatal hospitals and during pregnancy, to secute an adequate supply of vitamin-D in the diet. For children especially it recommends more liberal use of milk.

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Mothers will cooperate with physicians better in the feeding of their babies because Pablum is so easy to prepare. Please send for samples to Mead Johnson & Company, Evansville, Indiana.-Adv.

"CONGESTIVE HEART FAILURE"

Before the Cincinnati Heart Council, Dr. B. A. Schwartz reported on a series of 37 cases of congestive heart failure treated with digitalis and Metrazol (Ohio State Med. Jr. May 1933, page 308-310).

The author made use of the circulatory stimulant Metrazol in place of, or in conjunction with, digitalis in a selected group of 37 cases of chronic congestive heart failure in which digitalis did not prove effective or where the patient's gastro-intestinal or even nervous system was partially or wholly intolerant to this drug.

Case histories are given and many

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cardiologists and a comprehensive bibliography is included.

In conclusion Dr. Schwartz writes: "Our clinical experience with digitalis and Metrazol in this group of cardiac patients with congestive failure, leads us to conclude that there is a definite synergistic relation between the two stimulants. In those cases where normal doses of digitalis had been found to be toxic or ineffective, smaller doses of this drug in conjunction with Metrazol often proved of value in obtaining the desired results. Where digitalis is not tolerated at all, Metrazol alone has been used references made to reports from with success. In cases of acute digi-

talis poisoning Metrazol has proved of definite value. In acute cardiovascular collapse the use of Metrazol is especially beneficial.

Information and a trial quantity of this circulatory and respiratory stimulant, Metrazol (Council Accepted) may be obtained, upon request to the manufacturers, Billiuber-Knoll Corp., 154 Ogden Ave., Jersey City, N. J.

FROM A LILLY BULLETIN

"The benefits derived from the use of local medicinal agents commonly prescribed in nasal therapy would appear to depend to a considerable extent upon the manner in which they are applied. Some physicians recommend the use of sprays, while others favor drops. Linn has called attention to the value of double spraying; the first shrinks the exterior turbinate, allowing the second spraying to reach more readily the important middle turbinate area. According to Jackson and Coates, gravity will carry further into the recesses of the nose and sinuses than a spray or applicator. In applying drops by the gravity, or postural, method, the patient lies on a couch or table with the head well down over the end. The drops, usually about ten, are instilled into each nostril. The head is then rolled from side to side. After two or three minutes a normal recumbent position is resumed and should be maintained for from three to five minutes. During this procedure the patient is instructed to breathe through the mouth and not to 'sniff.' Gentle tapping over the forehead may facilitate the spread and penetration of the drops."—Adv..

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DISORDERS OF MUSCLE TONE AND THEIR LOCALIZING SIGNIFICANCE

By WALTER FREEMAN, MD, ST. CLIZABETH'S HOSPITAL, WASHINGTON, D C.

From the Department of Neurology, George Washington University Rend at the Annual Meeting of the Medical Society of the State of New York, at New York City, on April 5, 1933

THE recent discussions of muscle tonus and its various components have led to so much confusion that at a recent meeting Fulton decried the use of the word, saying that it had ceased to mean anything specific and should there-fore be discarded. To do so, however, would force us to fall back upon other terms whose definitions are equally unsatisfactory, and would deprive us of a term that everybody finds useful For purposes of present discussion, muscle tone may be defined as that quality of resistance met with upon passive movement of the segments of a limb Deviations from the normal may be both quantitative and qualitative. I propose to discuss some of these as a means of localizing lesions in the nervous system It goes without saying that muscle tone of itself is by no means sufficient for localization Hypotonius, for instance, may result from lesions as far up as the cerebral cortex, and hypertonus often results from spinal lesions Qualitative differences are often the important distinguishing features

In addition to "muscle touc" certain other terms frequently used in similar connectious may also be defined Spasticity is to be understood, for purposes of this paper, as the condition in which, with or without hypertonias, there is exaggeration of reflexes and increased postnral reactions. It denotes involvement of the pyramidal tract Contracture, in the same way, is defined as a deformity due to permaient shortening of muscles with or without ankylosis of joints Perseveration, or tonic uncervation, is used in the sense of blocking of passive molement due to insoluntary contraction of all associated muscle groups. Extensibility refers to the normal range of movement of a joint Postural reactions are widespread coordinated reflexes elicited by forcible muscular contraction or by painful stimuli, the prototype is the Babinski sign

Hypotonus

Hypotonus may result from damage to the up per motor neurone as well as from the destruction of the lower — In apoplexy, during the period of shock and in the terminal phases, the hypotonus is quite general, but a hypotonic limb may persist for a long time after interruption of the pyramidal tract. This chronic hypotonia is usually accompanied by diminished extensibility, but sometimes, if the lesion affects the parietal lobe, there may be hyperextensibility and actual muscular atrophy Spastic phenomena such as exaggerated reflexes, synkineses and increased postural reactions, are always present.

The hypotonus resulting from a lesion of the anterior horn cells or of the peripheral nerves is more often accompanied by atrophy than is that due to destruction of the posterior roots as in tabes. The differentiation may often be made by testing the extensibility of the joints, since this is increased and painless in tabes, while it may be increased but painful in polionity elitis, and almost certainly will be decreased and painful in neutritis. The sensitiveness of the muscles to compression is acute in neutritis, and Abadie's maneriver (junching the achilles tendon) serves quite well to differentiate pseudotabes of neutritic origin from the real article. Contractures are absent in tabes, while they often develop in poliomyelitis and in neutritis.

From these two types of hypotonus, the cortical and the neuromuscular, must sometimes be distinguished the cerebellar Tests for coordination will not always serve to distinguish between them, nor will they differentiate between the tabetic and the cerebellar hypotonias lests for coordination jield valid results only when motor power and sensibility are altogether intact. Weakness or spasticity of a limb will interfere with the performance of a movement, while a disturbance in the sense of position will certainly impair its ac-The hypotonus of cerebellar disease is often unilateral, while that of tabes is symmetri-The limits of extensibility are normal in the one and increased in the other, and the reflex activity in cerebellar disease is apt to be normal, while that in tabes, in the stage of hypotonus, is abolished I would call special attention to the importance of the achilles reflexes, since they

may be abolished while the patellar reflexes are The pendular reflex in cases still hyperactive. of cerebellar disease is often of value in determining the side affected. The patient sits sufficiently high so that the feet swing clear, and the degree of back-and-forth movement of the foot is noted after striking the patellar tendon. A similar test may be used on the triceps tendon, the forearm swinging free. The differentiation between cerebral and cerebellar forms of hypotonus is usually easily made, because muscular power remains unaffected in the latter while it is abolished in the former. Moreover the reflexes in the cerebral type are apt to be exaggerated, and synkineses and spasticity are present. Hypotonus with exaggerated reflexes and other signs of spasticity is met with in lesions low down in the posterior part of the frontal lobe cortex and is usually limited to the hand and face.

Hypertonus

Increase of muscle tone is a very common phenomenon in disease of the central nervous system. Aside from the contractures and sclerotic muscular conditions that indicate disease at the extreme periphery, however, hypertonus is generally a symptom of disease of the brain or of its efferent tracts. The problem of differentiation usually narrows down to distinctions between pyramidal and extrapyramidal disease, and the distinguishing features are often difficult to demonstrate, especially in cases of diffuse cortical disorder.

Pyramidal hypertonus, in its minimal state, is characterized by no loss of gross muscular power, but rather by slowness and imperfection of the finer movements. This fact alone, however, even coupled with increased reflexes, will not distinguish pyramidal from extrapyramidal disorders. The Hoffmann reflex occurs in both, but the Mayer sign (forcible flexion of the ring finger produces adduction of the thumb) is absent in pyramidal disease and may be exaggerated in extrapyramidal disease. The presence of this sign is important in Synkinetic reexcluding pyramidal disease. sponses are common in pyramidal disease and absent in extrapyramidal disorders. The Babinski reflex or one of its congeners is the best guide we have to the presence of pyramidal disease, and its homologous hand sign (produced by stroking the hypothener eminence), while less frequently encountered, has an almost equal value. Abdominal and cremasteric reflexes are abolished by pyramidal disease, but not by extrapyramidal disease per se.

The hypertonus of pyramidal disease has a plastic character that is peculiar when well developed. This is due to the so-called lengthening and shortening reactions, the antagonists taking up slack, as it were, so that within fairly wide limits the tonus remains constant. The elasticity,

or snapping back of a limb when stretched and released denotes contracture, and while often found in pyramidal cases, will not of itself distinguish them from extrapyramidal or even from peripheral lesions.

When pyramidal tract signs are present, alterations in muscle tone may throw some light upon the level of interruption. The hypotonus of cortical lesions has already been considered, and the spasticity of spinal lesions needs no elaboration. The distinction between a capsular lesion and a pontile one, however, is not infrequently of importance. In both instances marked hypertonus may result, with spasticity and contracture, limitation of passive movement, and, in milder cases, slowness in volitional movements. In general, the lower the lesion the greater the spasticity and the more precocious its onset. In the pons the pyramidal tracts are divided up into a number of fasciculi, which lie, nevertheless, in rather small compass where they come into relation at three or four different levels with the paramedian branches of the basilar artery. I have been quite impressed with the frequency of small softenings in the pons. The chief distinction between a capsular lesion and a pontile infarction lies in the absence of sensory changes in the latter. A capsular lesion sufficiently large to impair seriously the function of the pyramidal tract will almost certainly destroy fibers in the posterior limb and impair the sense of position in the fingers and The sensory and motor pathways in the pons, however, are subserved by different sets of arterial twigs and hence are usually not involved simultaneously. Crossed paralyses are exceptionally rare in vascular lesions of the pons, however common they may be in tumor cases.

The nearer a small lesion lies to the cerebral cortex the more limited will be the extent of the paralysis and other changes. The cortex is spread out fan-wise, the fibers converging into the internal capsule so that it takes a large lesion to destroy all the cortical fibers while a relatively small one might catch a great many in the capsule. Moreover the foot area lies in a different arterial distribution from the arm and face areas. Pure cortical lesions, as noted above, leave persistent hypotonus. Therefore a monoplegia with hypotonus usually indicates a cortical lesion, while a decidedhypertonic one indicates a small lesion strategically placed at some lower level. The arm is much more frequently the seat of persistent hypotonia than is the leg.

Bilateral spasticity usually indicates a lesion of the spinal cord, but I have observed spasticity of both lower limbs with a "cord" bladder from bilateral lesions of the paracentral lobules. If the face is involved in the spasticity, the lesions must lie above the medulla. Pseudobulbar palsy is due to bilateral pyramidal lesions, but these lesions involve some part lower than the cortex, and their

common locus is the pons.

Among the Extrapyramidal hypertonus. extrapyramidal disorders to be considered from the standpoint of muscle tone, one may include atrophy of the substantia nigra and globus pallidus, leaving aside for the moment the striatal disorders characterized by abnormal involuntary movements. I have been unable to distinguish objectively between the encephalitic destruction of the substantia nigra, and the rare degeneration of the globus pallidus. Most cases of paralysis agitans, I am convinced, are due to nigral atrophy, sometimes associated with rather marked inflammatory manifestations indicating nothing else than chronic encephalitis. The disturbances in muscle tone in parkinsonism are almost too well known to need emphasis, but the maneuver that I have found the most effective in bringing out the characteristic eog-wheel resistance, is a rather wide passive movement of the whole upper limb simulating the overhand swimming stroke. Progressive slowing of movements on repeated opening and closing of the hands or of the mouth, and diminution of the automatic swinging of the hands in walking, are also signs worthy of mention.

The pallido-nigral syndrome (so designated because the pallidum is sometimes affected while the nigra escapes) is to be contrasted with the syndrome resulting from lesions of the cortex, especially of the frontal lobes. The latter condition is seen particularly in senile dementia, lead poisoning, terminal paresis, and in the "central neuritis" of alcoholism and pellagra. In both syndromes spasticity and other signs of pyramidal damage are absent. The tonus of parkinsonism usually relaxes somewhat during continued manipulation, while that of cortical disease usually increases. In the former there is reduction of extensibility, while this is normal in the cortical cases of not too long duration. The hypertonus may be sufficient in either condition to abolish the reflexes. Disease of the frontal lobes may give rise to tremors that may be practically indistinguishable from those of parkinsonism, though at times they come to resemble clonus. The movements have a biphasie character that is peculiar, being termed elonic perseveration. These tremors subside when the patient rests, a differential feature as far as paralysis agitans is concerned. The most important distinguishing feature is the increased resistance to passive movement encountered in the patient with disease of the cortex. The more abrupt the movement the greater the resistance, hence the designation tonic innervation, or tonic perseveration. When the perseveration is quite marked it is apt to be accompanied by reflex grasping, and the clutch reaction may be observed in the foot. To elicit the latter the sole of the foot is tapped lightly with a blunt object at the base of the second toe. Disease of the pyramidal tract usually abolishes this reaction of the toes, and also does away with the grasp reflex. In

parkinsonism some suggestion of the grasp reflex is often found, but the thumb does not participate to any great extent. Moreover, the grasp is not active in character but suggests only that in response to passive extension of the fingers there has been an overswing into flexion. On three occasions I have witnessed a combination of nigral atrophy with senile atrophy of the frontal lobes (proven at necropsy) in which the findings were quite confusing. The condition most often underlying tonic perseveration with reflex grasping is senile degeneration of the brain with many Redlich-Fischer plaques in the frontal lobes. Focal lesions in the posterior part of the superior frontal convolution (Area 6 of Brodmann) or in the underlying white matter will produce these same symptoms provided the pyramidal tract is intact. Evanescent signs of this character may be observed in many acute cerebral conditions.

The distinction between the above disorders and catatonic states is sometimes important. Not infrequently patients have been admitted to mental hospitals with the diagnosis of catatonic dementia precox, which has turned out to be chronic encephalitis. Waxy flexibility is met with only in dementia precox and the resistiveness of the catatonic with its negativism is so different from the placid indifference of the senile and the confused state of the pellagrin that no difficulty should be encountered in distinguishing tonic perseveration from negativism. Reflex grasping does not occur in catatonia. When a patient is "resistive," watch out for perseveration. It has some localizing significance, pointing, I believe,

to the frontal lobes.

Hypertonus is a condition rather generally met with in old age. In some individuals it is accompanied by tremor of a modified intention type rather than the pill-rolling of parkinsonism. Not infrequently the patient with an advanced form shows considerable tonic perseveration, interfering not only with passive movement, but also with active movement. These individuals are often unsteady on their feet, slow in walking, sometimes taking short steps (the "marche à petit pas" of French writers) sometimes walking on a broad base, sometimes showing exaggerated balancing movements of the arms, at other times rather deficient movements with a tendency to topple over.

In the widespread atrophic processes going on in the brain during the senile period it is difficult to separate those conditions of hypertonus due to cortical lesions from those due to disease of the basal ganglia. In the putamen and caudate nucleus, also in the globus pallidus and at times in the thalamus and even in the cortex there is widespread retraction of the tissues from about the smaller blood vessels, indicating atrophy of the so-called molecular type, there being no definite focal lesions. This is the status cribralis, état criblé. Unlike certain other degenerative lesions of the striate body it is not accompanied by in-

voluntary movements like those seen in chorea. Aside from hypertonus and the tendency to tremors, little is found on examination and the signs of pyramidal involvement are absent. How much of the rigidity is due to disease of the basal ganglia and how much to cortical involvement is not altogether certain. I am inclined to favor the basal ganglia since in status cribralis one does not so often get the tonic perservation, and only very infrequently the reflex grasping and groping that are so often encountered in senile dementia.

The Dystonias

The dystonias belong in a class by themselves on account of the presence of involuntary movements which result from constant shifting of muscle tonus from one group to another. term covers a whole group of disorders, such as athetosis, chorea, Wilson's disease and pseudosclerosis, dystonia cerebellaris, dystonia lenticularis, etc. Very often confused with the lenticular group of dystonias is the cerebellar group. both types there may be marked hypertonus, often with deformity and hyperextensibility, exaggeration of involuntary movements by volitional activity, and quieting on rest. Tonus may be exaggerated in some of the cerebellar dystonias, and reduced in the acute choreas. The reflexes are extremely variable and are often impossible to obtain on account of the involuntary movements. I have erred most in attributing the involuntary movements to lenticular disease when they were found to occur in individuals with cerebellar atrophy. As a general rule the cerebellar dystonias remain quiet until stirred into activity, while the choreas cease only during sleep. In the cerebellar cases there is more oscillatory to-andfro movement, while the striatal cases show more complex movements and less stereotypy. presence of considerable atrophy in the lower limbs is in favor of cerebellar disease, since there is so frequently an accompanying degeneration of the spinal cord as in Friedreich's ataxia.

True athetosis is to be distinguished on the one hand from striatal disease and on the other from the pseudoathetosis occurring in tabes and in multiple sclerosis from loss of the sense of position. Athetosis is due to very complete interruption of all the volitional pathways at a low cerebral level, by virtue of which the automatic postural centers in the midbrain are released from higher control. The usual signs of pyramidal disease are present, and one may often elicit the cervical reflex of

Magnus and deKleyn. In the lenticular and cerebellar dystonias there are no synkineses or other pyramidal signs, and the cervical reflexes are absent. Hemiathetosis and post-hemiplegic hemichorea merge imperceptibly into one another. A lesion in the vicinity of the corpus subthalamicum is usually found at necropsy.

It is curious that similar lesions of the corpus striatum (putamen and caudate nucleus) should give rise to so wide a variety of involuntary movements. The abrupt jerky movements of dystonia lenticularis, the slowly progressive rigidity of Wilson's disease, the oratorical style of Huntington's chorea and the terrific contortions of torsion spasm all seem to have very much the same type of lesion. In the whole group the pyramidal signs are absent, the movements are less tremulous, affect the proximal portions of the limbs and the trunk and tend to subside only when the patient is completely at rest or asleep.

Not enough is known about the lesions underlying the involuntary movements in the hemiplegias and diplegias of childhood to attempt localization. It is my feeling that the movements are pseudoathetoses due to loss of the sense of position in the limbs resulting from widespread subcortical destruction. Tonus is usually increased, sometimes with contracture, sometimes with hyperextensibility. Synkineses are always present and often vivid, spasticity is present, and the cervical reflexes are sometimes elicited. The movements are really uncontrolled postural reactions.

Summary

The estimation of muscle tone will occasionally give important information concerning the localization of a pathologic process in the nervous system. Hypotonia may result from a cortical lesion as well as from a peripheral one, but its quality is different. Hypertonia without spasticity may result from disease of the substantia nigra or from that of the frontal lobe. There are differential features, however, that often render a diagnosis possible. Dystonia, with what appear to be involuntary movements, may occur in widespread cerebellar disease as well as in atrophy of the striatum. The differential features of the two forms are discussed. While the distinction between the different categories is sometimes impossible on the basis of muscle tone alone, this phenomenon, taken in conjunction with others, will often lead to correct localization of a disease process within the nervous system.

THE EXTERNAL EXAMINATION OF THE EYE IN THE DIAGNOSIS OF GENERAL DISEASES

II. THE EXTRA-OCULAR MUSCLES, CONJUNCTIVA, CORNEA AND SCLERA By CONRAD BERENS, M.D., and JOSHUA ZUCKERMAN, M.D., NEW YORK, N. Y. The second of a series of three papers read before the Dallas Southern Clinical Society, Dallas, Texas, April 1, 1931.

Outline

- D. Extra-ocular muscles
 - (1) Heterophoria (tendency to "cross eye" or "wall eye")
 - (2) Heterotropia (actual "cross eyc" or "wall eye")
 - (3) Convergence
 - (4) Paresis, paralysis and overaction
 - (5) Congenital abnormalities of the extraocular muscles
- E. Conjunctiva
 - Chronic conjunctivitis caused by focal infection in the sinuses, intestinal tract, and other foci

- (2) Pucumococcic conjunctivitis
- (3) Gonorrheal conjunctivitis(4) Tuberculous conjunctivitis
- (5) Diphtheritic conjunctivitis
- (6) Subconjunctival hemorrhages
- F. Cornea-Corneal Opacities
 - (1) Superficial
 - (2) Deep
 - (3) On posterior surface of cornea
- G. Sclera
 - (1) Inflammation
 - (a) Focal infection
 - (b) Tuberculosis

D. The Extra-Ocular Muscles

Diagnosis of Motor Anomalies—The eyebali is rotated by four recti muscles and two oblique muscles. In order to detect almost all motor anomalies (paresis, paralysis or overaction) which can produce symptoms, it is merely necessary to proceed as follows: Ask the patient to fix a small object at 6 meters (twenty feet) or any distance beyond this; place a card in front of one of his eyes, then alternately shift this card slowly from eye to eye; observe the direction of movement of the eye which is being uncovered. When fixing at 6 meters there should be practically no movement of the eyes, i.e., they should both continue to fix behind the screen.

(1) Heterophoria (tendency to "cross eye" or "wall eye")1—Movement of either eye inward when it is uncovered denotes exophoria (a tendency of the eyes to deviate outward); movement outward denotes esophoria (an abnormal tendency of the visual axes to converge); movement upward denotes hypophoria (the condition in which the visual axis of one eye falls below that of the other) and movement downward denotes hyperphoria (the elevation of one visual axis above the other) which is usually due to underaction or overaction of the vertically acting muscles. It will be noted that the terms exophoria, esophoria, hypophoria or hyperphoria are employed to describe the position which the eye assumes behind the screen. The same procedure is repeated with the patient fixing a small object placed at 25 centimeters (ten inches) and the same movements of the eye behind the screen denote the same anomalies. Exophoria, esophoria, hypophoria or hyperphoria is manifested to the patient by a "shifting" or "jumping" of the test object inward, ontward, upward or downward respectively as the eye is being uncovered. A small amount of exophoria or esophoria when fixing at 25 centimeters is considered normal. This produces a subjective sensation of movement of the object of approximately 2 centimeters at this distance when the card is shifted. Any vertical movement of the eyes seen by the observer or noted by the patient should be carefully studied, because hyperphoria² is a common cause of eyestrain and headache, and may indicate a beginning muscular paralysis.

(2) Heterotropia (actual "cross eye" or "wall eye")—With both eyes fixing a small test object at 6 meters the examiner covers one eye, then uncovers it, meanwhile noting the position of this eye. The same procedure is followed with the other eye. If either uncovered eye moves in, out, up or down to fix the object, heterotropia exists, named in the same manner esotropia, exotropia, hypertropia or hypotropia.

(3) Convergence—To test the near point of convergence, the eyes are made to fix a 2 millimeter black dot on a white card which is carried as close to the eyes as possible until double vision occurs, i.e., until either eye ccases to converge and can be seen to diverge. If the near point of convergence is found to be greater than 75 millimeters (three inches) from the cornea, convergence insufficiency may be suspected. This is a frequent cause of tiring of the eyes during or after close work.

(4) Paresis, paralysis and overaction—The patient is requested to follow a test object (a 1 or 2 millimeter white-headed pin) with both eyes. The pin is carried into various positions in the visual fields and any limitation of rotation of

the eyeballs is noted by the physician. Limitation of movement of either eye in a certain direction denotes paresis (incomplete paralysis) or paralysis of that muscle, the primary action of which is to turn the eye in that direction. Limitation of movement of either eye upward and temporally indicates paresis or paralysis of the superior rectus muscle, the primary action of which is to turn the eye upward in the temporal field; limitation downward and temporally denotes involvement of the inferior rectus; limitation upward and nasally, the inferior oblique; downward and nasally the superior oblique. It will be noted that the superior and inferior recti muscles act in the temporal field and the oblique muscles act in the nasal field. Paralysis of the extra-ocular muscles is characterized by (a) absence of movement; (b) squint, convergent or divergent; (c) diplopia, i.e., double vision. When diplopia is present the paralysis is usually recent. The lesion responsible for the diplopia may be central or peripheral and the paralysis may be caused by hemorrhage, exudate, tumor, periostitis, injury or vascular disturbance producing compression or inflammation of the nerves. Syphilis and epidemic encephalitis are the most common causes. Other causes are diseases of the nervous system: tabes, general paralysis and disseminated sclerosis; infectious diseases: diphtheria and influenza; poisónings; alcohol, botulism and ptomaine poisoning; and vascular disturbances; diabetes and hypertension.

(5) Congenital abnormalities, especially paralysis or paresis of the superior rectus, or fibrosis or paralysis of the external rectus, are not uncommon.

... (6) ,If nystagmus, i.e., an involuntary oscillation of the eyeball, is noted before the eyes are rotated 45 degrees in any direction it may be considered pathologic. Nystagmus usually affects both eyes and is associated with imperfect vision. Usually the abnormal movements of the eyeballs are from side to side (lateral nystagmus) but vertical, rotary and mixed nystagmus are also Irregular · nystagmus, common in Friedșeen. reich's disease and in multiple sclerosis, is not found in paralysis agitans. In true ocular nystagmus the eyes pass and repass the point of fixation and the components are of equal velocity; in labyrinthine nystagmus the cerebral component is rapid and the other component is slow.

E. Conjunctiva

In examining the conjunctiva, cornea, and sclera, natural daylight or artificial daylight illumination is essential in order to detect the presence of jaundice and congestion. Concentrated light is necessary in searching for small ulcers, infiltrations and foreign bodies. For these examinations and for the study of the deeper structures a hand lens and a loupe are valuable. A

strong convex lens is held in one hand in such a manner that the apex of the cone of light produced by it is thrown upon the part of the eye to be examined. The loupe is held in the other hand and the illuminated part of the eye is examined through it.

Conjunctivitis—Congestion of the conjunctiva in mild or (1) chronic conjunctivitis is often associated with chronic infection in the nasal accessory sinuses or in the gastro-intestinal tract. We have also seen congestion and low-grade chronic conjunctivitis in one eye rapidly subside after the extraction of an abscessed tooth.

(2) Pneumococcic conjunctivitis—It is well known that the pneumococcus, the gonococcus and the diphtheria bacillus as well as the tubercle

bacillus may attack the conjunctiva.

(3) Gonorrheal conjunctivitis — In certain cases of chronic gonorrhea there is a mild chronic conjunctivitis without the presence of gonococci. This type of conjunctivitis may recur simultaneously with evidence of the gonorrheal infection elsewhere.

(4) Tuberculous conjunctivitis³—Tuberculosis rarely affects the conjunctiva but occasionally occurs as a yellowish-red irregular lesion covered with secretion. Eczematous or phlyctenular keratoconjunctivitis, considered tuberculous by certain authorities, presents the appearance of small papules surrounded by congestion involving the conjunctiva and superficial layers of the cornea with predilection for the pericorneal zone. These lesions usually occur in children but occasionally adults up to the age of thirty or thirty-five may be affected. The lesions may be accompanied by chronic rhinitis, eczema and swelling of the

lymphatic glands.

Our belief is that many cases of phlyctenular conjunctivitis do not arise from tuberculosis but from sensitization to bacteria in the nasal acsinuses. Phlyctenular conjunctivitis and keratitis of nasal origin have been reported by Wormes and Bidault. In a study, conducted at the New York Eye and Ear Infirmary several years ago, we observed a group of children with phlyctenular keratoconjunctivitis all of whom had adenoids and chronic infection in their sinuses; streptococci were recovered in most of the cultures. On the other hand, Castaris⁵ reports that all of his patients with phlyctenular keratoconjunctivitis reacted to tuberculin intracutaneously; eye symptoms in every instance began to clear immediately when treatment by desensitization with tuberculin was begun. He concludes that phlyctenular keratoconjunctivitis is in all probability a local manifestation of hypersensitiveness of the patient to the tubercle bacillus or its toxins and a tuberculous focus somewhere in the body is the underlying etiologic factor. Whatever the cause may be it is apparently evident that desensitization with tuberculin is a good nonspecific treatment.

(5) Diphtheritic conjunctivitis-It is important to remember that in most cases of diphtheritic conjunctivitis diphtheria is present in the nose or throat. Ehlers describes six cases of diphtheria with diagnosis based on the presence of diphtheria bacilli in the infected conjunctiva. In five of the cases which were observed from their inception a simultaneous diphtheria was found in the nosc and throat. In two cases there was a false membrane. Membranons conjunctivitis may also be caused by streptococci which, in the cases we have seen, have also involved the nasal mucous membrane.

(6) Subconjunctival hemorrhages commonly accompany voniting and whooping cough. Patients who have recurring subconjunctival hemorrhages should be studied carefully to exclude hypertension, chronic infection or metabolic dis-

turbances (diabetes, etc.).

F. Cornea

Certain corneal opacities may indicate general disease.

(1) Superficial punctate opacities, which stain with fluorescein) and also branched opacities (dendritic keratitis) may be associated with chronic infection (virus or bacterial) elsewhere in the body even though Kip beheved that ninety per cent of the cases of dendritic keratitis in America were caused by malaria. In our experience most of these infections are "focal infections" localized in the teeth, tonsils, or nasal accessory sinuses. The elimination of chronic infections, even though they may not be the cause, is sometimes apparently beneficial in preventing recurrences of dendritic keratitis.

(2) Deep infiltration of the cornea—so-called interstitial or parenchymatous keratitis—is caused in ninety per cent of the cases by hereditary syphilis, rarely by acquired syphilis. It is an interesting fact that traumatism is often the exciting cause of this process. Recently we observed this in a young man whose left eye was struck by a piece of metal. Parenchymatous keratitis developed and after a period of three weeks involved the right eye. The Wassermann test was four plus. On close questioning this patient gave a history of chancre. Interstitial keratitis may also be caused by tuberculosis and in certain cases by focal infection.

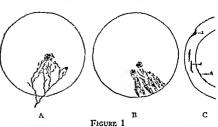


Diagram representing the vorious positions of infiltrations in the cornea according to their depth: A, super-ficial opacities; B, deep opacities; C, corneal opacities: 1, superficial, 2, deep; 3, on posterior surface.

(3) Round opacities on the posterior surface of the cornea—The so-called punctate keratitis of the deep type—are usually associated with chronic infection of the deeper ocular structures eaused by tuberculosis, syphilis, and focal infections. When these deposits are numerous they are usually arranged in the form of a triangle with the apex upward.

G. Sclera

Superficial and deep inflammation of the sclera is usually caused by (a) focal infection or (b) tuberculosis; if the cornea is involved in the process, the condition is called sclerosing keratitis.

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IMPORTANCE OF BRONCHOSCOPY IN OBSCURE PULMONARY CONDITIONS Report of Two Cases

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From the Laryngologic and Bronchoscopic Clinic, Beth Israel flospital, New York City Service of Dr. Samuel J. Kopetrky.

THE first case I am about to report will best illustrate the importance of bronchoscopy in all doubtful chest conditions, especially those running a bizarre course for some length of time. The patient, J. M., a journalist, sixty-five years of age, was admitted to the Beth Israel Hospital on January 9, 1932. His chief complaint was intense coughing for over one year's duration with profuse expectoration. He had pneumonia and peritonitis at the age of twenty and ulcers at sixty, but otherwise was in perfect health. There is no history of inhalation of a foreign body, tonsillectomy or recent operation.

About one and a half years ago, he began to cough with profuse expectoration. Four months later he developed bronchopneumonia with fever, sweats, cough and chills. He was in bed two weeks and returned to work in one month. Following this illness he was well except for asthmatic breathing and severe cough with marked expectoration of greenish material. Eight weeks before admission he developed chills, fever, profuse sweats and cough with occasional foul and sometimes bloody expectorations. His temperature was septic in type with remission to 99° for three weeks, after which it became septic again. He lost about twenty pounds in two weeks and became morbidly pale.

On admission his temperature was 103°, pulse 96, respiration 32. Examination revealed a chronically discharging left ear; upper and lower dental plates; and a barrel-shaped chest. There were diminished breath sounds at the right base, with distant tubular breathing above this area. There were also medium moist rales at left base, and occasional rales at right base.

A lung abscess and lung neoplasm were considered as diagnostic possibilities on January 9, 1932.

Laboratory findings: The urine showed considerable glucose on one occasion. The blood count on admission showed 3,840,000 red cells with 62 per cent hemoglobin; 14,000 white blood cells with 82 per cent polys and 3 staff cells. The sputum showed elastic tissue, many pus cells and many gram positive displococci.

An x-ray of chest taken on January 11, 1932, showed effusion into lower portion of right pleural cavity. The posterior portion of the right lower lobe showed evidence of consolidation. The pleura was markedly thickened and the mediastinum and heart were retracted toward side of lesion. The x-ray diagnoses were: Pleural effusion; bronchopneumonia; bronchostenosis and lung tumor.

On January 12, 1932, bronchoscopy was performed under local anesthesia using 10 per cent cocaine and adrenalin. A Jackson 9 m.m. bronchoscope was inserted through the glottis, into the trachea and down to the carina. The trachea was found adequate and its mucosa markedly congested. The carina was found in the median line thickened, obtuse, and intensely inflamed. At the bottom of the right main bronchus, there was a mass entirely plugging its lower end. This mass was enmeshed in foul purulent secretion. Believing that the mass was a lung tumor, a cup-shaped forceps was used in order to secure a good-sized piece for biopsy. The alleged tumor was then seized and brought forth, which proved to be an irregular curved-shaped chicken bone. After its removal the ever-present hacking cough immediately stopped; the purulent material found at the bottom of the bronchus was suctioned off; and the exuberant granulations from the inflamed area removed.

An x-ray examination following removal of the bone revealed the aeration of the right lower lobe improved; but still present are interstitial changes at the base with marked pleural thickening and a small effusion in the costo-phrenic space. Following the bronchoscopy, the patient felt subjectively better; and although he ran an irregular fever, going up at times to 103°, he improved gradually and left the hospital on February 2, 1932, for a country sanitarium, where he fully recuperated in a short time.

Examination of the chest on March 24, 1932, gives the following results: The lung is completely restored to normal after the removal of the foreign body. Aside from a slight thickening of the pleura, there is no evidence of any change. The aeration of both lungs is normal.

The important points in this case are: The bizarre course which the patient ran for over a year; the inability of the x-rays to locate the foreign body; the asthmatic breathing and the dental plates, which probably prevented the patient from detecting the bone.

The second case is that of a beef bone in the right main bronchus simulating asthma and

empliysema.

A married man, forty-nine years of age, presented himself to Dr. Joseph Grubman on July 9, 1932. His chief complaint was shortness of breath, severe cough with slight expectoration and a sensation of choking, especially so before he fell asleep.

Because of a rather vague or indefinite history of having "swallowed" a fish bone about two months prior to consulting Dr. Grubman, he was radiographed on several occasions with negative results. No tuberculosis, new growth or foreign body could be demonstrated.

Physical examination recorded by Dr. Grubman: A well-developed man with a brassy cough and a voice that seemed to be characteristic of laryngeal pressure. Lungs were hyperresonant throughout, expiration prolonged and feeble and accompanied by squeaks and crackles especially so on the right. Having consulted several outstanding clinicians without gaining any more light on the subject, Dr. Grubman decided on an exploratory bronchoscopy.

Accordingly, a diagnostic brochoscopy was performed on patient L. B. at the Sydenham Hospital on November 25, 1932. Under local anesthesia using ten per cent cocaine, to which a few drops of Epinephrin Solution were added, a Jackson 9 m.m. bronchoscope was inserted through the glottis, into the trachea and down to the carina. These passages were found adequate and the mucosa normal.

Entering the main bronchus we found a mass

Volume 33 Number 19

almost blocking the entire lumen. This mass appeared to be enmeshed in sanguino-purulent secretion and scenied to be attached to the left lateral wall of the right main bronchus. It had a cauliflower appearance with a necrotic center.

After the purulent secretion was removed by suction, the mass was sponged dry with cotton applicators and instead of the apparent cauliflower mass it now began to look like a hard bony substance. After several trying attempts I succeeded in delivering an irregularly shaped meat bone with very sharp edges. It was about three-fourths of an inch in length, one-half inch in width and about one-fourth inch in thickness. The concave surface was irregular and rough; the convex surface was rather smooth.

Slight bleeding followed the removal of the forcign body, but the cough soon ceased and the patient left the hospital on November 27, 1932, entirely well.

Comment:—It would be a good plan to refer all chest conditions running a bizarre course for diagnostic brouchoscopy. Many foreign bodies in the air and food passages, especially those organic in character, fail to throw a shadow to rrays. Patients with asthmatic breathing should be referred to the bronchoscopist; for Jackson's slogan should be borne in mind that, "All is not asthmat that wheezes." Last, but not least, patients with upper dental plates have no way in detecting foreign bodies, especially when swallowing soup.

SEQUESTRUM OF THE FRONTAL SINUSES By E. ROGERS NODINE, M.D., FREEPORT, N. Y.

THE literature is not very rich in reports of sequestra following ostcomyclitis of the sinuses, and so the presentation of this

case with recovery seems worth while. Osteomyclitis of sinus origin usually affects the frontal bone, and produces swelling and pain over the frontal sinus. At this stage there is usually scropurulent fluid between the periostium and bone. Necrosis involving the whole bone may follow and extend to other cranial bones through the diploe. If the condition becomes localized, a subdural abscess may form producing a boggy external swelling. Recovery may take place with the separation of sequestra. If the condition arises secondary to operation on the sinuses, the prognosis is poor. A mortality of 100 per cent in post-operative osteomyelitis was reported by McKenzie in the Journal of Laryngalogy, May, 1913, page 179.

A primary case of osteomyelitis of the nasal sinuses always brings with it a history of chronicity along with the acute symptoms.

Case report, Male, P.M., Age 35, was seen in my office in October 1931, complaining of severe frontal headache, nasal discharge, and edema of the right eyelids. The history was that of a chronic frontal sinusitis of ten years duration, with acute exacerbations on the average of five or six times a year. No nausea or vomiting had occurred.

Examination showed tender edema over the frontal region, and marked swelling of right cyclids with exophthalmos of this eye. There was intense headache with no nasal discharge Temperature, 99.8 by month. Intranasally

there existed a high deviation of the septum narrow nares, and a slight purnlent discharge from the right middle meatus.

Intranasal drainage was instituted at once, and x-rays were taken which showed pansinusitis with suggestive necroses of the frontal bone. He did not improve under intranasal treatment, and in view of the x-ray findings an external operation was decided upon.

Under ether anesthesia a modified Killian operation was performed. An incision along the brow was made, the periostium reflected, and the frontal sinus entered by removing the necrotic anterior wall. The interior of the sinus was full of creamy pus which was aspirated; and along with the pus a sequestrum came away about the size of a small lima bean. The sinuscs were very large in all directions, and full of polypoid tissue, which was curetted away. The floor of the sinus was removed, along with the ethmoids and middle turbinate.

While completing the operation it was discovered that the right and left frontal sinuses freely communicated, and the possibility was that the sequestrum was the main sinus septum which had sloughed off and was moving about in the large sinus spaces. All recesses of the sinus were rounded, and eigarette drains were introduced into the nose and the wound angles.

Recovery was uneventful except for a small persistent fistula at the inner angle of the wound, which finally closed under silver nitrate applications. The patient is now well and working.

A STUDY OF THE MATERNAL MORTALITY OF NEW YORK STATE A Preliminary Report

By GEO. W. KOSMAK, M.D., NEW YORK, N. Y.

This preliminary report was presented at a meeting of the Section on Obstetrics and Gynecology of the State Medical Society, April 4, 1933, and has been amended to include the more complete statistics developed since that date by the Department of Health.

N view of the generally unsatisfactory mortality record associated with childbearing in the State of New York among, of course, many others, the importance and value of a study to determine the underlying factors or causes, cannot be denied. A record which, in comparison with the improvement in other fields of medical practice, has remained practically unchanged during two decades, as regards the deaths from sepsis, hemorrhage and other conditions associated with pregnancy, is evidently in need of attention. It has been found that a satisfactory study of the matter must be based on a close examination of individual cases rather than collections of unrelated hospital and other statistics. And therefore the underlying circumstances in each instance must be obtained from the attending physician within a reasonable time after the fatality occurs, while the facts are still fresh in mind. For it is only thus that we can evaluate the particular case and determine the underlying causes, a knowledge of which should be helpful in formulating preventive measures against future contingencies.

A survey of the deaths associated with pregnancy which occurred during 1932 in this State, with the exception of New York City, has been conducted during the past year by the Department of Health with the cooperation of the Committee on Public Health and Medical Education of the State Society. The survey was in line with that being made for the Greater City of New York by a joint committee of the Academy of Medicine and the New York Obstetrical Society, but for obvious reasons the methods employed had to be adapted to different conditions. The officers of the State Department of Health were desirous of making their study with the full cooperation and support of the medical profession and a satisfactory liaison was developed with the Committee on Public Health and Medical Education of our State Society. A Sub-Committee, consisting of Drs. Farmer, Foster and Kosmak, has dealt directly with this matter and it is as a member of the same that I have been delegated to make this preliminary report and to request an endorsement of this important piece of work and a resolution for its continuance. The various County Societies have been favorable to the scheme with the exception of two which opposed that phase of the study which permitted a State physician in place of the family doctor to obtain information from the family. This objection, I am informed, has been adjusted satisfactorily.

As already stated, the value of a survey of puerperal deaths depends on a study of individual case records, supplemented by a personal interview with the attending physician. This constitutes a problem of considerable magnitude, but it has been attempted by the Department's specially designated physician investigators; and the partial results of the first year's work, namely those of 1932, are herewith presented for your comment and approval. If the project meets with the support of the profession in an earnest effort to learn and to make use of the information for the good of pregnant women, then definite plans must be formulated for the continuance of the investigations over a longer period before satisfactory final conclusions are possible; or the survey should be made a continuous one with periodical publication of the maternal mortality figures and a cumulative report of comparisons at Thus, by keeping the subject stated intervals. constantly before the profession, more permanent good may result than by sporadic and unconnected reports. The State Department of Health would seem to be well organized to do this through its ably conducted Division of Maternity, Infancy and Child Hygiene, and we bespeak for these efforts the support of the physicians of the State. The Director of the Bureau, Dr. Elizabeth M. Gardiner, is to be particularly commended for her enthusiasm, personal labor and interest.

The medical profession must accept the responsibility of reducing unnecessary deaths associated with pregnancy; and it must be accepted that a certain proportion is needless. This can be accomplished, I believe, by a due appreciation of the lessons which are taught by the results of such investigations as that under consideration. In carrying out a study of this kind one of the most essential purposes, as already stated, should be an analysis of the factors dealing with preventability. It was found in other and similar investigations that approximately four avoidable factors entered into the question of puerperal mortality: (1) omission of, or inadequate, prenatal care; (2) professional negligence, errors of judgment, or incompetency; (3) improper environment or lack of facilities; and (4) contributing negligence on the part of the patient or family.

The individual case records included in the present study were classified in the usual fashion according to cause of death, and likewise with regard to the factor of preventability, as just outlined. A member of your committee has gone over the year's case histories with the Chief of the Division of Maternity, Infancy, and Child Hygiene; and while in many instances the records were unsatisfactory, it was possible in many cases to establish, at least in part, the preventability factor. Conclusions will be ventured later on.

Unfortunately it is not possible to present a complete and satisfactory report of this survey because of lack of time and opportunity to study the results, but there is enough material on hand to present certain general conclusions and to show the desirability of continuing an effort to stabilize, if nothing more, some of our obstetrie methods and procedures. May I therefore summirize the statistical findings thus far obtained

During 1932 there occurred in New York State outside of the Greater City, 642 fatalities associated with pregnincy. I his number includes 126 cases of abortions and ectopics, and 123 cases in which the actual cause of death was believed to be non puerperal (cardiae, pulmonary and other intercurrent diseases). This leaves for consideration 285 deaths which may be divided into six groups according to the chief cause, as follows.

Otths accounting to the other cames, and an	
Sepsis	85
Hemorrhage	68
Toxemia	66
Embolism	32
Miscellaneous, associated with surgical procedure	31
Miscellaneous, associated with other eauses	3
•	285

The majority of deaths, 243, or 85%, occurred in hospitals. Of these more than half may be regarded as emergency eases, including 35 delivered at home and brought to the hospital when complications developed after delivery (See Table I)

Only 27% of the total cases had received adequate prenatal case, 45% had madequate, and 27% no prenatal care at all (See Table II)

Operative procedures were employed in 63% of the cases 36% of which were cesarean sections, 26% forceps deliveries, 26% versions and 13% induced hibor or other procedures (See Table III)

Thirty eight per cent of the cases were primparae, 57% multiparae and 5% not stated (See Table IV)

Seventy per cent of the deaths were associated with full term deliveries (See Table V)

A brief analysis of each of the groups of deaths classified by cause shows that prenatal care in the 85 deaths from sepsis was inadequate or entirely lacking in 67. Seventy seven of the sepsis deaths occurred in hospitals, but 24 were admitted after delivery elsewhere. In 49 or 58% some operative procedure was associated with delivery, and in 7 instances these procedures were followed by major abdominal operations during the puerperium. The operative procedures included 13 cesareans, 15 forceps deliveries and 10 versions. Some non puerperal disease was mentioned in connection with 59 of the septic deaths.

In the 66 deaths from toxenin only 14 were strict to have had adequate prenatal care. In but 28 cases was a spontaneous delivery recorded Cesarean was done in 17, version in 10 and forceps in 6. It may be called to your attention that where stated, the anesthetic used was chloroform in 7, and spiral anesthesia in 6.

There was 68 deaths from hemorrhage, 37 of which were associated with some type of placental anomaly. Rupture of the uterus occurred in this group 5 times and version was performed 18 times. Cesarean section was done in 13 cases of which 6 had contracted pelves.

The deaths from embolism numbered 32, among which there were 18 preceded by operation

In the miscellaneous group of 31 deaths after surgical procedures, 16 followed cesarcan section, 6 versions and 9 forcens. Long labors were present in more thin one third, mostly associated with cesarcan section. In the other miscellaneous group of 3 there were 2 deaths from puerperal psychoses.

It is not practical to present the detailed figures in this report, which must be regarded as preliminary, but these will be published in due course. However, to those who studied the ease histories a few observations may be permitted, among which the following are of especial interest

A large proportion (45%) of these fatalities occurred in women who failed to register with any physician or hospital until late in pregnancy or mactual labor

A considerable number of cesarean sections were "emergencies," often preceded by unsuccessful attempts at forceps or versions

There were many very long labors preceding operative deliveries, with the consequent bad risk of an exhausted patient. One hundred and forty-four, or 80%, of the operative cases were stated to have had labors from 12 to 100 hours. The coareans in this group averaged 40, the versions 37 and the forceps deaths 30 hours each

The factor of contracted pelvis was not recognized during pregnuncy in many instances, and even if recognized no plans were made for lospitalization or appropriate delivery

Too little attention was paid to intercurrent disease, with no intelligent planning for cardiac cases for example, hospitalization being post poned until a late period

There are many instances in which high blood pressure, edema and albiminum were noted in the final weeks, which had been under prenatal care and jet no effective measures were employed to properly evaluate these warnings of an impending eclampsia

One is impressed in studying a series of cases such as this that more information is needed about environmental conditions, about the competency of individual operators, about the lack of and the greater need of education in proper maternity

	Total	Sepsis	Hemorrhage	Toxemia	Embolus	Surgical	Other
Table I—Summary: Total Deaths. Deaths in Hospital Delivered in hospital. Planned. Emergency. Not stated. Delivered elsewhere. Death not in hospital, planned. Delivered in hospital, planned. Delivered elsewhere.	285 243 208 100 104 4 35 42 6 36	85 77 53 31 22 24 8 3 5	68 · 57 52 20 31 1 5 11	66 60 56 17 37 2 4 6	32 22 20 15 4 1 2 10 1	31 26 26 16 10 5	3 1 1 1 2 1 1
Table II—Prenatal Care: Adequate	75 125 75 10	18 41 26	20 24 15 9	14 28 24	12 15 4 1	10 15 6	1 2
Table III—Total With Operative Procedures: Total. Caesarean section. High forceps. Low forceps. Version. Induced labor. Perineal incision. Craniotomy. Breech extraction. Manual removal of placenta. Other.	180 64 8 39 46 10 1 1 1 3 7	49 13 3 12 10 1 1 1 2 5	44 13 9 18 4 	38 17 2 4 10 4 	18 5 1 7 2 1 	31 16 2 7 6 	
Table IV—Previous Pregnancies: Primiparae Multiparae Not reported	109 163 13	36 49 0	20 44 4	28 35 3	9 19 4	15 14 2	1 2
Table V—Gestation: Full term. 8 Months. 7 Months. Less than 7 Months.	202 36 30 17	67 7 6 5	45 11 6 6	31 15 15 5	25 3 3 1	31	3
Table VI—Avoidable Factors: Faulty Management Negligence of patient or family. Not preventable Negligence of midwife Not determined	147 49 87 1	56 12 17 0 0	37 6 23 1 1	22 28 16 	9 2 21 	23 1 7 	 3

care of both the public and physicians. The pregnant state, notwithstanding all the efforts which have been made in this direction, does not seem to command or receive the attention which it merits.

In order to make a study of this kind of value, some conclusions should be reached as to how many of these deaths should have been avoided. Although the case histories were gone over with this in mind, I do not feel competent to make any absolute statements in this respect, but I would venture my personal belief based on a review of 285 puerperal cases, excluding abortions and non-puerperal deaths, and classified according to the formula already previously mentioned, that over half could be ascribed to faulty management, either by the doctor or the hospital, over 17% to the personal negligence of the patient or her

family, and a very few to midwife participation, thus leaving about 30% of the total in the non-preventable class. The latter also includes the doubtful and undetermined cases. (See Table VI.)

It is quite evident, therefore, that a knowledge of the mortality associated with the pregnant state must be effectively disseminated, so that the lessons to be learned from a study of obstetric practice in any given community will lead eventually to improvement in the care of our prospective mothers. Moreover, it is essential that the feeling of fear, of uncertainty and even of suspicion, which results from the presentation of such unfavorable figures be clarified and eliminated. It seems to me that this is strictly a medical problem to the solution of which the organized medical profession must lend its moral support as well as its qualified technical assistance.

POSTGRADUATE MEDICINE AND THE GENERAL PRACTITIONER

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TN the past ten years a remarkable amount of interest has been evident in the field of postgraduate medical education. The responsibility for the quickening of this interest has not been centralized, but has been distributed among such widely diversified agents as national, state, and county medical societies; educational agencies such as the Council of Medical Education of the American Medical Association; medical schools; academies of medicine in our larger cities; and by various specialistic medical and surgical bodies too numerous to mention. Postgraduate training has been featured in medical periodicals, and comprehensive reports by medical commissions have reviewed the present status of graduate training and have suggested plans for the future.

In the present article some of the trends of postgraduate training as it concerns the general practitioner will be indicated. No attempt will be made to review the advances being made for the training of the specialist, nor will there be mention of courses having a particular appeal to the specialist. Some excellent discussions have been contributed to this field, particularly by Cutler,1 Rappleye,2 Hener,3 Dannreuther,4 Mecker,5 Mac-Pherson, McCarthy, by the Report of the Commission on Medical Education (1932), the yearly reports of the Council on Medical Education of the American Medical Association,8 and the bulletins from the National Boards of Oto-Laryngology, of Ophthalmology, and of Gynecology and Obstetrics.

It has been gratifying to note the active part that the state and county medical societies have taken in developing the postgraduate program for practitioners. It is safe to say that in many counties in New York State and elsewhere the atmosphere of the medical meeting has been completely changed by the emphasis that has been placed on education in planning medical programs. The county is the logical medical unit of the state. The county is and should be willing to let the specialist shift for himself; but the county through its medical society should be everlastingly aware of its obligation for the continuation education of its general practitioners. should be no danger of state medicine in a county where vigorous, progressive physicians united in an active medical society are working in cooperation with a well managed community hospital and intelligent health agencies.

One of the first attempts to carry postgraduate training to the doctor was made in North Carolina, where in 1916 an itinerant clinical course was given successively to six groups of physicians. Slightly different itinerant courses have been carried out in Wisconsin, Minnesota, and

Kansas. Other states that have conducted similar clinical courses include Michigan, Pennsylvania, Ohio, Missouri, West Virginia, Colorado, Iówa, and Oklahoma.⁹ Plans have been made by the New England Medical Council to carry to a number of rural New England communities all of the essential apparatus to teach general practitioners the fundamental principles of the treatment of fractures.¹⁰ Information regarding the treatment of fractures has been exceedingly well distributed by national and regional committees on fractures.

In the counties of New York State another form of graduate education in which medical courses have been brought to the doctors has been fostered. Under the aegis of the Committee on Medical Education and Public Health of the State Society, correlated series of clinical lectures have been given for the past six years at the meetings of the county medical societies. recent report of that Committee indicates that to date 116 courses comprising 632 lectures have been given in 47 different counties of the state.11 This means that approximately 70 per cent of the membership of the State Society has been reached by these correlated courses. The clinical lectures have been given by well known clinicians and surgeons for the benefit of practitioners of medicine, and a majority of the subjects have been in the field of internal medicine.

In the more populous sections of New York State the county societies have taken the initiative in establishing postgraduate courses. A good example is the series offered each year by the Kings County Medical Society in conjunction with the Long Island College of Medicinc. Outside of New York State educational plans sponsored by county societies that have recently come to our attention are those of the Allegheny County Medical Society (Pennsylvania), and the Mahoning County Medical Society (Ohio). Another very stimulating type of postgraduate course is the Graduate Fortnight of the New York Academy of Medicine, which has attracted each year for the past five years a large number of medical visitors. It goes without saying that urban communities, especially those that have within their eonfines one or more medical schools, can offer to their physicians more advantages in postgraduate training, elinical and pathological conferences. and section meetings at the various academies of medicine. The urban practitioner has plenty of graduate instruction within his reach if he will only take advantage of it.

A departure from the clinical lecture type of course in favor of a "clinical conference" plan is being advocated this year by the Committee on Medical Education of the New York State So-

ciety, and it is suggested that this plan be tried in some counties as an experiment. "The scheme of a clinical conference is to have physicians in an area bring to the meeting some half dozen cases which present concrete problems either in diagnosis or treatment. These cases should be brought to the center where the meeting is to be held, early in the day, thus allowing the guest chief of the clinic an opportunity to study these cases. Then, at the time of the meeting, the patient's physician presents the case and gives his point of view. The patient is shown and the case is opened for general discussion; and finally the guest chief summarizes his own findings, expresses his own opinion and makes his recommendations." 12 This plan is fraught with great possibilities, since it places the local hospital where it ought to be, at the center of the community's medical life, and gives the local physicians almost complete charge of a very practical program. Skilled clinicians should have no difficulty in making noteworthy contributions to the knowledge of the practising physicians in such practical problems as tuberculosis, heart disease. diabetes, infant feeding, and gastro-intestinal disorders. It would seem that, wherever postgraduate training is carried to the local groups, it can best be done by some such plan as this. Several of the rural hospitals under the Commonwealth Fund have had success with just this type of clinical conference. A very interesting document setting forth what the outlying hospital could do in postgraduate medical education was written by Dobson in 1921.

A complementary plan, and one that offers advantages not available to the average community hospital, is the establishment in large centers of practical clinical courses of one week's duration. These courses should be held at any time of the year when a sufficient number of applicants are available, and the schedule should be sufficiently elastic to meet the requirements of the general practitioner. In the large clinics and wards of our leading hospitals, clinical chiefs in pediatrics, internal medicine, obstetrics, tuberculosis and cardiology will have every opportunity to present a number of medical problems, with all the confirmatory evidence of the pathological, bacteriological, chemical, and roentgenological labora-Furthermore, in the large urban clinics, the general practitioner can get a more adequate approach to the control of gonorrhea and syphilis, to public health problems, to the care of school children, to mental hygiene, and to certain phases of industrial medicine. In each course of one week several hospitals, a variety of clinical services, and public health agencies would be utilized. One such plan has been presented by the Committee on Medical Education of the State Society, and a description of several tentative oneweek courses was published.

The medical schools of New York State have for many years offered postgraduate instruction to the general practitioner. Those listed in 1932 as having approved postgraduate courses by the Council on Medical Education of the A.M.A. are: Albany Medical College, Columbia University (including the New York Post-Graduate Medical School, Vanderbilt Clinic, Neurological Institute of New York and the New York State Psychiatric Institute and Hospital, and the affiliated hospitals. Mount Sinai, Saint Luke's, and Montefiore), Cornell University Medical School. New York Eye and Ear Infirmary, New York Polyclinic Medical School, Trudeau School of Tuberculosis, University and Bellevue Hospital 'Medical School, and University of Buffalo Medical School. Space does not permit a discussion of the variety of courses offered by these medical schools. It is sufficient to say that the general practitioner can find almost any type of course that he wishes, either part time or full time, and he can spend at this work a few hours a week or he can devote himself for several weeks full time to the study of medicine. In New York City the efficient Bureau of Clinical Information at the New York Academy of Medicine has made available to all medical visitors a summary of postgraduate opportunities in New York and Brooklyn, as well as a calendar of the daily clinical conferences in the large hospitals.

What can the practicing physician hope to get from the postgraduate programs locally and in the large centers? So much depends on the native ability, medical education and practice, and the aspirations and ideals of the individual practitioner that no ready answer can be given to this question. It has been pointed out in the report of the Commission on Medical Education that the capable general practitioner is well qualified to handle 80 to 90 per cent of the illnesses he is called on to treat. 15 But he does need to be kept informed of the recent advances in medicine, and those less capable need a more basic training than that. In a general way the benefits to be expected from postgraduate courses may be grouped under the following headings: (1) a more thorough understanding of the fundamentals of physical diagnosis, history taking, and the rationale of differential diagnosis, (2) an appreciation of the usefulness and limitations of laboratory aids in medical practice. (3) a practical survey of modern treatments of a variety of diseases, the management of which falls largely to the lot of the general practitioner, and (4) an accession of that intangible something usually referred to as morale.

It is difficult to get physicians in practice to realize the importance of physical diagnosis and history taking. Many clinicians feel that these are studies for only the undergraduate medical student, and that it is an affront to the doctor's in-

telligence to insinuate that lie cannot make a thorough physical examination or take a eareful his-And yet it is only necessary to think of the intricacies in the physical diagnosis of those patients one sees in eardiac, chest, gynecological and neurological clinics to realize that the recent graduate, no matter how good his medical education or his hospital internslup, cannot possibly get all the refinements. And many of the older hysicians, furthermore, have not had the advantages of modern medical training. Some of the points in physical diagnosis to be stressed are value of percussion and auscultation in examining the heart and lungs, appreciation of cardiac murmurs, altered breath sounds, and rales, palpation of the neck for thyrnid enlargement, correct examination of the nerves of special sense, determination of exophthalmos and increased intra-ocular tension, appreciation of motor and sensory (touch and pain) disturbances, pelvie examinations leading to correct diagnoses, rectal and prostatie examinations, and blood pressure readings These are only a few of the more important elements which constitute a complete physical examination

The use and abuse of laboratory data in arriving at diagnostic conclusions have been widely discussed in recent years. It is generally agreed, however, that, in the great majority of clinical problems, whether a diagnosis is fairly evident or not, a few laboratory tests are mandatory Among the more important may be mentioned urinalysis, estimation of hemoglobin, white and red cell counts differential counts, and staining of smears for gonococci, tuberele and diphtheria bacilli It would seem that every active practitioner should be able to properly evaluate these tests Somewhat more complicated tests that will not be done in the practitioner's office, but which at times he will have oceasion to use are the estimation of the sugar and urea content of the blood, examination of spinal fluid blood cultures, Wassermann test, analysis of stomach contents and feces, and the estimation of basal metabolic rates under laboratory data should be mentioned such tests as the Mantoux and the Schick The knowledge a general practitioner should have about roentgenological diagnosis is a moot question Certainly he should know enough to choose intel ligently a competent roentgennlogist to make interpretations for him, and he should be able after sceing the report to visualize fairly accurately the pathological changes that have occurred

Many practitimners wish to touch rather lightly on the diagnosis, and concentrate on treatment Winle this is a misplacement of emphasis, considerable attention must be given by the teacher to those forms of treatment that have been intro duced successfully within the past ten or fifteen Methods of treatment that will be in demand are the use of insulin in diabetes, management of anemias by liver and iron, use of arsphenamines, infant feeding (an important topic), management of obstetrical problems, use of digitalis and other cardiac drugs, treatment of arthritides, and the technique of intravenous and intraspinal therapy Psychotherapy (not psychinanalysis) should have a place in the practice of every doctor, and nearly every one is using it consciously or otherwise. In all forms of treatment, prescription writing, although having its place, should not be unduly stressed

An important by-product of any postgraduate training is an increase in the morale of the student physician Graduate training means for one thing a break in the routine of practice, it takes the doctor back to the atmosphere of pleasant undergraduate medical days, and it brings new thoughts and ideas to minds that have too often grown rigid. The reading of incdical literature has been one of the chief antidotes against the feeling of staleness that inevitably comes to one in the practice of medicine Graduate training in its simplest form is this practical literature made vivid by personal contacts with stimulating The renewed interest in a medical chnicians practice which comes to the practitioner after a visit to the hospital ward or clinic of such a clinician can be appreciated only by one who has had such an experience

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PHYSICAL AND CONSTITUTIONAL MEASURES IN CHRONIC ARTHRITIS By RICHARD KOVACS, M.D., and JOSEPH KOVACS, M.D., NEW YORK, N. Y.

Read before the Session on Physical Therapy at the Annual Meeting of the Medical Society of the State of New York, at New York City, April 6, 1933.

THRONIC arthritis causes more prolonged disability, suffering and economic loss than any other chronic disease including tuberculosis. The medical profession is striving earnestly to solve the problem of its cause and to find its effective remedy. In recent years under the dominating influence of modern bacteriology the theory of focal infection has been propounded as a prime etiological factor. It is generally conceded that in both types of chronic arthritis, the rheumatoid and the osteoarthritic, a low grade microbic infection is present. The consensus of opinion inclines towards considering chronic arthritis as a streptococcus infection, yet in spite of a huge amount of research work, up to the present time it has been impossible to find the specific microorganism. It has not yet been decided which strain of streptococcus should be accepted as the causative microorganism. On the other hand, Crowe indicates as a frequent cause of arthritis a staphylococcus, the micrococcus deformans; Loewenstein and Reiter are in favor of the bacillus of tuberculosis, while still other research workers believe that colon, dysentery and pneumonia bacilli are responsible.

It is a well known fact that most of the above mentioned bacteria can be always found in the nose, throat, mouth and bowels of perfectly normal persons. There are also many individuals who harbor dental, tonsillar, prostatic or other foci of infection for many years, yet do not show

any signs of arthritis.

Considerations such as these must lead to the conclusion that there must be also some other factor responsible for the development of the disease. Bacteria take hold only in an organism in which they find an appropriate nutritive soil. Bacteria of the type held responsible for arthritis will thrive only in a body with lowered resistance—with an arthritic diathesis, an increased susceptibility towards chronic infections. A lowered resistance as a rule depends on the constitutional make-up of the individual and this introduces a consideration of the "constitution" as one of the main factors in the development of chronic arthritis.

What do we mean by constitution? It signifies that complex of conditions which determines the reaction of the individual both against physiological (normal) and pathological (harmful) external and internal influences. The important function of the constitution is its ability to counteract any disturbances and to adapt the body to changed conditions. Two factors are recognized in the formation of an individual's constitution: One of these is the genotypic factor—the qualities inherent in the germ plasm. In a large series

of cases studied by Pemberton and Pierce¹ heredity played a very great role in the background of chronic arthritis. The other factor is the paratypic, the effect of environmental influences. Environmental forces modify the individual's constitution constantly. Infectious diseases of childhood, unfavorable housing, lack of light, air and exercise, improper or insufficient food, all exert a potent influence on the constitution.

In recent years consistent efforts have been made to classify individuals according to constitutional types. A classification is based mainly on antrophologic measurements, and we accept that of Borchardt,² differentiating between the asthenic or feeble, and the pycnic or robust type of individual.

Studies by Osgood,³ Goldwaith,⁴ Swain⁵ brought out the significant fact that there is a close connection between these two types of body constitution and the two types of chronic arthritis. Anthropometric measurements by one of us (J. K.) at the arthritis clinics of the Postgraduate and the St. Luke's Hospital have further corroborated the fact that the infectious or rheumatoid type of arthritis appears mostly in individuals belonging to the asthenic type, while osteoarthritis is as a rule found in those of the pycnic type. We believe that the different forms of chronic arthritis can be explained on the basis of different body types:

TABLE I
Constitutional Types in Arthritis

Asthenic Type
Long, narrow body
Long neck
Gracile bones
Feeble—Inclines to ptosis
Lack of fat
Hypotonic
Anemic
Poor in connective and
mesenchimal tissues
Often hyperthyroid
Lowered capacity for anti-

Pycnic Type
Shorter, broad shouldered body
Short neck
Large bones
Robust—Tendency towards obesity
Fat retention
Hypertonic
Plethoric
Abundance of connective tissues
Often hypothyroid
Increased response to stimulation

When in the asthenic type resistance becomes lowered as through harmful external effects and an arthritic diathesis is present, a more active form of infection will appear, the rheumatoid type of arthritis, characterized by an exudative type of inflammation with proliferation of the synovial membrane and perichondrium.

On the other hand, in the pycnic type an arthritic infection involves a slow degenerative process, and the affected joints present a picture of a

dry osteoarthritis.

It is our belief that the two generally recognized types of chronic arthritis, the rheumatoid and the osteoarthritic, are brought about by identical etiological factors, and their different manifestations are based on the difference in body constitution. It must be recognized, however, that we frequently meet with mixed body types, and generally we find the mixed form of arthritis in them.

A different body type in itself does not represent abnormality or increased susceptibility to different diseases, it takes harmful external effects to develop a morbid constitution, an arthritic dia-Diathesis ethmologically means disposition. It signifies an anomalous morbid constitution which no longer belongs within the confines of normal variability but already represents a potential disease condition. From a clinical standpoint, the following factors have been shown to contribute to the development of an arthritic diathesis.

TABLE II

Factors in the development of an arthritic diathesis

- Previous disease of infectious or inflammatory nature.
- Unfavorable climate.
- Damp dwellings. Lack of sunlight.
- Lack of exercise. Bad posture.
- Improper diet (lack of Vitamine B combined with carbo-hydrate excess) and over eating.
- Dysfunction of the digestive system (constipation).

 Disturbed function of the skin (instable thermoregulating mechanism—reduced skin elimination). 10.

Disturbed capillary blood circulation.

Dysfunction of the endocrine system (ovarian-11. thyroid glands).

12. Fatigue, worry, anxiety.

Constitutional Therapy in Arthritic Diathesis .

The aim of a rational treatment of chronic arthritis is based primarily on the climination or amelioration of the arthritic diathesis by means of a constitutional therapy and, secondarily, the relief of the local changes. It is self-evident that regaining the full vitality of the body gives the best hope for the restoration of local pathological changes, if not too far advanced, and it is also evident that different types of abnormal body constitutions will require a somewhat different type of constitutional therapy.

A careful regulation of the hygiene of daily life plays an important part in the constitutional therapy. Regular living habits, well planned exercises, proper posture for improving faulty body mechanics, suitable clothing are essential parts of any plan. Regulation of the digestive function, especially the correction of any variety of constipation, a suitable diet, an adequate hormonic stimulation and, finally, an increase of circulation are all important links of a constitutional therapy.

As to diet, a high vitamin low carbohydrate content is indicated in both types of arthritic

Pemberton1 believes that low manifestations. calorie intake will benefit every type of case; we agree to this as far as the pyenic or robust type is concerned, but are of the opinion that in asthenic types, in people with anemia and a tendency to "emaciation," no restricted diet should ever be applied. A recent article by Snyder and Traegers contains a wealth of sane and useful information on this angle of the subject.

Remedial agents to increase the circulation are indicated in both types of arthritis. In the rheumatoid type the circulatory disturbance is more due to a spasm, a disturbed innervation of arterioles and capillaries, and treatment must be Physical therapy directed toward this spasm. measures are of foremost importance for this purpose, also in some eases histamin substances administered subcutaneously or through electrophoresis (ionization) are effective.

In osteoarthritis, where a plethoric state and high blood pressure is generally present, to increase the blood circulation venesection or bloodletting is one of the most effective therapcutic measures. Removal of 300 to 500 c.c. of venous blood decreases the blood volume and viscosity and increases the speed of the circulation.7 Hess' showed in dog experiments that in addition to the increase of blood circulation, the circulation of lymph also increases. The amount of blood taken at a time should depend on the blood pressure and on the amplitude of the pulse. It may be preferable as a rule to remove a smaller amount-250 to 300 e.e. at first and repeat the venesection three to four weeks later, taking a larger amount the second time. When ostcoarthritis is connected with hypothyroidism, thyroid medication often brings prompt relief. climacteric arthritis ovarian preparations do not seem to show satisfactory results, while the removal of 200 to 300 c.c. of blood often does.

We may sum up the principles of constitutional therapy in the two types of chronic arthritis as

follows:

TABLE III

Constitutional therapy in chronic arthritis Rheumatoid arthritis (asthenie constitution)

Roborant and tonic therapy.

Normal caloric, low carbohydrate, rich vitamine and mineral diet.

Increase weight and fat deposits.

Stimulation of hemato-poetic system, blood transfusion, Stimulation of antibody formation (vaccine, foreign protein, fever therapy)

Relieve increased capillary and arteriolar tone (physical

therapy and histamin products).

Osteoarthritis (Pycnic constitution) Eliminative and reducing therapy.

Low calorie, low carbohydrate, rich vitamine and low mineral diet.

Reduce weight and fat deposits. Deplethorizing, blood letting.

Increase excretion and secretion through diuretics, cathartics, skin irritation.

Increase circulation and metabolism (physical therapy and thyroid medication).

Vaccine therapy has its legitimate place in the treatment of chronic arthritis. When a definite bacterial infection is found, vaccine therapy may be applied but we may rest assured that it will influence but one factor; it leaves the arthritic disposition unchanged and the patient may get within a short time a new bacterial infection from the same type or another type of germ. In performing sensitization skin tests, it often happens that after two or three months of vaccine treatment a positive skin reaction occurs with a different type of organism. If a definite focus of infection can be proved it should be removed, although spectacular and prompt results after such surgical intervention are an exception and not a rule. We believe that a thoroughly administered constitutional therapy is essential for overcoming the original endogen cause of the arthritic diathesis and in many cases it will eliminate the foci too.

Physical Therapy in Chronic Arthritis

Physical therapy in chronic arthritis fulfils a two-fold object: (1) It serves as part of a constitutional therapy in increasing circulation and influencing metabolism, in promoting the activity of the digestive tract and in correcting faulty body mechanism. (2) It relieves and prevents local arthritic changes, pain, stiffness, exudation, muscular contracture, atrophy and weakness. Physical measures must be employed in every case according to a carefully individualized plan which takes into account the pathological changes present as well as the constitution and social circumstances of the patient.

Physical therapy will afford maximum benefit if it is employed early in the disease and is properly coordinated with other constitutional measures, and is continued consistently for a sufficiently long period. There should be no polypragmacy, but rather a suitable alternation or combination of general and local measures. A certain change of methods is at times unavoidable in a definitely chronic condition like arthritis, and hence the advantage of drawing on the large variety of circulatory stimulants offered by physical therapy. (See Table IV.)

TABLE IV

Physical therapy in chronic arthritis 1. General or systemic measures

 Heat: Hot water baths, electric light baths, general diathermy, hyperpyrexia treatment. Galvanic baths with or without additional skin stimulation.

2. Heliotherapy, natural and artificial.

3 Exercise: Carefully supervised physical training and medical gymnastics.

General massage.
 Colonic irrigations.

2. Local measures

 Heat: Luminous heat and infra-red radiation. Diathermy. Hot air douche. Monoterminal high frequency (Oudin) current. 2. Galvanic current. Histamin iontophoresis.

3. Massage.

4. Voluntary and passive exercise.5. Static wave current for decongestion,

6. Low tension wave currents for muscle exercise.

A. Systemic or Constitutional Measures

1. Heat. Hot water baths with or without additional chemical stimuli, contrast baths, electric light baths, steam and hot air baths, general diathermy, autocondensation, and the newly inaugurated method of short wave fever therapy, all belong among the large variety of thermal Age old empirical experience, extended clinical observations, (Pemberton^o), and recent physiological research (Bazett¹) all point to the fact that such measures are potent agents influencing circulation and metabolism. Changes in the body temperature following general heating result in the acceleration of the pulse rate, an increase of the circulation rate and a general vasodilatation in the skin. The circulating blood volume is increased, while the alveolar CO₂ tension and the alkalinity of the blood show a decrease. Respiration is affected at a rate of 5 to 6 respirations per minute per 1° C. (1.8° F.) rise in rectal temperature. Metabolism always shows a considerable increase on any increase of body temperature. These physiological effects may be varied in intensity and extent according the nature, degree, duration and interval spacing of thermal treatments.

The clinical object of systemic heat therapy is the amelioration of the arthritic diathesis by the stimulation of general circulation and the increase of body metabolism; the local changes are only indirectly affected, yet in many instances following general thermal treatment there is a decrease of pain and swelling and functional improvement in the affected parts

improvement in the affected parts.

The selection of a systematic thermal measure must be made on the basis of seasoned clinical experience and within the limits of the expected individual tolerance. The patient's social circumstances and the question whether the measures are to be applied at the home, in the doctor's office, in an institution or a health resort also enter into consideration.

The hot water bath is perhaps the simplest and most everywhere available general thermal measure. It may be started at a temperature of from 96° to 99° and gradually carried up to 102,° employed from five minutes to half an hour, two or three times a week. It should never exhaust a patient. Fragrant pine extracts or other resinous substances, or vile smelling sulphur mixtures are often recommended as an addition to these hot baths, with all kinds of extravagant claims; the only effect of these substances is an additional mild stimulation of the skin, especially when gentle friction is employed with the bath. A galvanic current passed through a warm bath

exerts a marked stimulating effect but no specific curative virtues, contrary to the claims of the commercial promoters of these "electric" haths. Prolonged hot baths or hyperpyrexia baths are very exhausting and must be employed only with due care in selected cases of rohust constitution. The same precaution relates to an additional application of a cold or an alternating hot and cold water application, known as a Scotch douche. In suitable cases it adds to the general stimulating effect by neuromuscular "toning." The same effects can be adapted to home use by means of a cool bed sponge.

Electric light cabinet baths, steam and hot air baths are being employed in the institutional treatment of chronic arthritis of the robust constitutional type. General light baths from high wattage (1500 or more watts) incandescent lamps, applied for half an hour or more may be conveniently administered in physicians' offices instead of the somewhat more exhausting cabinet baths. General diathermy, or in occasional instances autocondensation also offer a means for general thermal effects in office practice.

High frequency fever treatment through a powerful diathermy apparatus or through a short wave apparatus (radiothermy) offers a new and not yet fully evaluated institutional means for profound constitutional effects on chronic arthritis. Carpenter and Warren¹¹ report some striking results in infectious types of arthritis. In a limited series of cases of ours under treatment the failures and the encouraging results were about equally divided but good results were particularly evident in chronic gonorrheal arthritis.

None of the general heating measures should ever be instituted in a haphazard way and without definite indications. Provision must be made for patients to cool off and rest after any general heat treatment. A well planned course of general thermal measures should be followed by a period of no treatment or be alternated with suitable local therapy. It is not avisable to employ vaccine therapy during a course of general heat treatment.

2. Heliotherapy-natural and artificial. benefit of either natural or artificial light treatment in tuberculous arthritis is explained through the constitutional effects of the irradiation and those of elevation, mountain air, rest and re-The good results reported in nontuberculous chronic arthritis after sojourns in heliotherapy resorts, or after artificial radiation, are undoubtedly partly from the general tonic effects of radiation, especially on patients with asthenic constitution and rheumatoid arthritis; in addition, the recent research work shows that chemical, thermal and other "insults" of the skin provoke or increase the defensive power of the body by a direct effect on immunity and by the stimulation of the immunizing mechanism through

the absorption of the products of the tissue damage. (Colebrook, Eidenow and Hill. 13)

There is need for controlled clinical work in arthritis along the lines of light treatment; we feel inclined to recommend the use of predominantly ultra-violet irradiation from the standard mercury vapor or cold quartz lamp in the rheumatoid type of arthritis; and in the osteoarthritic type of arthritis the additional thermal effect from a carbon arc lamp appears to be more desirable.

3. Exercise. General exercise in the form of physical training or suitable athletic sports is of considerable importance in the harmonious upkeep of the vital forces of the body and in counteracting a general body inactivity towards which so many arthritics incline. Medical gymnastics or postural exercises on the other hand are indispensable for correcting faulty body mechanics, malposture, ptosis, imperfect action of the diaphragm, etc. To carry out these measures in actual practice requires an appreciation of the subject of exercise and a definite knowledge of basic orthopedic principles.

Exercise of the abdominal muscles by voluntary work or by low tension wave currents (the surging faradic or interrupted sinusoidal) has its object the improvement of tone of the musculature, the stimulation of peristalsis, the aiding of the venous return from the abdomen to the heart and the stimulation of glandular function. This is expected to result in the general improvement of circulation, digestion and elimination and to bring about a better functional efficiency of the entire body.

4. Massage. General body massage, as a rule, preceded by a general thermal measure is of recognized value for overcoming the feeling of fatigue, building up the muscular system, stimulating body metabolism and soothing the nervous system. In many of the health resorts the combination of general heating and massage with hydrotherapeutic procedures, such as the Aix le Bain douche are found beneficial in properly selected cases. Massage, local as well as general in arthritis must begin in the form of gentle stroking over a limited area and be increased in extent and force only as the patient becomes accustomed to the procedure.

5. Colonic irrigations. Colonic irrigations, like various other physical methods, have been popularized in recent years by commercial methods rather than by sound clinical considerations. As many physicians consider the intestinal tract as a major secondary focus of infection, is appears desirable that the bowels be kept open adequately without irritation. Whether colonic irrigations are necessary for this purpose or not depends on the circumstances of the individual case and the clinical experience of the attending physician.

B. Local Physical Measures

1. Heat. Local heat treatment has as its object the increase of local blood and lymph circulation and local tissue metabolism, promotion of resorption and restoration of function. An even more important effect of suitable local thermal application is that of the relief of pain, the symptom which is the most bothersome and most depressing, next to the stiffness and limitation of motion.

The measures available for local heating are also numerous. Hot wet compresses, hot poultices, electric heating pads are popular as pain relieving measures. For simple yet efficient routine heat application in the home and in the office, infra-red and luminous heat generators mounted on suitable stands are now universally preferred, and have largly replaced the former cumbersome dry baking apparatus and light boxes. penetrating effect of the luminous heat is somewhat deeper than that of infra-red generators. For home treatments patients should be instructed to use these appliances for half an hour two or three times a day over the affected joints. Well planned home treatment help to keep patients comfortable and allow the bridging of the time between office visits.

Diathermy has become recognized in recent years as the most efficient form of deep heating. Recent research work (Edstrom¹³) has proven without doubt that the interior of joints can be effectively heated. Extended clinical experience has shown that diathermy will do more for local relief of pain, promotion of resorption and restoration of function than any other physical measure; it also lends itself easily to a combination with other local and general measures. Best results can be expected in cases of osteoarthritis localized in one or two of the larger joints or in the spine. (Kovacs, R.14) In the so frequent bilateral knee involvement of the osteoarthritic type diathermy is well-nigh specific in its local sedative and restorative effect.

The monoterminal high frequency current (known as the Oudin current) has a well defined use for mild counter-irritation in fairly sub-acute arthritis involving several joints, it should be employed following external heat treatment. In painful involvement of small finger joints the hot air douche, from an ordinary hot air drier, affords usually a marked analgesic and resorptive effect.

2. The galvanic current is indicated in cases of atrophic arthritis of long standing where fibrous tissue changes have taken place. It is important that as large amount of current as can be borne be applied for a sufficiently long time. When there appears a combination of chronic arthritis and neuritic pain in the same extremity the local galvanic bath may be beneficial. Recent favorable reports from abroad on the effects of histamin ionization have been partly corroborated in this country.

3. Massage and exercise belong among the mechanical measures which are indispensable in almost every case of chronic arthritis, the others being active and passive exercise, low tension wave currents, and the static wave current. The common object of all these measures is (a) the maintenance and improvement of circulation and drainage in and around the affected joint, (b) the correction of the atrophy of the soft structures, especially those of the muscles.

Massage is the most readily available mechanical measure in arthritis. It must be applied in the most gentle and careful manner for its incorrect or over-zealous employment adds insult to injury by traumatizing the joints. As to massage, only gentle stroking with some light kneading should be performed, and this is better done in the neighborhood of the diseased joints rather than immediately over them. When the help of a skilled technician is not available, physicians should give suitable instruction for massage to family members of patients confined to the home; this will enable the patient to receive at least some massage with a measure of success.

In arthritis of the rheumatoid type motion must be insisted on if fibrous and later bony ankylosis is to be prevented, and the safest way of carrying this out is to have the patient do action exercises within the fullest possible range of motion after the parts have been limbered up by heat and massage. The passive movement of joints in conjunction with massage requires great caution; in many instances forced passive movements, twisting and bending tend to traumatize the tender joints. Patients must receive individualized instruction as to what exercises they can do at home and as to the range of motion they should attempt to attain.

The application of any mechanical measure should always be preceded by heat, external or deep, for it opens up vascular channels, relaxes the parts and enlarges the range of motion. Experience in therapeutic pools has shown that joints in the stage of sub-acute arthritis can be carried painlessly through a surprisingly large degree of motion.

4. The static wave current offers unexcelled benefit through gentle, pleasant molecular massage and decongestive effect, which is well recognized by those who have had actual experience with it. Wherever there is edema and marked stasis, the static wave current will reduce it evenly and with less effort and trauma than hand massage. Static sparks applied around tense and spastic joints aid their mobilizing; arthritis patients usually feel markedly limbered up after a series of well placed sparks.

5. Low tention wave currents, such as the surging faradic, the slow or interrupted sinusoidal, serve for maintaining the tone of muscles and preventing atrophies so frequent in the later

stages of chronic arthritis 15 The combination of voluntary exercise with electrical muscle stimulation tends to prevent one of the most frequent causes of increasing disability in arthritics, muscular atrophy

Conclusions

1 Chronic arthritis must be considered as a systemic disease with local inmifestations in the The different forms of arthritis are in close connection with the different constitutional The combatting of the disease is body types planned primarily through systemic measures to which local measures are added in accordance with the prevailing signs and symptoms

2 Constitutional therapy is directed toward the elimination of the arthritic diathesis, and towards the restoration of the full body vitality. It should be planned and carried out according to the different constitutional types

3 Physical measures are an invaluable aid in constitutional therapy and are the mainstay of They must be employed conthe local therapy sistently according to a definite plan, and this should provide for a suitable alternation of sys temie and local measures Polypragmicy is to be avoided but a certain change of methods is desirable in account of the so definitely chronic condition In some cases simple routine measures

may be applied in the home

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DISCUSSION

R G Snyder, M D, New York City-I wish to compliment Dr Kovacs upon the splendid presentation of his subject. He has not limited his paper to a discussion of physiotherapy in chronic arthritis but has developed in his thesis all phases related to the subject

Dr Kovacs attempts to divide chronic arthritis cases into two distinct types. In my opinion a relatively small proportion of cases can be thus classified From my personal experience based on observations of ambulatory clinic and private practice patients, I would say that ap proximately twenty five per cent of the cases could be classed as belonging to the purely rheumatoid group and about ten or fifteen per cent as belonging to the purely osteoarthritic group The remaining sixty or sixty-five per cent of cases defy such rigid classification because they give evidence of infective as well as of metabolic or degenerative etiologic factors. The majority of cases, therefore, must be classed as belonging to the mixed type

Dr Kovacs' effort to classify the arthritie patient on the basis of constitutional make-up is

Here he has justly stressed the a worthy one point that even on that basis, only a small percentage of patients present the pure asthenic or pure plethoric habitus. Most individuals show distinct evidence of both types of physical development

In some quarters, the significance of focal infection in chronic arthritis is still in dispute. The failure to cure the patient after discovery and elimination of an obvious focus of infection is In the first place, often due to two factors elimination of the local focus of infection may not be sufficient unless diligent care is taken to treat the patient as a whole including local care of the affected joints Secondly, one is apt to forget that the finding and eradication of an obvious focus does not always result in the cure of the patient unless other concomitant foci are discovered and cleared up. In my experience, a clinical cure of the patient has often been made possible only after very diligent search and discovery of obscure and asymptomatic foci of infec tion in the tonsils, teeth, sinuses, genital and intestinal tracts

With further reference to the intestinal tract, one must emphasize the point that absorption of toxic putrefactive products from the intestine is another very important factor in chronic arthritis. Many arthritics on account of the associated pain are forced to curtail their physical activities to a very large extent. These patients usually suffer from chronic constipation, which must be given serious consideration in the general treatment of the case. Various methods of relieving the obstipation may be employed. My own practice has been to regulate the patient's diet, increase his fluid intake and limit or eliminate the use of cathartics. I also utilize abdominal massage and

body exercises and of colonic irrigations. I use both the long and short tube methods of colonic irrigation. In the arthritis clinic of the Hospital for the Ruptured and Crippled, the short tube is used. In my private practice, where the irrigations are given under my direct control by highly trained technicians, I employ the long fifty-four inch tube. To date, 16,470 irrigations have been given to 969 patients in private practice and 2,504 irrigations to 230 patients at the hospital clinic without any deleterious results that could be demonstrated either clinically, or proctoscopically or by augmented roentgenologic examination.

PRESENT DAY PROBLEMS IN LIGHT THERAPY

By FRANK HAMMOND KRUSEN, M.D., PHILADELPHIA, PA.

Read before the Session on Physical Therapy at the Annual Meeting of the Medical Society of the State of New York, at New York City, April 6, 1933

IGHT therapy may be defined as the treatment of diseases by means of light rays (particularly invisible light rays). The commonly accepted view among physicians seems to be that we understand all about light therapy at present, and that we have little more to learn. As a matter of fact we are just on the threshold of knowledge concerning the physiological action of various light wave lengths concerning the sources of light rays and the methods of filtration of light rays. Most of us remember Sir Isaac Newton's demonstration of the splitting of a beam of sunlight by means of prism into the various colors, violet, indigo, blue, green, yellow, orange and red. Some of us remember that in 1800 Sir William Herschel found that there was an area beyond the red end of the visible spectrum that caused a thermometer to register a temperature even higher than in the red area, thus discovering that there were invisible heat rays which, because of their position below the red rays, were called infrared rays. Some of us remember that in 1801 Johann Ritter found that there were rays beyond the violet end of the visible spectrum which darkened silver chloride and thus discovered the invisible chemical rays which because of their position above the violet end of the spectrum were called ultraviolet rays. Most physicians believe that if they have a lamp which is labelled an infrared lamp, that it will produce rays from the infrared region which have some mysterious deeply penetrating heating property. And many physicians seem to believe that if they possess a lamp which is labelled an ultraviolet or sun lamp, that it will produce simply ultraviolet rays and that these rays will accomplish practically any desired anti-rachitic or bactericidal effect which they require. As a

matter of fact, on more careful study of the various light sources, it is found that these sources vary widely in the portions of the light spectrum which they produce and that it is essential to have certain portions, of the light spectrum, in proper intensity reproduced by the source in order to obtain the desired physiological effect.

To practice light therapy intelligently the physician should be acquainted with the physical properties of the light which he is using. Humphris¹ has stated that, "perhaps the chief evil is the almost indiscriminate use of artificial sunlight by those who are insufficiently acquainted with its use, properties and dan-

gers."

The commonly accepted unit for measurement for light wave lengths is the millimicron which equals one millionth of a millimeter. The wave length of visible light extends from 390 millimicrons at the violet end of the spectrum to 770 millimicrons at the red end. Beyond the violet light lie the ultraviolet rays which extend from 390 millimicrons down to 13.6 millimicrons. Beyond the red end of visible light lie the infrared rays which extend from 770 millimicrons up to 15,000 millimicrons.

The sources used for the production of light rays for therapeutic purposes must be heated to a very high temperature. The greater the temperature of the source, the shorter the wave length of the light rays. The temperature of boiling water is 100° centigrade, yet merely to produce the longer infrared rays it is necessary to heat the source to three or four times the temperature of boiling water, (i. e., 300 to 400 degrees centigrade). A source heated to this temperature will give off rays with the maximum emission from 4000 to 5000 millimi-

crons, whereas at low red heat (600 to 800 degrees centigrade) the maximum emission is from 2000 to 3000 millimicrons Heated eoils, plates or bars, the so called "infrared generators' are used to produce rays in this portion of the spectrum These rays which are in the far infrared do not penetrate deeply into the skin. If the source is heated to an even higher degree, as is the case with the tungsten filament lamp, the near infrared rays will be pro A tungsten filament lamp will give off rays ranging from 300 to 4500 millimicrons 'with a maximum emission ranging from 1100 to 2000 millimicrons "

Rays from a tungsten filament lamp though still not penetrating to very great depth will penetrate more deeply than rays from an infrared generator. This is a fact not commonly recognized A tungsten hlament light gives off both heat rays and visible light rays order to have the source emit rays in three ranges of the spectrum, that is, to give off heat rays, light rays and ultraviolet rays, it is necessary to heat it to even higher temperature (3000 degrees centigrade or lugher) Coblentz² points out that 'since solids (e.g., metals such as tungsten) evaporate very rapidly at high temperatures, sources of ultraviolet radiation are practically confined to electric arcs between electrodes of metals, of carbon, and of mercury vapor in a closed tube of quartz glass called 'the burner'' One may possibly visualize the heating of a light source and the associated gradual decrease in the wave length of the light rays by thinking of an ordinary iron poker placed in the fire When the poker is first beginning to heat up if it is pulled from the fire, it will be found to remain black but still give off heat rays when held close to the hand These are the far infrared rays. If the poker is again placed in the fire and becomes still hotter it will glow to a dull red heat. If examined at this time it will be found to be give ing off rays in the middle portion of the in-If heated still more it will frared spectrum be found to turn yellow at which time it will be giving off near infrared rays and also visible light from the red and yellow end of the spee-If heated still more it will become trum white hot In other words it will be giving off white light or rays throughout the entire visible spectrum as well as heat rays. It would be impossible to heat a poker hot enough to have it give off ultraviolet rays because as Coblentz points out it would evaporate before it reached the necessary temperature

There is a common misconception that light rays penetrate to great depth. The far infrared rays as a matter of fact penetrate to a depth of about 1 centimeter while the near infrared rays which are the most penetrating of all light

rays penetrate only to a depth of about 15 centimeters (three fifths of an inch)3, while the ultraviolet rays are still less penetrating reaching to a depth of probably not more than 1 millimeter 4 Mayers points out that "penetration should not be stressed as the factor for the interpretation of physiologic effects" of light

Sources of Therapeutic Light *

1 The sun at high altitude gives off rays froin 290 to 4000 millimicrons with greatest intensity at about 490 millimicrons. The sun at sea level gives off rays froin 300 of a very faint intensity up to 350, then a rapid rise to 490 and a gradual fall to 4000 millimicrons. The atmosphere filters out much of the short ultraviolet rays found at higher altitude.

2 The quartz mercury vapor are gives off a series of intense spectral lines (namely, at 257, 265, 297, 302, 313, 334 and 365 millimicrons) superimposed on a faint continuous spectrum 'About six per cent of the total radiation contitted is of wave lengths shorter than 290 millimicrons which are entirely absent in sunlight. They have a high germicidal action"

3 Carbon ares

(a) The white flame are gives off radiation from 220 millimicrons to more than 4000 millimicrons with a strong emission in the violet at 389 millimicrons. This is the nearest unscreened artificial source to sunlight but is still

far from being an exact match

(b) White flame are through special (Corex D) glass screen. The glass shuts out the short ultraviolet beyond 290 millimierons and the infrared rays longer than 4000 millimierons. This screen puts the light within the same spectral limits as sunlight but the intense band (known as the evanogen band) at 389 millimierons remains. This is the closest artificial source to sunlight but even this is not an evact match.

(e) Neutral core carbon are from these carbons the radiation of wave lengths less than 320 millimicrons is very weak, the radiation being concentrated almost entirely in the so called "eyanogen band" at 389 millimicrons

(d) The blue flame carbon are gives off rays from 220 to more than 4000 millimerons. The ultraviolet radiation of wave lengths less than 310 millimierons exceeds that of all other carbon arcs.

(e) Yellow flame carbon are gives off rays from 220 to more than 4000 millimierons but has an intense band from 290 to 320 millimierons and also a strong emission from 500 to 750 millimierons

(f) The red flame earbon are has the same spectral limits as the previous earbon are mentioned but is conspicuous for its intense emis-

sion between 550 and 750 millimicrons in the orange-red portion of the spectrum.

- 4. Tungsten and Nickel arcs give off numerous fine lines extending from 220 to 750 millimicrons. There are strong lines especially at 230 and 350 millimicrons.
- 5. "Cold Quartz" Ultraviolet Lamps give off a series of spectral lines at 254, 297, and 313 millimicrons. The most intense emission is at 254 millimicrons. These rays are predominatingly of wave lengths which possess a high germicidal action but which destroy vitamin-D.
- 6. Heat coils, plates and bars (so-called "infrared generators"). These give off perceptible radiation of all wave lengths throughout the infrared to 1500 millimicrons. The maximum emission varies according to the surface temperature of the "generator." At a surface temperature of 300 to 400 degrees centigrade the maximum emission is from 4000 to 5000 millimicrons, while at a temperature of 600 to 800 degrees centigrade the maximum emission is from 2000 to 3000 millimicrons. These rays do not penetrate deeply into the skin.
- 7. Tungsten filament lamps give off rays from 300 to 4500 millimicrons with a maximum emission from 1100 to 2000 millimicrons. About thirty per cent. of the rays are in the region from 770 to 1200 millimicrons in the near infrared which rays do penetrate to the greatest depth into the skin.
- 8. S-1 and S-2 Ultraviolet Lamps. These rather new lamps give off a series of strong emission lines (namely at 280, 297, 302, 313, 334, 365 and 405 millimicrons) superimposed on a continuous spectrum. The improved S-1 lamp at a distance of three feet gives off radiation which is about equal to noon June sunlight.

9. The induced ultraviolet glow lamp. This newest type of lamp gives off a series of intense spectral lines (namely at 254, 265, 280, 297, 313, 365, 436 and 546 millimicrons). The most intense lines are at 365 and 436 while there is a fairly intense line at 313 millimicrons.

When one considers the marked variation in the spectral limits and the intensity of the radiation from the different sources just mentioned, he realizes that the use of lights for the treatment of disease is not the simple matter that it might at first be considered. One soon finds that it is of great practical importance to become familiar with the radiation from the lamp he is using for the therapeutic application of light therapy. For instance, the "cold-quartz ultraviolet lamp" produces a very intense band of rays at 254 millimicrons in the short ultraviolet. These rays destroy vitamin-D but are bactericidal and cytocidal. Therefore

rays from such a source are probably of value for their germicidal effect but contraindicated as an antirachitic agent. Likewise, the usual quartz mercury vapor arc produces six per cent, of its rays in wave lengths shorter than 290 millimicrons in this same germicidal vitamin-D destroying area. It is therefore desirable that these short ultraviolet rays be screened out by means of a proper filter if such a lamp is to be used for its maximum antirachitic effect. This is a fact not commonly recognized and one which should be given more consideration. Again, the tungsten filament lamp produces intense radiation (about thirty per cent. of its total rays) in that portion of the infrared (770 to 1200 millimicrons) which penetrates to the blood bearing or capillary area of the skin; whereas the so-called "infrared generators" produce no such intensity of penetrating rays, but do produce more long wave length infrared rays which cause counterirritation. The luminous heater (tungsten filament lamp), therefore, should be used when it is desired to increase local circulation; and the "infrared generators" should be used for surface counterirritation. This fact also is not commonly recognized.

Time will not permit a complete discussion of all the problems which at present are facing physicians who desire to practice light therapy in a logical manner, however, the simple discussion of the various light sources presented here will. I hope, stimulate more interest in the careful selection of light sources.

TECHNIQUE OF APPLICATION OF LIGHT RAYS:

In addition to knowing the light source which he is using, the physician should also know two simple laws which govern the application of light rays. First of these is known as the inverse square law. This law states that the intensity of radiation from any light source varies inversely with the square of the distance from the source. For example: the usual distance between an air-cooled quartz lamp burner and the patient is 36 inches. Applying this law, if the distance is cut in half (to 18 inches) the intensity will not be twice as great as one would at first expect, but four times as great. If the distance is decreased to onethird, the intensity becomes nine times greater. It is necessary to remember this law if one is to prevent overdosage when shortening the distance between the light source and the The other law is known as the Cosine law which states that the energy per square centimeter is proportional to a constant times the Cosine of the angle made by a line connecting the source and the patient and the line perpendicular to the patient's body. That constant is the light per square centimeter

when the patient is perpendicular to the line joining the light and the patient. In simple words this law states that light rays are most intense when the part to be irradiated is at right angles to a line joining the patient and the light source and that there is a gradual diminution in intensity as the patient becomes more oblique to this line. At an inclination of 30 degrees (one third of a right angle), twice the exposure is necessary to produce the same radiation as at ninety degrees (a right angle). This law may be visualized by imagining the face of a clock and picturing the patient as being at the center of the clock face with the light source at 12 o'clock. In this position the light rays will be at right angles to the patient and the greatest intensity of the radiation will be obtained. If now the light source is moved either to one o'clock or to eleven o'clock, the rays will fall upon the patient at an inclined angle and there will be only 80 per cent. of the maximum intensity. Again, if the light source is moved to either ten o'clock or to two o'clock the inclination of the rays will be even greater and only 40 per cent. of the maximum intensity of the radiation will be obtained. This law should be remembered since it indicates that to obtain the maximum intensity from a light source the part to be treated should be at right angles to a line joining this part and the light source.

Conclusions:

A study of the subject of light therapy leads to the following conclusions concerning it.

"1. Despite general usage of sunlight therapy, and of various types of therapeutic light, light therapy is still in a chaotic state.

2. There is still much controversy concerning the physiological effects of various light wave lengths, and about the technique of application.

3. Light therapy has been applied too frequently in an empirical manner, without suf-

ficient knowledge of its effects.

4. The different sources of light vary greatly in extent and intensity of their radiation. Knowledge of these variations is essential for intelligent application of the rays.

5. There is a need for more accurate selec-

tion of therapeutic rays.

6. Knowledge of the mechanism of the source and of one or two simple laws, is

essential for correct therapeutic use of light

7. Dosage of light has not yet been standardized, and there are marked differences of opinion as to proper dosage.

8. There are numerous forms of administra-

tion of light rays.

9. Light therapy (especially ultraviolet therapy) has been recommended in an absurdly

large number of conditions.

10. Ultraviolet therapy is indicated in a fairly large number of conditions, and it has an almost specific action in rickets, tetany, spasmophilia, and, when properly applied, in lupus vulgaris. It is a valuable adjunct in the treatment of selected cases of tuberculosis, and in minor degrees of calcium and phosphorus deficiency, as well as in anemia. It has a valuable, but distinctly limited field of usefulness, in skin diseases. It will impart an antiraelitie power to the milk of an irradiated mother, or of an irradiated cow, or to directly irradiated milk. Locally it is probably of value for its superficial bactericidal and cytocidal effects upon indolent and infected wounds and chronic uleers. It will also improve the tone of unused muscles. It may be used to impart an antirachitic potency to foods and drugs, and also it may be applied to the skin as an adjunct to the administration of such foods and drugs.

11. Infrared therapy is especially indicated in nephritis, arthritis, circulatory diseases, neurologie conditions, fractures, dislocations,

and sprains.

12. Light therapy has distinct limitations and dangers with which its users should be

13. The millennium in light therapy will not be reached until we have gained more accurate knowledge of the exact action of various wave lengths, and until we know how to produce limited ranges of wave lengths in proper doses. (This will probably be accomplished by modification of the sources and by more accurate filteration of the rays.)

14. Even with our present rather limited and chaotic understanding of light therapy, it may be said to be distinctly valuable in a fairly large number of pathological conditions, and to offer great promise when more accurate methods of administration are developed, and when we have attained more knowledge of therapeutic action of various wave lengths."

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DOMINANT PROBLEMS IN THE PRACTICE OF MEDICINE

The resumption of medical meetings after the Summer's vacation brings out the dominant problems with which physicians have to deal. These problems fall naturally into two groups:

- 1. Those of the individual doctor dealing with the individual patient. These concern scientific medicine.
- 2. Those of the medical profession as an im-

personal group giving medical care to the These concern administrative medicine

Administrative medicine consists largely in preparing the people as a group to extend the scope of medical services along two lines

I In the prevention of disease when there is

no visible threat to an individual

2 In making provision for medical service to those who are financially unable to purchase it for themselves

The modern system of administrative medicine began with health departments only about a quarter of a century ago, and was fostered by lay or ganizations that were heavily endowed with the means of educating the people and of financing demonstrations of the efficiency of the newer methods of health service. A dominant problem that grew naturally out of these educational campaigns was the establishment of the county as the administrative unit of public health work county licalth department was one of the greater problems that were discussed in the medical societics of the counties, the states, and the nation five years ago. The problem is still far from be ing settled, but out of the discussion there has come the accepted conclusion that the county health department is desirable and practical in certain counties, and much less so in others

The discussions also led to the development of the principle that the county medical society is the natural organization that shall determine the adoption of a new method of the administration of medical services. This principle is illustrated by the establishment of county health departments in those New York State countres in which the medical societies developed and supported plans which were adapted to their particular counties, and by the failure to apply a blanket form of nrganization not fitted and adjusted to the individual New York State recognizes the principle of local determination of health policies by its laws based on permission in distinction from

mandation

The operation of the ancient economic law that services cost money led the great health organizations to undertake a survey of the costs of medical care the most important one being that by a national committee which conducted investigations over a period of five years and made its final report on November 29 1932 (See the New York STATE JOURNAL OF MEDICINE, Dec 15, 1932 page 1432) A leading recommendation of the committee was the adoption of the principle of health insurance especially its voluntary forms The immediate object of health insurance is to provide a fund by which the insured sick person can secure medical treatment. The report of the committee has ever since been a leading subject of discussion in the incdical journals of the sev

eral state societies, and in their meetings, the general conclusion being that a county society may

adopt a plan of its own derising

New York State, in 1929, had anticipated the adoption of this principle by enacting the Welfare Law which was mandatory in its provision that the local welfare officials should provide medical service for those who otherwise could not obtain it, but the law was permissive in its administrative provisions, leaving the county to determine whether to continue the ancient system of an overseer of the poor in each township or to centralize all relief in a county commissioner, and also leaving in the lay officials the decision whether or not to give the service to any particular individual, and how much to pay the doctor for his services. Some county medical societies in New York State had taken definite action and assumed the leadership by seeking consultations with the welfare officials, and making agreements regarding authorizations for treating the sick and the fees to be paid. It was a revolutionary idea that the doctor should be paid by the community for treating the sick poor, and the physicians in only a few counties had been able to develop administrative systems that were satisfactory to the doctors and the officials However, the participation of both the Federal and the State governments in the relief system is compelling the physicians in each county to devise new principles and rules that shall control their relations to the welfare officers

The problem of the relation of physicians to welfare officials is the dominant topic of discussinn today in every medical society. The decision lies with each county society. The officers of the State Society will always be ready to give advice, but the fitting and adaptation of the system to the local officials must necessarily be the work of the local physicians acting through the county medical societies

There is abundant common ground on which physicians and welfare officials can meet is a mutual recognition of the need for the medical service, of the willingness of the physicians to give it, and of the intent of the law that the community shall provide it. The principal prob lem that is left is that of giving authorization for the service and of paying the doctor for it. An agreement can always he reached when one party has what the other must have, and the second party has the means to pay for it

The dominance and acuteness of the present economic problem does not indicate that physicians are neglecting those problems which for merly received their major consideration solution of one difficult problem develops a habit and capacity of meeting conditions as they arise, and points a way by which other problems may be solved



MEDICAL PROGRESS



The Indications for Evipan-Sodium Anesthesia.—Eugen Kobel says that for brief operaations, not requiring more than 10-15 minutes, evipan-sodium offers the ideal form of general The patient sinks comfortably anesthesia. into a quiet sleep without any of the preliminary disagreeable sensations attendant upon the use of most general anesthetics. Its use should, however, be limited to interventions performed within hospital walls, since in a few cases a period of violent unrest has followed the narcosis after the lapse of 15 or more minutes. Among Kobel's first ten cases there were four which presented intermediate states that required forcible restraint To determine the time limits within which anesthesia is complete, a breast amputation and a total vaginal extirpation were carried out, 10 c.c. evipansodium being injected intravenously in each case. In the breast amputation, which required 35 minutes, the patient remained perfectly quiet for 22 minutes, after which violent struggling began that proved a serious handicap to the surgeon, although the patient suffered no pain and had no memory of it afterward. The motor excitation concerned chiefly the leg muscles. No other anesthetic was given, and the operation was successfully concluded despite the hindrance offered. In the vaginal operation the struggling began after 35 minutes, and continued during the 50 minutes of the procedure. In this case too there was no memory of the unrest, which lasted two hours after the end of the operation. An hour and a half later the patient awoke from a peaceful sleep, in excellent condition and unaware of having struggled. One patient who underwent an excision from the portio had double vision upon awaking; after further sleep, she awoke with normal vision, and with no memory of the operation, but full memory of the double vision. Such cases as these make it evident that with patients who are psychically labile, and who present a ready excitability of the central nervous system care should be taken not to prolong the operation unduly nor undertake the administration of evipan-sodium in office practice. As a basis for the introduction of ether this new anesthetic is ideal, but it should not be given with a view to saving ether, since it is impossible at the present time to know just when its exciting action will set in. One should not administer it for more than 5 to 8 minutes before beginning the ether narcosis; when given in this way, it relieves the patient from all the unpleasent subjective feelings that the second form of anesthesia might produce. When used alone, it is especially indicated in dislocations, care of fractures, opening of abscesses, furuncles and felons, nail extractions, examination requiring an anesthetic, and so forth. — Deutsche medizinische Wochenschrift, June 30, 1933.

Angina Pectoris, Spasmodic or Paroxysmal.—John Hay, writing in the Practitioner, June, 1933, cxxx, 6, says that two factors clearly involved in anginal pain are the amount of work performed by the heart and the quantity of blood flowing through the coronaries. If the work exceeds the supply there is a relative ischemia and pain. Another factor is the glycogen metabolism of the myocardium and the occurrence of nutritional disorders. The essential characteristic of spasmodic angina is that the substernal discomfort or pain is increased in response to effort and is relieved by rest. When the pain is over the lower third of the sternum or xiphisternum it is often labelled "indigestion." In spasmodic angina the average expectation of life, excluding cases of coronary thrombosis, is about five or six years, though some patients far outlive this. A steady diminution in the amount of effort required to bring on pain is an index of depreciation. In the treatment of an attack, if the pain increases in spite of rest, one or more tablets of trinitrite should be chewed slowly; if these yield no relief, the inhalation of amyl nitrite is essential. If the vasodilators fail and the pain is intense, there is no drug comparable to morphine. Less severe attacks of flatulency are generally relieved by brandy or a strong carminative draught such as menthol 8 grains, spirits of ammonia, tincture of carduus compound, and tincture of ginger compound, of each 1 ounce. A mixture containing opium and chloral, given twice daily, undoubtedly diminishes the tendency to anginal attacks. Haste and hurry after a meal, particularly breakfast, should be avoided. In the general treatment reliance must be placed on a change of life rather than on drugs. A more leisurely life is the aim, but a life in which all vital interests are retained. Exercise is advisable as the heart muscle must be kept fit, one. of the best forms being walking. Meals should be small, the food simple and digestible. In those in whom there is an outstanding mental factor massive doses of ammonium bromide are undoubtedly helpful, 20 grains two or three

times daily, with the addition of 10 grains of chloral hydrate twice daily. Later luminal, ½ grain, and theominal, 5 grains, may be administered once or twice daily with advantage. Occasionally diathermy diminishes the number and severity of the attacks. It is best administered with one electrode placed over the sternum and the other between the shoulders. A suitable dose is from 800 to 1,500 milliamperes for 20 to 30 minutes two or three times a week. Shirley Smith recommends insulin and glucose in anginal patients, irrespective of the presence or absence of diabetes.

Chloride Disequilibrium in Operative Shock. -F. Legueu, B. Fey, Palazzoli, and Mile. Lebert, writing in the Bulletin de l'Académie de Médecine of June 27, 1933, say that their studies have convinced them that chloride disequilibrium is one of the main factors in operative and traumatic shock, and that excess of chlorides in the tissues is at the root of the decrease in blood chlorides observed under conditions of shock. The hypochloremia following operation is more or less pronounced; it lasts 3-4 days ordinarily, after which the chloride content of the blood rises to normal, provided serious accidents do not occur to prevent it. It is nearly always associated with a certain degree of uremia, for which it seems to be responsible. While vomiting, diarrhea, and profuse sweating might explain it occasionally, it is present also in certain cases in which none of these phenomena has been observed. Another striking fact is that the urinary chlorides too are dimished in operative shock, falling to 2 gm., 1 gm., or even 0.50 gm. per liter; and this diminution is still evident 8-10 days after operation. It outlasts the phase of hypochloremia and is the more grave in that it coincides with a marked oliguria. Thus we observe the paradox of a diminution of ehlorides in the blood and in the urine at the same time, showing that the organism is not eliminating its chlorides. If these salts are in neither the blood nor the urine, where are they? In animals artificially traumatized and then killed on the 2nd, 3rd, or 4th day, the authors demonstrated that the ehlorine is fixed in the organ traumatized, where its quantity is found to exceed that of the symmetrical organ, being generally more than double the latter. In one case the quantity exceeded even the amount of blood ehloride that had been present before the traumatism. This excess in the tissues is purely local, and corresponds exclusively to the traumatic focus. It is almost immediate, being found after a few hours, and is still present after 18 days; it then disappears, too gradually to permit of a graph being made. Its degree is proportional to the importance of the traumatism.

In traumatic shock following severe muscle contusion, a tissue chloride content amounting to 4 gm. was observed, confirming the authors' researches, which had been pursued for a period of six months. If it is not possible to prevent the chlorides from being called into the tissues, it is at least possible to reestablish the lost balance by the introduction of large amounts of chloride into the bodily economy and thus to put the patient on the road to health.

A Room-Sized Respirator.—Philip Drinker and James L. Wilson describe the construction and use of a respirator which is so large that several patients can be treated at the same time and into which nurses and physicians can comfortably enter to care for the patient. With the usual type of respirator ordinary nursing care is exceedingly difficult, and no dependable physical examination, especially of the heart and lungs, can be made. It is also evident that in a severe epidemic of poliomyelitis, even with a large number of respirators available, only the most serious cases could be treated and those for periods just long enough to tide them over the most severe stage of their illness. For these reasons, as well as for the economic advantages of group treatment of paralyzed patients, the authors were stimulated in their effort to develop the "respirator room." This is built of steel plates, and is so constructed that four patients, in double tiers, can be cared for. The size of the machine can be varied without affecting materially the cost either of construction or of operation. The room is provided with a number of small windows to allow unobstructed view of the patients' bodies from the outside and of the patients' heads from the inside. Communication between persons inside and those outside the room can be made without raising the voice. The patient receives the same sort of nursing and medical care as he would in a hospital bed. Any desired combination of pressures and breathing rates is obtainable by a blower and valve arrangement. The blower is driven by a five-horse power motor, and is a standard type of unit used widely in industry; it is installed in the basement with various other mechanical equipments of the building. Patients can be placed in the respirator room with greater speed than in the small ma-There is no difficulty in maintaining respiratory rates varying from 10 per minute to 50, and at any pressure up to 35 cm.

The authors point out that, so far as theory

The authors point out that, so far as theory and clinical observation can be relied upon, the greatest recovery of paralysis takes place if the museles are given maximum rest, so that a patient with respiratory paralysis due to poliomyelitis, should be given aid with the respirator as early, as continuously, and for as long a time

as is possible. Patients with only partial paralysis of the respiratory muscles, who can still breathe sufficiently well to carry on pulmonary ventilation adequately, probably benefit considerably by the rest that treatment in a respirator gives them.—New England Journal of Medicine, August 3, 1933, ccix, 5.

Observations on Lichen Urticatus.—Hugh Gordon, writing in The Lancet, July 15, 1933, ccxxv, 5733, states that while lichen urticatus is one of the commoner skin diseases of children, occasional difficulty in the differential diagnosis of scabies may arise, particularly where the lichen urticatus papules become secondarily in-Borderline cases may resemble the prurigo of Hebra. Possibly the two conditions are simply variants. Urticaria as seen in the adult is rarely met with in children, but in both adults and children the conditions are examples of the skin response which is exactly reproduced experimentally by the action of histamine, and which fall into the group of allergic phenomena. Lichen urticatus has usually been regarded as due to some dietary indiscretion. There are reasons, however, for supposing that the alimentary factor is by no means solely responsible. One factor named by all investigators is heat, the condition being more common in the summer months. In a review of 50 cases during the past year the author has been impressed by the possibility of a nervous factor in many cases; 50 per cent of the children in this group were of decidedly nervous temperament. Changes of habitat seemed in some cases to bring on attacks. The exanthemata figured as a very real predisposing factor in ten cases. In 10 per cent the first attack was said to have followed an accident or shock. In the treatment of the cases four patients were admitted to the hospital; these all rapidly improved, fresh lesions ceasing to appear soon after admission. All patients received a bromide mixture containing 1 to 2 grains of ammonium bromide for each year of life, given three times a day, with the use of a calamine and phenol lotion. This treatment gave unexpectedly good results, though it could not be claimed that all patients were rapidly cured. As an adjuvant in some cases, particularly in pale and debilitated children, general carbon-arc baths appeared to be of great value. The results of the bromide treatment were definitely better than those obtained with other drugs. That a skin lesion in a child said to be "nervous" should improve upon the administration of bromide is obviously very slender proof that such a condition should be considered a "dermatological The observations presented in this paper suggest, however, that in some cases a psychological factor, in the widest sense of the term, may play a greater part than has usually been admitted.

A New Treatment for Chronic Arthritis of the Hip; Forage of the Epiphysis of the Femur.—In the Acta medica scandinavia of June 27, 1933, Jacques Graber-Duvernay says that he has employed Louis Duvernay's forage of the epiphysis of the femur in 13 cases of chronic arthritis of the hip. The center of the head of the femur is first found by means of fluoroscopy or radiography. Under careful local anesthesia no difficulty is encountered in reaching the external aspect of the femur through an incision 8-10 cm. long. The crest which forms the lower limit of the great trochanter is easily rcognizd by the finger. At a point 1 cm. below this, and halfway between the anterior and posterior aspects of the femur a gimlet 6 mm. in diameter and 12-18 cm. long is made to penetrate the bone in the direction of the head. When the instrument enters the spongy tissues the patient feels a sharp pain, which may be attenuated by a preliminary injection of a few drops of novocaine. The gimlet must be driven directly into the head of the femur, as nearly as possible into its cen-The nearer the center it passes, the more pronounced will be the modifications of the circulation which condition the good result. After the forage, a splinter of dead bone 5-7 cm. long and 5 cm. in diameter may be inserted in the opening, though this is not indispensable, its chief value being that it serves as a means of orientation for the correctness of the direction. when the postoperative radiogram, which is of capital importance, is taken. In its absence. lipiodol may be used for the same purpose, being injected through the trapanation orifice. Within 3 days, with impressive regularity, the pain disappears or is at least greatly ameliorated in nearly every case, only the line of incision being still sensitive. This improvement has been maintained to date, over 18 months in the author's earliest cases. A gonalgia appears on the 2nd day after operation, which disappears after 6-8 The patients can begin to walk on the 12th to 15th day. The action exerted by forage upon the lesions is explained as follows: It is well known that these lesions, consisting of rarefaction of the bone and of osteophytic proliferation, are due to a phenomenon of a vasomotor order: a hyperemia which causes a process of osteolysis and a local calcium mutation. Forage produces vasomotor modifications of the circulation which can be studied by the oscillometer. The new element that it introduces appears to be a lowering of the oscillometric index of the side operated on, in the month following operation. But all traumatism (and the operative act is such) causes a hyperemia, revealed by increasing the oscillometric index. It therefore appears logical to assume that during the first weeks following operation a vascular disequilibrium is produced that results in hyperemia, but that at the end of that time the vasomotor equilibrium is reestablished in the direction of a rarefaction of the blood that is, a vasoconstriction, or an arrest of the evolution of the pathological process

Perforation of the Stomach, The Sign of "Burning Drops Falling into the Abdominal Cavity "-Attention is drawn by Ed Juillard to a sign of gastric perforation which, so far as the author knows, has not been mentioned in It was described by a patient as the literature a horrible sensation of "burning drops falling into the abdominal cavity," or of "a jet of burning liquid being poured from a cruet into the howels" The patient in question, who had not exhibited the classic symptoms of perforation, was found at operation actually to have a perforation on the lesser curvature of the stomach There was excruciating pain localized not only in the region of the abdomen and liver but also in the back. If the author had attached to this expression of the patient's the importance that it deserved, the diagnosis might have been established immediately, before the appearance of a boardlike rigidity and other characteristic symptoms. As it was, the presence of intense pain over the gall bladder led to a tentative diagnosis When, 2-3 hours later, a genof cholclithnasis eral muscular rigidity was observed, giving the impression of a boardlike hardness to the entire abdomen, with pulse accelerated despite a normal temperature, the suspicion of a perforation was naturally aroused. The patient had not admitted a past history of a stomach affection, he had never had hematemesis, melena or pains after eating and it was not until after his operation that he mentioned that a small meal had often had a soothing effect upon cramps. The experience gained from this case has led the author to question other patients with reference to this symptom of a burning drop sensation, and has received enough affirmative answers to lead him to believe that the sign is pathognomonic of a perforated gastric or duodenal ulcer, the acid gastric juice passing through the perforation into the abdominal cavity, causing the patient a writhing agony at the point of incidence appears therefore to have an importance of the first rank for establishing a diagnosis of the beginning of perforation, when the classic signs may be entirely absent. Possibly it is less rare than might be supposed. It is reported in the behef that other physicians may on occasion elicit, by questioning the admission of a similar sensation from patients suffering with an undiagnosed abdominal condition, and may thus be led to suspect a gastric perforation-Schweizerische medizinische Wochenschrift, July 29, 1933

The Biochemistry of Asthmatic Conditions

—G H Oriel describes his investigations with
reference to irrinary proteose in asthmatic
patients He says it has become obvious that

asthmatic subjects are divisible from a biochemieal standpoint into two main groups (a) a true allergic group in which skin tests to foreign protems are positive, and (b) a group in which in positive skin tests are demonstrable. It has been slimwn that so-called proteose is present in normal urine. In the asthmatic the quantity varies from time to time, but is greatly increased during the In the present study Oriel has succeeded in the separation of normal proteose into one fraction, and of asthmatic proteose into three fractions, thus providing a method of distinguishing between the two substances. The three fractions isolated from an asthmatic during the attack and the proteose fraction from a normal person were severally tested on a series of protein sensitive astlimatics. In no case was a positive reaction obtained with the normal proteose Approximately the same results were obtained with each of the three fractions as with the whole proteose from the asthmatic individual. Oriel then attempted to ascertain which portion of the protein molecule was the one giving the skin test in subjects susceptible to egg. The work of Avery and Heidelberger suggested that it might be in the nature of a carbohydrate Using Rivington's method of isolating the carboly drate portion of serum albumin Oriel isolated a carbohydrate substance which chemically was glucosamine himan-This substance was found to be quite mert in hoth normal and egg-sensitive persons but it was noticed that the intermediate products of the alkaline Indrolysis of egg gave positive tests in It was therefore deteregg-sensitive persons nined to make intermediate products of digestion using trypsin. This substance gave negative reactions in normal subjects, while six egg-sensitive persons all gave positive reactions. It appears that, although the specificity of a protein probably depends on its carbohydrate moiety yet it is necessary for a linkage of aminoacids to be present before a positive skin test can he obtained This work suggested a new approach in the treatment of asthma Gradually increasing doses of proteose were given by subcutaneous injection to 70 asthmatic patients. The initial dose was a very small one, Ol cc of a dilution ten times weaker than the lowest dilution of autogenous urmary proteose which gives a positive skin test. and this was repeated at weekly intervals, increasing by 01 cc until there was a reaction or signs of improvement. Of 44 protein sensitive persons 23 per cent were rendered symptom-free 46 per cent were much improved, while in 8 per cent there was no change Of 26 nonproteinsensitive persons 8 per cent became symptomfree, 19 per cent were much improved, while in 54 per cent there was no change It seems that the protein sensitive asthmatic is much more likely to benefit from treatment with his urinary proteose than the nonprotein-sensitive asthmatic ---The Lancet, August 19, 1933, ccxv. 5738



LEGAL



MALPRACTICE—FOREIGN BODY

By Lorenz J. Brosnan, Esq.

Counsel, Medical Society of the State of New York.

It is always interesting to read cases decided in other States on the subject of malpractice. Especially is this true in cases where it is claimed that a foreign body was permitted to remain within the person of the patient by the operating surgeon. Not all jurisdictions in this country are in accord upon the legal situation presented in a case of this kind. A recent case involving a retained foreign body decided by the highest court of one of our Western States will, we believe, be of general interest to the profession.

A man had been suffering for two or three years from a condition of hernia, and made arrangements to be operated upon by a certain Dr. H, who was to be assisted by a Dr. E. The operation was performed on October 5th at a small private hospital. Subsequent thereto there was some drainage of pus, and on November 4th an abscess of the scrotum was incised by Dr. E. The wounds did not close until November 28th, and the patient remained in the hospital until the 13th of December.

Suit was brought against the two doctors charging them with negligence in leaving and permitting to remain inside the plaintiff's abdomen a piece of towel or surgical gauze. It was claimed that the said foreign substance caused an infection, which required the plaintiff to be long confined in the hospital, and as a result he claimed to have been disabled, in addition, after his discharge from the hospital. The defendants generally denied in their answer all charges of negligence.

When the case came up for trial, the principal witness whom the plaintiff called was a Mrs. M, who had been in charge of the hospital where the operation was performed. She was not a registered nurse, but had been for some years practicing as a trained nurse, looking after the patients in the hospital herself with some additional help. She testified that she had prepared the patient for operation, but that she was not present during. the operation and knew nothing about it. She said that she had been in daily attendance upon the patient postoperatively with the doctors, assisting with dressings and recording the progress, medicine, temperature and the like. She asserted that about ten days after the operation a "stitch abscess" developed, that

drainage of that abscess continued until October 22nd, when she claimed a retained sponge was removed. Mrs. M described the said occurrence and told that in the presence of Dr. E, she observed something foreign within the opening of the wound that looked like cloth and not like a sponge, and that she took a hemostat and pulled it out. She testified that it looked like a towel about a foot wide by two feet long, such a towel as are used as screens for operations. Her notation upon the record, however, was "Retained sponge removed." She stated that the piece of material that she had removed had been subsequently destroyed by her. She described in detail the daily record of the patient from that day down to the date of his discharge from the hos-On cross-examination she described the careful methods in use in her hospital for the sterilization of all materials to be used in the course of operations.

The plaintiff's examination of the defendant Dr. H. (which was permitted under the practice in that State as part of the plaintiff's case) elicited from the doctor the testimony that it is bad practice for a surgeon to leave a piece of towel within a wound. Dr. H. added, however, that a foreign substance, such as a towel, if sterile would not cause pus when left in a wound. Dr. E. stated on similar cross-examination that ordinarily, after an operation for hernia, without complications, a patient is able to leave the hospital within thirty days. The testimony of the defendants merely consisted of a re-direct examination which brought out their statement to the effect that no towel was left in the incision, but that gauze drainage had been left in the wound to protect against pus, and that the latter was good practice.

No other medical testimony was taken, and a motion was made at the conclusion of the evidence on behalf of the plaintiff, for a directed verdict in favor of the defendants. The principal grounds urged for the motion were that if any foreign substance was left in the patient's body following the operation, there was no proof that it was so left as the result of any negligence on the part of either defendant; further that there was no competent proof that any damages or disability suffered by the plaintiff were in any way attributable to anything done or omitted to be done by the defendants. The motion was granted and judgment directed in favor of the defendants.

An appeal was taken from the judgment, and the highest court of the State affirmed the ruling of the lower court. In deciding the appeal, the appellate court carefully went over the testiniony that appeared in the record, and unde clear the reasons why the pluntiff had failed to prove a case sufficient to justify a jury to award damages to the plaintiff. As the court said.

"In the case at bur, the claim is that infection resulted from the alleged failure of the defendants to remove a towel or surgical gauze from the wound made in plaintiff's abdomen in the course of performance by them of the operation for which they were employed. This infection, it is charged, caused the damage for which plaintiff seeks recovery. Necessarily, under the authorities, the burden rested upon plaintiff to prove that a towel or surgical gauze was negligently left in the wound by the operating surgeons. The testimony of Mrs. M is rehed upon to establish this fact.

"Dr H, who performed the operation, denied that any towel was left in the incision, but says that necessary gainze drainage was left in it, as he and Dr E feared pus, and that this was good practice in this case. He had previously testified that to leave any foreign substance in the wound was bad practice in a large percentage of cases."

"As the evidence in the case stood, if Dr H's statements relative to the gauze be regarded as true, then there was no proof of negligence in leaving the foreign substance in the wound Mrs M's oral testimony would seem to be in conflict with the statement in her memorandum jury would have been obliged to guess whether a towel or sponge was removed from the wound Only by disregarding the written memorandum and by giving such oral testimony its full value in conjunction with Dr H's qualified statement as to what constituted bad practice in most instances, could it be regarded as sufficient on the point for submission to the jury In this state of the reeord, and in view of the rule that, 'where the evidence is as consistent with the absence as with the existence of negligence, the ease should not be left to the jury, we are inclined to view it as at least doubtful whether, all things considered, the

burden of proof was sustained in this respect"

The court went on to point out that whether or not it could be assured that the plaintiff had made out a prima facie case of negligence, the proof was entirely lacking in testimony to show that any injury was or could with reasonable certainty have been caused by the alleged negligence. The opinion of the court said in part

"There remains the question of whether the plaintiff upheld the burden of proving the proximate causal connection between the alleged negligence and the damage suffered. The testimony of both Dr. L. and Dr. H. stands undisputed in the record that a sterile towel lelt in the wound would not cause infection—the admitted factor admittedly the source of the plaintiff's delayed recovery and most of the other ill effects following the operation

"It is contended by plaintiff in error that there was no proof that this towel-assuming that the article removed was a towel-was sterile this contention we are not inclined to agree der the rule governing the direction of verdicts hereinbefore given, deducing such inferences from Mrs M's testimony as may reasonably be drawn, we think it was fairly established that the towel in question was sterile. Without contradiction, she stated that hand towels were not used. and the towel removed from the wound was one such as is put up in the hospital in packs for operations, that these towels were employed as a sereen, bound and put lengthwise and crosswise (evidently about the operative area), and that it was a fact that all dressings used in the operation were sterile. It would hardly seem reasonable to conclude in view of her testimony as to the eareful sterilization of all dressings used in connection with the operation, that the towels employed in it were not sterilized, but that only the sponges furnished by her were so

"The proof in this case at bir was that sterilized cloths in the wound would not cause infection. In view of that proof and the other elements in the case, it therefore devolved upon plaintiff in order to carry the matter to the jury, to produce evidence that the towel was unsterile. This was not done. Indeed as we think, the evidence reasonably interpreted was to the contrary."

AMBULANT TREATMENT OF HERNIA

A doctor who had for several years made a practical study of ambulant treatment of hernia by injection was consulted by a middleaged man with respect to the possibility of treating a hernia from which he was suffering. The doctor's treatment consisted of an

injection of a very small amount of a certain preparation into the inguinal canal through the scrotum. The treatment necessitated the application by the doctor of a tight fitting truss which it was necessary for the patient to wear in order that the injection treatment could take effect. The single injection was administered to the patient and the truss fitted to him. He was supposed to return for further injections.

A few days later the patient communicated with the doctor, complaining that he had returned home and the discomfort from the truss had been so great that he could not wear it, and further claiming that the doctor had spilled some of the fluid on his scrotum causing him a great amount of pain. He demanded that the doctor pay him a sum of money for the alleged suffering, and since the doctor would not comply with his request he instituted a law suit, claiming negligence in the doctor's treatment.

The case came on for trial before a judge and jury and upon the trial the plaintiff produced photographs of his private parts which purported to show that an inflammation had developed subsequent to the injection by the doctor. On cross-examination the plaintiff revealed that upon returning to his home he had applied some disinfectant to his scrotum at the point of the injection which was apparently the cause of any discomfort that he might have suffered, rather than the truss or the injection made by the doctor. The trial judge sent the case to the jury who returned a verdict in favor of the doctor, thereby completely exonerating him of the charges brought against him by the patient.

N. Y. State J. M.

October 1, 1933

FRACTURE OF PELVIS CLAIMED TO HAVE RESULTED FROM DELIVERY

A woman about 31 years of age consulted the defendant doctor complaining of soreness in her lower left abdomen. His examination of the patient disclosed that she was four months pregnant with a sensitiveness and tenderness on the left side to the left of the uterus. She was complaining of pain which the doctor attributed to low grade chronic inflammation of the left tube and ovary. She had had an induced abortion several years previous and at that time it has been necessary for her to be operated upon for the removal of placental tissue. The doctor rendered to the patient prenatal care and in due course she entered the hospital to be delivered of her child. The delivery was made under general anaesthesia with the aid if a low forceps and was relatively simple, the forceps being used for only three minutes and no particular force being necessary to deliver the child. The child was abnormal and died several days after birth from congenital encephalitis. The patient remained at the hospital for about three weeks subsequent to the delivery and was seen practically every day by the doctor. She complained of increased amount of pain in her left side which was accompanied with a rise in temperature. The doctor, after examining her, diagnosed this condition to be an exacerbation of the old inflammation in the left tube and ovary. His record diagnosis of this condition was salpingitis. A few days later the pain gradually diminished in severity, her temperature came down to normal and she felt better, except

that she complained that when she moved her legs she had pain in her abdomen. Finally she left the hospital against the doctor's orders and he never heard anything further about the matter until suit was instituted against him, charging him with malpractice.

The plaintiff's claim was that in delivering the woman of a child the doctor had improperly applied his instruments so that he fractured her pelvis and displaced the coccyx. The case came on for trial and testimony introduced on behalf of the plaintiff disclosed the plaintiff's contention to be that in the delivery the doctor had caused three cracks in the body of the left pubic bone. X-rays were submitted in support of this contention which were examined by competent x-ray men on behalf of the defendant. The said witnesses for the defendant testified that they were unable to detect any indications of a fracture of the pelvis. The testimony as to the coccyx showed that only one segment was involved and that the claim was that it was displaced laterally only slightly.

The case was tried without a jury and after all the testimony had been put in the court directed a verdict in favor of the defendant.

An appeal was taken from the judgment cntered in favor of the defendant to the Appellate Division on the grounds that the Judge's verdict was contrary to the weight of the evidence. The Appellate Division. however, refused to disturb the ruling of the trial judge and the matter was finally terminated in the doctor's favor.

NEWS NOTES



THE CONFERENCE OF STATE SECRETARIES AND EDITORS

The annual conference of the secretaries and editors of the State Medical Societies, conducted under the auspices of the American Medical Association, was held on Friday and Saturday, September 22-23, 1933, in the Palmer House, Chicago, Ill.

About one hundred delegates were present from the several state societies; those representing the Medical Society of the State of New York were;

Dr. Peter Irving, Assistant Secretary

Dr. Orrin Sage Wightman, Editor-in-Chief

Dr. Thomas P. Farmer, Chairman of the Committee on Public Health and Medical Education; and

Dr. Arthur W. Booth, Trustee of the American Medical Association.

The meeting was called to order by Dr. J. H. J. Upham, of Columbus, Ohio, Chairman of the Board of Trustees of the American Medical Association. Dr. Walter F. Donaldson, of Pittsburgh, Pa., Secretary of the Medical Society of the State of Pennsylvania, was chosen Chairman.

Meetings were held on Friday morning and afternoon, and Saturday morning, with a luncheon on Friday noon, and a dinner in the evening.

The program of the conference was of a practical nature and on a series of subjects of general interest to the medical profession of all the states.

The dinner on Friday evening was a "gettogether" evening held in the Trustees Lounge of the Hall of Science in the Century of Progress building at the Chicago Fair, under the auspices

of the Cook County Medical Society.

After the luncheon Dr. Dean Lewis, President of the American Medical Association, spoke on the subject, "The Quality of Medeal Care," pointing out some modern improvements in the education of medical students, so as to make them better practitioners of medicine. He mentioned the rise and fall of theories and principles of practice which are inseparable from medical progress, mentioning as an example the theory of focal infection and the necessity that doctors who have graduated ten years ago should keep themselves up-to-date in the subject.

Dr. Lewis also made a plea that doctors should learn and practice the most modern of bedside examination, so as to supplement the information given by the laboratory technician who does not see the patient. The most satisfactory doctor is he who can give efficient treatment on the basis of bedside examination.

Dr. F. C Warnshuis, Secretary of the Michi-

gan State Medical Society, discussed a survey of medical services of the State of Michigan, which have recently been made by the State Society and which is described in the New York Stat Journal of Medicine of September 1, 1931 page 1061.

Dr. Warnshuis discussed some of the developing trends in the practice of medicine and in that attitude of the people toward their physicians and the growing expectation that medical service wibe provided at public expense, including the in surance of hospital care on a voluntary basis.

The address of Dr. Warnshuis was intensivel discussed by several members including Dre Wightman of New York, Morrison of New Jer sey, McCormack of Kentucky, Biering of Iowa Taylor of Texas, and Sullivan of New Hamp shire.

Dr. Olin West, Secretary of the American Medical Association, summed up the genera opinion of the medical profession when he said that the fundamental principle of the practice o medicine was a contact of an individual doctor with an individual patient; and that insurance of health and of hospital care, or any other form of impersonal medical service would be unsatisfac-

tory to both doctor and patient.

Dr. E. A. Meyerding, Secretary of the Minnesota State Medical Association, described the exhibits, both scientific and commercial, at the annual meeting of his State Association, May 22-24, 1933. The exhibit booths were arranged so that there was room for a demonstration of their specimens and wares; and space was allowed for a considerable number of physicians to see and hear readily. The scientific sessions were dismissed for an announced hour, so as to enable the physicians to attend the exhibitors of both the scientific and commercial departments.

Dr. W. J. Biering, of Des Moines, Iowa, President-elect of the American Medical Association, discussed the "Education of Physicians in the Undergraduate Medical School," describing the great over-supply of doctors in the United States as compared with those in other countries, as is

shown in the following table:

United States . 1 to 700 inhabitants England . . . 1 to 1420 " France . . . 1 to 1690 " Sweden . . . 1 to 2890 "

Dr. Biering suggested 1 to 1200 being a fair distribution of doctors. Sweden has legislated to keep the number of doctors down to 1 to 2800,

and to control the admission and education of the students, but such a procedure would not be possible in the United States. However, he suggested dropping the lower one-third of each first year

Dr. J. E. Tuckerman of Cleveland, Chairman of the Committee on Medical Defense of the Ohio State Medical Association described the plan of defense against civil malpractice suits. One peculiar condition of assuming the defense of a physician is that he shall not have sued to collect his bill within one year of the termination of his services.

Dr. Thomas P. Farmer of Syracuse, Chairman of the Committee on Public Health and Medical Education of the Medical Society of the State of New York, described the postgraduate system of medical instruction conducted by the Medical So-

ciety, and enumerated some of the results as follows:

N. Y. State J. M. October 1, 1933

Sustained interest in county society activities Direct help to individual doctors

Increased use of laboratory methods and their interpretation

An increase in the amount and breadth of medical reading and study.

General improvement in the state of medical practice.

The Conference had a great value in promoting the acquaintance of the secretaries and editors, on whom the societies depend the most largely. Medical problems are universal in their nature and scope, and the exchange of ideas by officers from all sections of the United States promotes a unity of action and standardization of method throughout the nation.

SEVENTH DISTRICT BRANCH

The Twenty-Seventh Annual Meeting of the Seventh District Branch of the Medical Society of the State of New York, was held on Thursday, September 21, 1933, in the College Auditorium on the River Campus of the University of Rochester. The registered attendance was 251, and the doctors were unusually cordial in their attitude toward one another, and responsive to the speakers on the program.

The Seventh District Branch is composed of eight county societies, whose membership was as follows:

Cayuga, 63
Livingston 32
Monroe450
Ontario
Seneca 22
Steuben 72
Wayne46
Yates
Total

The morning session was opened at 10:30 o'clock by the President, Dr. James M. Flynn, who introduced Hon. Charles Owen, Comptroller of the City of Rochester. Mr. Owen welcomed the physicians and referred to the aid which they render in prolonging the years of usefulness of those long experienced in the practical affairs of business and civic life.

The following officers were elected at the

business session:

President, Alfred K. Bates, Auburn; First Vice-President, Thomas W. Maloney, Geneva; Second Vice-President, Afred W. Armstrong, Canandaigua; Secretary, H. S. Brasted, Hor-

nell; Treasurer, E. T. Wentworth, Rochester. A noon luncheon was served in the students' dining hall of the University.

The State Institute for Malignant Disease sponsored an exhibit of photographs and x-ray

films illustrating its cancer research.

Dr. F. H. Flaherty, President of the Medical Society of the State of New York, gave a brief address urging the officers of the County Medical Societies to confer with their county welfare officials in order to reach agreements in regard to supplying medical service to the poor and those who cannot otherwise obtain it. Securing these agreements is of extreme importance to every County Society.

Five scientific addresses were listed, all of deep interest and great practical value.

Dr. Royal R. Sayers, Chief of the Industrial Hygiene and Sanitation of the United States Public Health Service, discussed the subject of silicosis; and the deleterious effects of silica dusts compared with the effects of other dusts. The specific effects of silica are the results of its solubility. Carbon, for example, is insoluble, and is therefore not toxic, although it may blacken the lungs with its deposits. But silica is slightly soluble, and has toxic properties in addition to the irritation of its mechanical presence in the tissues. Silica produces a characteristic fibrosis, and predisposes to tuberculosis.

Dr. Charles Gordon Heyd gave a talk, illustrated with lantern slides, on the subject: "The Mechanism and Clinical Interpretation of Jaundice." Dr. Heyd reviewed the source of the bile salts in the blood and the several mechanisms by which they are retained or

deposited in the tissues. The practical application of his address was a plea that doctors should bear in mind the physiology of jaundice and the various conditions that bring it about, such as vomiting leading to alkalosis, and diarrhoea leading to acidosis,-contrasting conditions which respond to appropriate treat-

Dr. Byrl R. Kirklin, of the Mayo Clinic, Rochester, Minnesota, gave an address on "The Diagnosis of Pulmonary Tuberculosis," with special reference to the peculiar field of

the x-ray. Dr. Arthur J. Bedell, of Albany, gave a talk on "Medical Ophthalmoscopy, the Connecting Link Between the Physician and the Specialist." Dr. Bedell showed photographs of the fundus of the eye in various diseases, using three stereopticons loaned by the Bausch and Lomb Company, and throwing three pictures on the screen simultaneously, in order to show contrasting conditions. He showed how the eye fundus may reveal conditions in their early stages while they are remediable. His talk was an argument for the use of the onlithalmoscope in two conditions:

1. In visual defects which are of rapid onset, often revealing kidney disease, lead poisoning, syphilis, or other serious condition.

2. In these same systemic conditions often revealing an eye disease in an early stage.

Dr. Fred H. Albee, of New York, spoke on "The Bacteriophage in Wound Treatment," tracing the history of the greater developments in the treatment of chronic infections of wounds through three stages:

The Carrell-Dakin method of irrigation

used in the World War.

2. The Orr method, or packing the wound with gauze impregnated with vaseline and leaving the material intact for days or weeks. 3. The application of bacteriophages to the

wound.

The first method depended on the constant application of an antiseptic to the wound and bacteria. The probable explanation of the second method was that the long presence of the packing in the wound permitted bacteriophages to grow in the wound.

Bacteriophages were first discovered in 1915, and about fifty varieties are known, each specifie for a single kind of germ. Doctor Albee's method of using them is to fill a wound eavity with a soft mixture of paraffin and vaseline, and to introduce the bacteriophages into the

wound daily through a eatheter.

A time schedule was followed, and every speaker began and ended on time.

PROGRAM OF THE FIRST DISTRICT BRANCH

The annual meeting of the First District Branch of the Medical Society of the State of New York will be held in the Grasslands Hospital (The County Hospital of West-chester County), in Valhalla, Westchester County, on October 11, 1933. The program is as follows:---

"The More Common 10:15---10:50 A.M. Cardiac Arrythmias; their Significance and Treatment," James F. Rooney, M.D., Albany.

Discussion—(ten minutes) Opened by Mil-

ton J. Raisbeck, M.D., New York,

11:00-11:35 A.M. "The Use of Quinidine Sulphate in Cardiac Arrythmias," Frederic C. Conway, M.D., Albany,

Discussion-(ten minutes) Opened by Fred

Holcomb, M.D., Kingston.

11:45-1:00 P.M. "Operative Clinics and Case Demonstrations in Chest Surgery," George C. Adie, M.D. Director of Surgery, Grasslands Hospital, and Assistants.

Luncheon Session 1:00-2:00 P.M. "State Society Problems," Frederick H. Flaherty, M. D., President, Medical Society of the State of New York. Daniel S. Dougherty, M.D. Secretary, Medical Society of the State of New York. Orrin S. Wightman, M.D., Editor, New York State Journal of Medicine.

2:00-2:35 P.M. "Motion Pictures Illustraing Normal and Abnormal Cardiac Mechanism and Electrocardiograph," Lewis M. Hurxthal, M.D., Lahey Clinic, Boston.

2:35—3:10 P.M. "Pulmonary Tuberculosis: Recent Types of Operation" (Illustrated), Howard Lilienthal, M.D., New York.

3:10-4:00 P.M. "The Management of Tuberculosis Cases Under Collapse Therapy" (Illustrated), J. Burns Amberson, M.D., New York.

Discussion-George C. Adie, M.D., John M. Nicklas, M.D., William G. Childress, M.D., of Grasslands Hospital Staff.

FOURTH DISTRICT BRANCH

The Twenty-seventh Annual Meeting of the Fourth District Branch of the Medical Society of the State of New York was held at Malone, N. Y., on Tuesday and Wednesday, September 19 and 20, 1933, at the Elks Club in that city.

The meeting began with a luncheon at the Hotel Flanagan attended by the officers of the Branch together with the Presidents and Secretaries and Chairmen of the Committee on Economics of the component County Societies. This conference was called by Dr. Raymond G. Perkins, President of the Fourth District Branch with the purpose of establishing a uniform fee table for treating welfare cases throughout the District. Views on the subject were expressed by various members from the different counties present, as well as by Dr. Frederick H. Flaherty, President of The Medical Society of the State of New York, and Dr. Joseph Lawrence, Executive Officer of The State Society. This Conference adjourned to be called again after the dinner at night.

The Scientific Session began at two p. m. at the Elks Club with remarks of welcome by Dr. R. G. Perkins, President, of Malone, N. Y.

The following papers were presented:

1. "Fractures and Dislocations of the Elbow," by Phillip D. Wilson, M.D., of Boston, Mass. This paper was illustrated by lantern slides and was a very exhaustive treatment of this subject and very profitable to all present.

- 2. "The Diagnosis and Management of Goitre," by Frank H. Lahey, of Boston, Mass. This paper was illustrated by slides and the subject of goitre was covered by Dr. Lahey in his usual searching and compressive manner.
- 3. "What the State of New York Plans to Do at Saratoga Springs," by Carl R. Comstock, M.D., of Saratoga Springs, N. Y. This paper was also illustrated and showed very interestingly what the State of New York had done and intended to do in developing this famous spring resort for the benefit of physicians and patients.

A rising vote of thanks was given to Drs. Wilson and Lahey for coming from Boston to present their two very interesting papers.

Before adjourning for the afternoon, Dr. Perkins extended the privileges of the Golf Club to those members or their wives present who might wish to play the course.

The Annual Dinner was held at the Hotel Flanagan at seven p. m. After a sumptuous repast, the following talks were given, the general subject being that of Medical Economics.

1. Address of Welcome. John W. Kissane, M.D., President of Franklin County Medical Society of Malone, N. Y.

2. "Some Thoughts on the Present Day Evolution of Medicine," by John Wyckoff, M.D.,

Dean, Bellevue Medical College, New York City.

3. "Why the County Should Compensate Physicians for the Care of County Cases," by Robert S. MacDonald, M.D., Plattsburgh, N. Y., Chairman of Economics Committee of Clinton County Medical Society.

4. "How Saratoga County Medical Welfare Is Handled," by Edward J. Callahan, M.D., Saratoga Springs, N. Y., President of Saratoga County Medical Society. This subject was discussed by the President of The Medical Society of the State of New York, Frederick H. Flaherty, M.D., Syracuse, N. Y.

An opportunity was then given for supervisors and welfare workers who were present to ask questions, but none took advantage of the invitation.

An adjourned meeting of the noon conference was then held at which time it was moved and carried that the President of the Fourth District Branch appoint a committee representative of the county societies of the District which committee would meet at a later date and consider the question of a fee table.

A morning session was held on Wednesday, September 20, 1933 at nine a. n., in the Elks Club.

At this session the following papers were presented.

- 1. "The Commoner Diseases of Colon and Rectum," by G. Gavin Miller, M.D., of Montreal, Canada.
- 2. "The Management of Persistent Occiput Posterior Position on Labor. With motion picture showing the thecnic used," by William M. Mallia, M.D., Schenectady, N. Y.
- 3. "The Diagnosis of Brain Tumors," by Wilder G. Penfield, M.D., Montreal.

A vote of thanks were given the speakers, and also to the Elks Club for the use of the rooms.

The Twenty-seventh Annual Meeting adjourned at noon.

The Fourth District Branch is located in the northeast corner of the State, and comprises ten County Societies whose membership is as follows:

Clinton	. 29
Essex	. 19
Franklin	. 51
Fulton	
Montgomery	. 52
St. Lawrence	61
Saratoga	
Schenectady	33
Warren	
Washington	
-	
Total	512

Sylvester C. Clemans, M.D., Secretary.

PROGRAM EIGHTH DISTRICT BRANCH

The Twenty eighth Annual Meeting of the Eighth District Branch of the Medical Society of the State of New York will be held on Flursday, October 5 1933, in the Cataract House, Niagara Palls N Y, beginning at ten o'clock by the morning.

in the morning The program is as follows
10 A M— Timely Economic Issues," by
Charles II Goodrich, M.D., Brooklyn, N. Y.
Discussion opened by Edward E. Haley, M.D.,

Buffalo

11 A M — "A Study of Diabetic Deaths from Autopsies" by Ivan Hekimian M.D. Buffalo, and Samuel A. Vogel M.D., Buffalo. Discussion opened by Byron D. Bowen, M.D., Buffalo. 12 M -Laurcheon and Introduction of Guests

1 30 PM—Business Meeting Election of Officers

2 P.M.—"What Every Doctor and Dentist Should Know About Cancer," by Joseph C Bloodgood, M.D., Baltimore Md

3 P M—'Advances in Cancer Research The relation to enzymes in cancer, and research in the mechanism of radiation effects," by Ellice Me-Donald M D, Philadelphia Pa Discussion by Burton T Simpson M D Bernard F Schreiner, M D, Louis C Kress, M D, and Herbert A Smith M D Buffalo

DUTCHESS-PUTNAM

The regular meeting of the Dutchess-Putnam Medical Society was held September 13, 1933, at Wassaie State School, Wassaie, N Y

The meeting was called to order by the Vice-President, Dr A W Thomson at 400 PM after inspection of the school and hospital. The following candidates were elected to membership

Dr Lotts D Goldberg—Pouglikeepste N Y Dr Reginald Berry—Stanfordville N Y

The following committee was appointed to prepare suitable resolutions for the late Dr W T Rivenburgh -Drs Sobel, J Newton Boyce and R H Breed

Scientific Program

Dr Steblen presented a case of juvenile paresis Dr Pense presented three cases of infantile cerebral palsy occurring in one family

Meeting adjourned at 5 00 P M for refreshments

Present 35

II P CARPENTER, Secretary

INDEX OF ACTIVITIES OF MEDICAL SOCIETIES OF COUNTIES AND STATES RECORDED IN THE NEW YORK STATE JOURNAL OF MEDICINE DURING THE THIRD QUARTER OF 1933

American Medical Association Annual Meeting Annual Meeting in Louisiana Wyoming	893 846 971	Ontario Rockland Saratora	894 1011 841
Appendicus Deaths in Massachusetts	1021	Suffolk 895	1122
Arkansas Medical Lien Law	904	County Society Activities	
Blood Donors	957	Albam Abuse of Dispensaries	1119
Bulletin of Public Relations Committee	1010	Columbia Public Relations	1119
California Indigents Cancer Control in Kansas	970	Greene County Hospital	1119
Cancer Quack in Mississippi	1020	Sullivan Survey of Schools	1120
Colorado Malpractice Insurance	902	Ulster, Care of Indigent	1120
Compulsory Medical Care in Nebraska	1022 1023	Crippled Children 839	
Contract Practice in Pennsylvania	1023	Cuba Medical Insurance in	1001
West Virginia	972	Deafness League on 838	957
Corporate Medical Practice in West Virginia	972	Delaware Medical Imergency Relief	1018
Costs of Emergency Cases in Hospitals	843	Department of Health Cooperation with Family	
Costs of Medical Care Comments by Ontario	073	Doctors in Pennsylvania	1074
County	894	Dispensary Practice in Monroe County Dispensary Abuse in Pennsylvania	839
Council M	1130	Dispensary Patients and Family Doctors in Penn-	1070
County So	1130	siliana	
Delaware	895	District Branch Schedule of Meetings	968
Dutchess Putnam	895		894
1 ranklin	896	Seventh 1063,	
	_, ~		1063

Economics in Pennsylvania	1070	Medical Lien Law, in Arkansas	904
Educational Committee in Illinois	846	Medical Relief in Ohio	854
Education, Preliminary Medical, in Massachusetts.	964	Michigan, Survey of Medical Services	106
Emergency Relief in Delaware	1018	Mississippi, Cancer Quack	902
Ethics in Massachusetts	1124	County Society News	1016
Examination of Compensation Cases, Brahdy	873	Obstetric Champion	973
Fireworks in Syracuse	959	National Recovery Administration1110,	111
Flour, Tax on	1015	Ncbraska, Compulsory Medical Care	1023
Fourth of July Fatalities	897	News of County Societies in Mississippi	1016
General Practitioners' Issue of Journal in South		Nurses, Public Health, of Counties	839
Carolina	966	Obstetrics in Mississippi	973
Georgia, Group Insurance	852	Ohio, Mcdical Relief	854
Graduate Education in Massachusetts	1130	Oklahoma, Legislation	1128
Group Insurance in Georgia	852	Malpractice Suits	854
Hard of Hearing, League for838,	957	Ostcopaths in Mainc Hospitals	853
Health Insurance in Washington	900	Pennsylvania, Dispensary Patients	968
Hospital Abuses in Pennsylvania	1075	Examinations for Licensure	964
Hospital Aid in West Virginia	1060	Indigent	1124
Hospital Care, Insurance of	1067	Medical Economics	1070
Hospital Insurance in West Virginia	900	Public Relations Committee Meeting May 29	838
Illinois, Educational Committee	846	June 26	957
Index of Activities	841	July 29	1010
Indigent, Relief in New York839,	958	Public Welfare Law, Analysis of	1121
Ontario County	934	Racketeering in Compensation Cases	1014
Indigent in California	970	Reference Committee in South Carolina	1080
Pennsylvania	1124	Registration, Annual, in Kansas	852
Virginia	969	Relief, Medical, in Ohio	854
Insurance, Health, in Washington	900	Relief, Public Welfare	839
Hospital, in West Virginia	900	Rhode Island, Certification of Specialists	1081
Insurance of Hospital Care	1067	Saratoga Springs Development	1065
Insurance, Malpractice, in Colorado	1022	School Children, Examination of838, 957,	1010
Insurance, Mcdical, in Cuba	1001		1120
Industrial Medicine in Pennsylvania	1076	South Carolina, Journal Number for General	066
Journal, Issue for General Practitioner	966	Practitioner	966 1080
Kansas, Annual Registration	852	Reference Committee	1000
Cancer Control	1020	Specialists, Certification in Rhode Island	1081
Cancer Control		Subway Noise	1066 1061
Jennings	791	Survey of Medical Services in Michigan	1001
Layworkers in Medical Fields of Pennsylvania	1072	Temporary Emergency Relief Administration	958
Lectures to Medical Students1010,	1064	(T.E.R.A.) Tick Vaccinc in Wyoming	850
Legislation in Oklahoma	1128	Unlicensed Practitioners in West Virginia	848
Wyoming	849	Venereal Disease Clinics	957
Lien, Medical, in Arkansas	904	Virginia, Indigents	969
Louisiana, Annual Mecting	846	Washington, Health Insurance	900
Maine, Osteopaths in Maine Hospitals	853	West Virginia, Corporate Practice	972
Malpractice Insurance in Colorado	1022	Hospital Aid	1080
Malpractice Suits in Oklahoma	854	Hospital Insurance	900
Massachusetts, Council Meetings	1130	Property Rights of Medical Practice	851
Deaths from Appendicitis	1021	Unlicensed Practitioners	848
Education, Preliminary Medical	964	Workmen's Compensation in Pennsylvania	1077
Ethics	1124	Wyoming, Annual Meeting	971
Graduate Education	1130	Legislation	849
Medical Education in Massachusetts	964	Tick Vaccine	850

THE DAILY PRESS



THE DUTCH ELM DISEASE

There is a striking similarity between the contagious diseases of plants, and those of animils and man. A new disease now threatens the clins, whieli are among the largest and most beautiful trees that his our roadsides. The disease was discovered in the Netherlands in 1919, in England in 1927, and in Cleveland, Ohio, in 1930. The New Yorl Sun of August 25 says editorially.

'The first symptom of the disease is sudden wilting of the leaves of part of the crown of the tree, of the entire tree, or the tips of some branches Defolation may follow, the wilted leaves turning yellow or brown before

falling

'Progress of the disease varies with trees. In some cases it may kill in a season. In others the tree may survive for several years, the fungus spreading slowly. According to European investigators they have found that trees become infected through buds, twigs, limbs, trunks or roots. The fungus grows principally on the sapwood. In Europe spread of the disease is now believed to be accomplished by the clin bark beetle, Scolytus scolytus Fabr, which earnes the fungus on its body, wounds the tree and introduces the disease through the wound. This beetle has not been found here, but other insects may perform a similar disservice.

'The fungus causing the disease is closely related to organisms that produce blue stains in pine, gum and other trees. At present it is sometimes impossible to tell from examination in the field whether a wilted elm is a vietim of the Dutch elm disease because other fungi and becteria produce similar types of diseolor ation. Laboratory examination is necessary

to reach a decision

'No cure is known for the Dutch clm disease unless it is localized in a limb that can be removed. The United States Depurtment of Agriculture says that as the disease is still

in an incipient stage here the only logical program in fighting it is to find and eradicate stricken trees, delay may result in loss of the opportunity to eradicate it, and the elm may follow the chestnut

When it is feared that the disease has fastened on a tree a specimen twig or small braneli about ten inches long from the affected portion should be sent to the Dutch Elin Disease Laboratory Agricultural Experiment Station, Wooster, Olio, with a letter gring all available information concerning it

"It is possible that the disease is not yet so firmly established here as to resist a general cooperative attack on it. The elm is one of the noblest of trees and no effort that will eliminate or stay the Dutch elm disease is too costly or too arduous to be undertaken."

They do things differently in England where presention is practiced. The New York Herald Fribine of September 7 carried the following item as front page news under the caption 'British Calin Shattered by Three Little Potato Bugs'

"After an intensive search the Ministry of Agriculture has discovered that Great Britain

his only three potato bugs

'Specimens found wandering about Tilbury Docks started a tremendous hue and ery. The country side was decorated with warning notices. Harassed experts in Whitehall dashed from patch to patch, while restrictions on French imports were tightened. One newspaper lightly reported that milhons of bugs had been killed in the County of Norfolk.

'Now the country breathes again. The ministry officially announced today that it has been able to discover only the Tilbury trio

No beetles have been found in any other part of the country,' the announcement adds, despite careful search of potato crops in areas in which the Colorado beetle might be most likely to make its appearance.'"

QUESTIONNAIRES

The semi humorous column on the editor al page of the New York Times of August 20 entitled "Topics of the Times is on the subject of questionnaires, written in mutation of Alice in Wonderland Alice, addressing the Mad Hatter said—

Dr Mayo says that once upon a time clul dren were never told the truth Nowadays cluldren are told everything. He likes the new way better. But I wonder if this means Dr. Mayo is opposed to fairy tales for children? I should be very sorry if he was."

"So should I," said the Hatter. "I came across a perfectly lovely fairy tale the other day. Would you like to hear it? It's about an Ant and a Grasshopper."

"The Ant works all Summer and the Grasshopper sings. But when the frost comes, it is the Ant who is cold and hungry and he applies to the Grasshopper for relief. 'What were you doing all Summer?' said the Grasshopper. 'Working my head off,' said the Ant. 'Well, you darn fool,' said the Grasshopper, 'what did you expect? You went and piled up a Surplus, and smashed prices to smithercens, and now you are out of a job on account of overproduction, and your purchasing power is nil. You should have done the way I did and gone in for a good time all Summer. We would have created between us an economic vacuum that it would take the factories five years to fill up."

Alice shook her head. "I don't think it sounds very interesting for a fairy story for children," she said; "It would be quite a nice story for grown-ups."

The March Hare looked up.

"Sure you are allowed to have fairy stories for grown-ups," he said. "But you must always begin by saying, 'It is stated here in circles close to the Foreign Office that when Goldilocks heard the Three Bears coming into the house she did so and so."

But Alice wasn't listening.

"I should hate to think of children without fairy tales; and always being told the truth about everything the way Dr. Mayo says Think of telling a child everything!"

"It won't hurt them the least bit," said the Hatter. "Children can stand anything. The March Hare is right. It's the grown-ups that cannot get on without fairy tales. First they make up a fairy story and then they put the scientific and statistical foundations under it."

The March Hare looked up.

"Don't you love questionnaires?" he said. "You send a questionnaire to 8,000,000 children under the age of 11 asking whether they think Debentures are a sounder investment than Short-term Certificates. You get a reply from 843 children. You publish the results for grown-ups to read."

MEDICAL EXAMINATION OF SCHOOL CHILDREN

What progressive newspaper editors think of the medical examination of school children is shown by the following editorial in the New York Sun of August 25:

"The Health Commissioner has appealed to all parents who can afford it to have the necessary examinations made by their own physicians. The response to this appeal should be immediate. The attitude of physicians is typically displayed by those of Brooklyn; their county society, cooperating with the Tuberculosis and Health Association, has distributed forms approved by the Health Department to remind parents of the requirement of the law.

"It is distasteful to practitioners of medicine to do anything which might be interpreted as forcing their services on their pa-

Many physicians are so careful in this that they lean over backward. unfortunate; there are many situations in which patients are greatly benefited by af-firmative acts, by urgings on the part of physicians. In the matter of examinations of children for admission to school the physician who calls the provisions of the law to the attention of his patients is doing no more than a citizen's duty. It is not enough to say that everybody knows the law; some parents may be ignorant of it, and among those who know it there is the usual proportion of the neglectful, procrastinating and forgetful. The schools will soon open for the autumn term and the doctors, along with the others, should do their part to get the children ready for them."

BOOKS RECEIVED



- Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them A selection from this column will be made for review, as dictated by their merits or in the interests of our readers
- OBSTETRICS AND GAMEGOLOGY VOI 2, Pathology of Labor and of the Puerperium, Operative Obstetries, Infectious Processes and Tumors Edited by ARTHUR H CURTIS, MD (Published in three volumes and a separate desk index Octavo of 1135 pages, illustrated Philadelphia, W B Saunders Company, 1933 Cloth \$35 for the set
- Frontiers of Medicine. By Morris Fishbein, M.D. 12mo of 207 pages. Baltimore, Williams & Wilkins Company, 1933. Cloth, \$1.00. (Century of Progress Series)
- Fractures By Paul B Magnuson, MD Octavo of 466 pages illustrated Philadelphia, J B Lippincott Company, [c. 1933] Cloth, \$500
- CHRONIC ILLNESS IN NEW YORK CITY BY MARY C JARRETT In two volumes Octave of 545 pages New York Published for The Welfare Council of New York City by the Columbia University Press, 1933 Cloth, \$5 00
- THE NATURE OF DISEASE JOURNAL VOI 2 By J L R McDonagh F.R.C.S Octavo of 196 pages London, Wilham Heinemann, Ltd., 1933 Paper, 7s 6d
- DIE PSYCHOANALYSE UND DER PRAKTISCHE ARZT VOrtrag Gefialten zu Ehren von Prof Sigm Freuds 75 Geburtstag in der Deutschen Medizinischen Gesellschaft der Stadt New York am 4 Mai 1931, von Dorian Feigenbaum 12 mo of 227 pages (Sonderdruck aus Zentralblatt für Psychotherapie und ihre Grenzgebiete Band VI, Heft 1) Leipzig, S Hitzel, [1933]
- PSYCHOANALYSIS AND MEDICINE. A Study of the Wish to Fall III By KARIN STEPHEN, M.A. Octavo of 238 pages New York, The Macmillan Company, 1933 pages Nev Cloth, \$2 50
- Doubt A Study of Knowledge By Charles F How-LANO 12mo of 410 pages New York, Newhill Com-pany, [1933]
- THE HEALTH SCHOOL ON WHEELS BY J MACE ANDRESS Ph D and I J GOLDBERGER M D 12mo of 399 pages, illustrated Rew York, Ginn & Company, C 1933] Cloth, 76c
- THE THYROID GLANO Its Chemistry and Physiology By Charles R. Harington, Ph D Octavo of 222 pages illustrated New York & London, Oxford Utu versity Press 1933 Cloth \$4 50
- DISEASES OF THE NEWTONS SYSTEM By W RUSSELL BRAIN M D, Octavo of 899 pages, illustrated New London, Oxford University Press, 1933 Cloth,
- ESSENTIALS OF PRESCRIPTION WRITING By CARY EGGESTON M.D. Fifth Edition 16mo of 155 pages Philadelphia, W. B. Saunders Company, 1933 Cloth,
- PEGIATRICS BY HENRY DWIGHT CHAPIN M.D., and LAWRENCE T ROYSTER, M.D. Seventh Edition Oc-

- 1330 of 775 pages, illustrated Baltimore, William Wood & Company, 1933 Cloth, \$7.00
- SURGICAL CITNICS OF NORTH AMERICA Vol 13, No 4 August, 1933 (Mayo Clinic Number) Published every other month by the W B Saunders Company, Philadelphia and London Per Clinic Year (6 issues) Cloth, \$1600, Paper, \$1200
- Rose and Carless Manual or Surgery Fourteenth Edition Revised by Cecil P G Wareley, D Se London, and John B Hunter M C American (Fourteenth) Edition edited by W T Coughlin M D Octavo of 1468 pages, illustrated Baltimore, William Wood & Compans, 1933 Cloth, \$900
- MIGRAINE. Diagnosis and Treatment B, RAY M BAINEAT, MD Octavo of 242 pages, illustrated J B Lippincott Company, [c 1933] Cloth, \$300
- TETAL, NEWBORN, AND MATERNAL MORBIDITY AND MOR-TALIT. REPORT of the Subcommittee on Factors and Causes of Iclal, Newborn, and Maternal Morbidity and Mortality Hugo Engrypers M.D. Churman White House Conference on Child Health and Protection Octavo of 486 pages illustrated New York D. Appleton Century Company, Inc., [c 1933] Cloth, \$300
- THE HISTORY AND EPIDEMIOLOGY OF SYPHILIS BY WILLIAM ALLP'N PUSPY, M.D. Octavo of 113 pages, illustrated Springfield, III, Charles C. Thomas, 1933 Cloth, \$2.00
- Public Health Nursing in Industry By Violet H Hoogsov, RN Prepared for the National Organiza-tion for Public Health Nursing Octavo of 249 pages, illustrated New York, The Macmillan Company, 1933 Cloth, \$1.75
- Great Men of Science. A History of Scientific Progress By Phillips Lenard Translated from the second German edition by Dr H Stafford Hatfield Octavo of 389 pages illustrated New York, The Macmillan Company, 1933 Cloth, \$300
- To BE OR NOT TO BE. A Study of Suncide By Louis I DUBLIN, Ph D and BESSIE BUNZEL, M A Octavo of 443 pages New York, Harrison Smith and Robert Haas, 1933 Cloth, \$3.50
- Handbuch der Allgemeinen Hanatologie Band II Haffte I Herausgegeben von Dr Hans Hirschfeld and Dr Anton Hittmar Large Octavo of 700 pages, illustrated 1933 Paper RM 50
- PROCEEDINGS OF THE FIRST INTERNATIONAL CONGRESS ON MENTAL HYGIENE Vols 1 & 2 Edited by Frank wood E WILLIAMS M D Octavo of 1643 pages illustrated New York The International Committee for Mental Hygiene, Inc., 1933
- INTERVATION, C. Quarterly of Illustrated pecially Prepared Original dicine, Surgery, etc Vol by Loomcott Company 1933 Cloth, \$3.00



BOOK REVIEWS



HUMAN VALUES IN PSYCHOLOGICAL MEDICINE. By C. P. BLACKER, M.D. Octavo of 179 pages. New York, Oxford University Press, 1933. Cloth, \$2.50. (Oxford Medical Publications.)

In the preface, the author acknowledges his debt to the genius of Freud in so powerfully influencing psychological medicine. The author is well versed in Freud's writings, but disclaims membership in the recognized psychoanalytic group of his country. He has displayed interest in philosophy and biology. In the book the author elaborates upon various phases of values in life as held by the general person and especially by the mental patient. He emphasizes the personal characteristics and idiosyncracies of individual sufferers from mental diseases, and particularly in the realm of the person's affective reactions.

The average physician would enjoy this philosophical approach to a most interesting subject.

IRVING J. SANDS.

THE NERVOUS CHILD AT SCHOOL. By HECTOR C. CAM-ERON, M.D. 12mo of 160 pages. New York, Oxford University Press, 1933. Cloth, \$1.50. (Oxford Medical Publications.)

The author considers the problem of the child in relation to school life. As a preliminary he stresses the need of home understanding, especially the function of parents in instilling self-confidence on the part of the pupil. The factor of fatigue is stressed as it produces disorders of health such as vomiting, abdominal pains, rise of temperature and disorders of sleep. The author emphasizes the relationship of fatigue and unhappiness in school life. He indicates that the development of such delinquencies as persistent lying, stealing, truancy, and masturbation may be related to these factors. Disorders of micturition and speech are also discussed. There is also a chapter on special ability and disability.

The book is well written and simple in its style.

offers a common sense view of difficulties in school life and their treatment. It is a valuable addition toward the understanding of the so-called nervous child.

STANLEY S. LAMM.

Neurological Effects of Syphilis. Diagnosis and Treatment. By Bryan B. Sharp, M.D. Octavo of 92 pages, illustrated. New York, Oxford University Press, 1933. Cloth, \$2.00. (Oxford Medical Publications.)

This book is divided into two parts. The first being concerned with diagnosis and the second with prevention, treatment and prognosis. The various types of syphilis and para-syphilitic diseases of the central nervous system are described including tables and G.P.I. The tem are described including tables and G.P.I. The changes in the blood and spinal fluid are discussed. Congenital neuro-syphilis is treated separately.

Under therapy, the malarial treatment of syphilis is reviewed. Treatment with other forms of pyrexia is shown, such as relapsing fever, vaccine, sulphur and

diathermia.

There is a satisfactory bibliography. This book is of value for a quick review of the subject of neuro-STANLEY S. LAMM. syphilis.

LIGHT THERAPY. By FRANK H. KRUSEN, M.D. Octavo of 186 pages, illustrated. New York, Paul B. Hoeber, Inc., 1933. Cloth, \$3.50.

Krusen in his book on "Light Therapy" has assembled quite an array of facts and fancies from authoritative

or as near authoritative sources as possible in this "chaotic" subject of light. He has collected this array of data and with his own background attempts to give an up to the minute survey of the general subject. This is a difficult task for any one man.

He readily admits borrowing here, there or wherever he can, information which will help his subject matter.

The book is thorough, very thorough.

His Table of Spectral Sources as based on studies of Coblentz is good. His analyses of this table as he proceeds with the work is in one instance not up to the usual, e.g., Cold Quartz Lamp. To dismiss the subject of Visible Rays with the dictum, "The possible psychic effects of various colors is not in the realm of this discussion," is not up to the completeness nor standard of the rest of the book. He is to be commended for his position on Pulmonary Tuberculosis. It undoubtedly will create considerable discussion.

The references cited are alone worth the price of the bok.

John J. Hauff. book.

OBSERVATIONS OF A GENERAL PRACTITIONER. By WILLIAM N. MACARTNEY, M.D. Octavo of 478 pages. Boston, Richard G. Badger, The Gorham Press, [c. 1932].

This is an unusual book written for the general practitioner, especially the country doctor. The author treats briefly of nearly all discases in a rough and ready fashion, his own observations forming the basis of the

work, he preferring this method with its incompleteness, to what he calls the "copy cat" type of writing.

The relative advantages of country and city practice are discussed, the writer preferring the former with its opportunities of enjoying nature, going fishing or roaming in the woods. There is much information furnished which is generally sound country the wide follows. which is generally sound, considering the wide field covwhich is generally sound, considering the wide held covered. Besides the chapters dealing with specific discases, there are others, among them, "The Young Doctor," "Beginning Practice," "Specialism," "The Therapeutic Nihilist," which is very good; "The Dead Beat," "Domestic Nursing," and "The Doctor in Court."

There are many observations recorded. In those parishers are many observations recorded.

tients in whom morphine causes vomiting, the drug is said to be well borne if hyoscine is given with it. Having an opportunity to try this the day after reading it, the reviewer found it to work and his respect for the book increased. If solutions of homatropine, esering, nitrate of silver or cocaine are dissolved in salicylic acid water, one-quarter grain to the ounce, they will remain colorless, it is stated, instead of becoming cloudy.

The author remarks that one critic who read the manuscript said that some of the humor was too coarse, and he pleads guilty, having written for the "plain and in-elegant country practitioner who feels that humor can be drawn so fine as to be impalpable." Most chapters end and often begin, with a joke or story, some good and some not.

W. E. McCollom.

OPERATIVE SURGERY. Covering the Operative Technic Involved in the Operations of General and Special Surgery. By Warren S. Bickham. M.D., and Calvin M. Smyth, Jr., M.D. Vol. VII. Octavo of 849 pages, illustrated. Philadelphia, W. B. Saunders Company, [c. 1933]. Cloth, \$10.00.

This supplementary volume appears after a period of eight years in order to bring the subject matter in the previous six volumes of this work abreast of the times with the many advances that have been made in the field of surgery.

In reviewing the new work one is again impressed with the first clipper. The two pages devoted to the status of the surgeon, operative surgery and of the patient are well worth reading by the layman and the surgeon fivery young surgeon should read it and attempt to follow. It bespeaks in idealism in the practice of surgery that could come only from a man of inderstanding heart.

No surgeon will agree with all the operative technique that the author has selected—such agreement never could be hoped for However, the general selection of technique has been excellent and in this way the new volume supplies a valuable text for the student and practicing

surgeon

There are thirty six chapters covering over six hundred pages on all the more common operations that occur in general surgery as well as the specialties. The books well illustrated well written and a most useful book to have at one's elbow

ROBERT F BARBER.

Psycho Analysis Tonai Its Senpe and Limition Edited by Sandor Lorand, M.D. Octavo of 370 pages New York, Covici Friede, 1933 Cloth, \$425

Man Ins mastered the elements of nature to satisf, his wants. He flies in the air, sails under the seas, exploits the resources of the earth and communicates with his fellow beings thousands of miles away. Yet he has failed to master human nature, because he does not understand the basic fictors underlying human behavior. Hence the apparent paradoxes of man's behavior towards his fellow beings. For instance, one does not hear of the fifteen millions of the youth of the world who had lost their lives in the late war, but one continuously listens to the rasping sounds of the dickering of war debts, etc. Psychoanalysis throws some light that en ables one to analyze this apparent rhapsody of incoherence in human conduct.

The editor of the book enlisted the aid of twenty three active workers in the field of psychoanalysis and has produced a book that contains in simple and lucid terminology, the salient points of psychoanalysis as it has developed and as it is understood today. To those who have a knowledge of psychoanalysis the book will prove quite refreshing. To those who do not it may serve as a stimulus to further pursue this fascinating subject. To those who are still influenced by their own meconscious blinding conflicts and feelings of guilt and regard psychoanalysis as a synonym for sex, the book may prove of considerable educational value as it will enable them to realize that the most progressive and cul tured of the educators teachers theologians and thinkers regard psychoanalysis as the most enlightening means of understanding human conduct. The hook is well written and technically well printed so that it occupies a high place in medical literature.

IRVING J SANDS

AMERICAN AND CANADIAN HOSPITALS CLARK FIFTELD with the cooperation of the American Hospital Association Quarto of 1560 pages Minne apolis Minn Midwest Publishers Company, [e 1933] Cloth, \$10.00

'American and Canadian Hospitals" is a bonanza of historical, statistical and other pertinent information respecting American and Canadian hospitals and allied institutions

Among the dart given for hospitals and illied institutions are the following brief historical sketch types of service rendered type of control endowment isso cation memberships and approvals value of buildings grounds and equipment, amount and sources of income operating expenses average bed patient daily cost daily rates for private, seemi private and ward patients operating room fee, number of patients cared for dur

ing the year, average daily number of patients, number of interns, number of attending staff, average number in school of nursing, number of graduate nurses regularly employed, etc.

There are interesting and valuable reports on such organizations as the American Hospital Association, with whose cooperation this volume was edited, the American College of Surgeons, the Callolic Hospital Association of the United States and Canada, the American Protestant Hospital Association, and several others

The Appendix is of especial interest, containing historical sketches of all religious orders, both Protestint and Catholic, engaged in hospital work, information respecting the United States Public Health Service, the Veterius Administration, the National Tuberculosis Association endowments and funds devoted to the advincement of health, and many other hospital and medical

organizations

This book should have a strong appeal for the hospital executive, because the fiscal data presented will enable him to compare his financial structure with those of institutions of similar classification and possibly suggest to him the need for a study of costs in relation to income. To the general public, most of whom must sooner or later avail themselves of hospital facilities, 'American and Canadian Hospitals' is a mine of valuable information in easy reference form.

TREDERIC DAMRAU

ASTIMA, HAY TEVER AND RELATED DISORDERS A Guide for Patients By Samuel M Frinderg, M D 12nio of 124 pages, illustrated Philadelphia, Lea & Febiger, 1933 Cloth, \$150

Dr Feinberg in his new, small book fulfills all expectations. It is a simple, non-technical explanation of

allergie plienomena for the average layman

After describing the varied emises of asthma, he explains the necessity for detailed investigation of the patient through the history, stressing environment and food. It is an excellent survey of the known facts, and should be helpful to anyone suffering from any form of lypersensitiveness Dorottea D Curnow

ACIDOSIS AND ALKALOSIS BY STANLEY GRAH M. M D
& NOAH MORRIS M D 12mo of 203 pages Balti
more, William Wood & Company, 1933 Cloth, \$2.75

This book of 203 pages will answer most of your questions regarding Acidosis and Alkalosis. The definitions of acidosis, alkalosis ketosis, and alkaline reserve are simplified so as to be readily grasped. Van Slyke's unit prossible variations of acid base brlaince are given but the authors prefer Hildane's classification of four variations into a Acidosis (non gaseous), 2 Acidosis (gaseous), 3 Alkalosis (non gaseous), and 4 Alkalosis (gaseous) The defences against acidosis, comprising also buffer action in blood and tissues are taken up in detail. According to the authors. The multiplicity of the tests devised from time to time for the recognition of acidosis and alkalosis is ample proof of the difficulty of finding any simple, and at the same time accurate method of determining the state of the acid base equilibrium. Apart from the actual determination of the pH there is not, nor is there likely to be a single test which can be considered mfallible. Hence we would stress the necessity of taking into account the clinical history and findings as well as the laboratory tests in coming to a decision." And they further say that unless you know the pH that is normal for each individual an isolated reading of that figure may be of little value.

Diabetes nephritis gastro enteritis, cyclical vomiting, tetany and pyloric stenosis are discussed from the stand point of acidosis and alkalosis

Many helpful diagrams add to the clarity of the text
ARCHIBALD D SMITH



OUR NEIGHBORS



CLINIC ABUSE IN MISSOURI

The September issue of the Journal of the Missouri State Medical Association has an editorial on a plan for correcting the abuse of free clinics which was proposed by the St. Louis County Medical Society, and approved at a conference of representatives of the physicians, the leading welfare organizations, the Missouri State Medical Association and the St. Louis County Hospital when the problem was the most extensive. The Journal says:—

"The plan is termed the 'certification of the indigent.' No free cases will be accepted by the hospital, except acute and emergency cases, without being referred by a physician. Each physician in the county is furnished with blanks for the patient to fill in and sign. Aside from identification of the patient the blanks require him to give full particulars as to his financial condition, the questions being so formed as to make clear the conditions which make it impossible for the patient to pay although not destitute. The patient makes affidavit to these statements and thus becomes liable to six months' imprisonment or five hundred dollars fine if he makes a false affidavit. Mr. Arthur Anderson prosecuting attorney of St. Louis County, said he would heartily cooperate in the enforcement of this legal phase.

"At a dinner given to Dr. W. G. Patton, superintendent of the hospital, July 15, Dr. Patton outlined some of the difficulties encountered and the manner of handling them. Dr. Patton said: 'There is an impression among some people of St. Louis County that if they pay taxes they are entitled to free treatment at the hospital. This impression is wrong as the hospital was built by the taxpayers of St. Louis County to provide medical and surgical care for the indigent poor. We have thirty private beds for the taxpayers and the general public who are able to pay for the private physician and the hospital fee.'

"At the present time if a man owns a home it is difficult and often practically impossible to borrow enough money to take care of his immediate medical and surgical needs. Consequently, when people who own a home are seen at a free clinic for treatment or hospitalization it creates the false impression that those persons are abusing the free clinic. You can readily see that a wrong conclusion is drawn by the physician as well as the laity for, as a matter of fact, these people are themselves much embarrassed because they find it necessary to appeal for charity service. They must be taken care of and it is impossible for the management of free hospitals to refuse them medical care.

"We have a splended investigator who investigates all cases that apply for hospitalization and I feel that we have been reasonably successful in preventing any unusual abuse at this hospital.

"On July 10 we inaugurated a policy at the hospital requiring patients who apply for treatment at the clinic or for hospitalization to secure a letter from an active practicing physician stating that they are deserving charity patients and are not able to pay a physician or a hospital for medical care."

COMMITTEE ON PROFESSIONAL CONDUCT IN CALIFORNIA

The August issue of California and Western Medicine contains an editorial commending the medical society of San Francisco County for instituting a "Committee on Professional Conduct" to act when a member is sued for malpractice. Commenting on the action the Journal says:

"The San Francisco method puts teeth into the Principles of Professional Conduct and should have a deterrent influence on members of the medical profession, who, knowingly or otherwise, give support to certain types of attorneys of a class that may be said to be typified by the group known as 'ambulance chasers.'

"It is of importance to know that the activities of the committee are regarded as confidential procedures in all cases (except when appeal is requested by some party to its arbitrations), thor-

oughly to guard members and others from any annoyance or humiliation which might arise from publicity or gossip in some of its cases.

"San Francisco physicians are in a precarious situation in the matter of malpractice insurance protection. Our city is cited as the high spot in the country for lawsuit losses by the carriers of this form of insurance. To assure ourselves of further protection it is imperative that there be a rapid decrease in malpractice claims and suits. Two definite elements are at play causing them. One is looseness of tongue of physicians regarding the work of other physicians which gives origin in the patient's mind to suspicion, resentment or the suggestion that here is an easy racket to 'shake him down' for a considerable sum of

(Continued on page 1180-adv. xii)



If this tired, worried, over-worked mother were using Pablum for her behind and the definition of the period of losing her temper while her children clamor for the in the certal bowl, simply by adding water or milk of any temperature.

GETTING up an hour earlier in the morning is an inconvenience for most persons, but for the mother of young babies it is a hardship, sometimes almost tragic, frequently nullifying the best-planned pediatric advice.

This is especially true in the case of the nursing mother whose supply and quality of breast milk are affected by emotional shocks resulting often in agalactia and sometimes giving rise in the baby to diarrhea, colie, and even convulsions. Furthermore, the mother's emotional stress brings about a train of behavior on her part which is reflected in the child's psychologic reactions so that a vicious circle of bad habit formation is set up.

From this angle, the recent introduction of the pre-cooked form of Mead's Cereal, known as Pablum, assumes new importance in the doctor's psychological handling of both mother and child, quite aside from its nutritional value.*

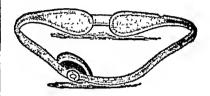
Because Pablum can be prepared in a minute, the mother can sleep the extra hour she would otherwise be compelled to spend in a hot kitchen cooking cereal. Added rest means better poise, so that petty annoyanees do not bring jaded nerves. Prompt feedings prevent many childhood tantrums, and a satisfied baby usually eats better and enjoys better digestion and growth.

*Like Mead's Cereal, Pablum represents a great advance among cereals in that it is richer in a wider variety of minerals (chiefly calcium, phosphorus, iron, and copper), contains vitamins A, B, E, and G, is base-forming and is non-irritating. Added to these special features, it is adequate in protein, fat, carbohydrates, and calories. Pablum consists of wheatmeal, oatmeal, cornmeal, wheat embryo, yeast, alialia leaf, and beef bone.

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SURGICAL APPLIANCES

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Brooklyn Newark Boston Springfield Detroit Wilkes-Barre (Continued from page 1178)

money. Ideas of this nature readily snowball into large proportions, especially when a lawyer of doubtful integrity foresees a sizable contingency fee in prospect. But let it be distinctly understood that no muzzling of medical men is intended. The by-laws and the committee do, however, distinctly point out that disparaging speech concerning the conduct, opinions, and treatment of another member of the profession shall not be indulged in with impunity until and unless he has made himself impartially familiar with the facts and circumstances obtaining at the time cited in such criticism.

"The second element conducing to our high 'mortality' is the ease with which some physicians can be paid to give unsound but convincing testimony against a colleague in a malpractice suit. To counteract this it is stipulated that physicians shall now notify the committee of intention to assist in a case before they do so, and shall give their reasons for so intending. Again it must be clearly understood that the by-laws and the committee are not to muzzle any person in such matters. They 'shall respect the privilege of every member to testify in any case as his conscience and opinion may dictate, and shall act in all matters with due regard to the rights of the patient."

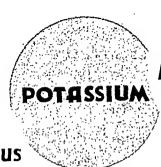
LIABILITY INSURANCE IN ALABAMA

Liability insurance has certain legal aspects of which many physicians are not aware. A fundamental consideration which is often overlooked by physicians is the authorization of the company to do business in the State in which the physician lives. The doctor naturally assumes that a company writing insurance has that authorization from the State Department of Insurance, but many companies doing an active business do not have that permission. The August Journal of the Medical Association of Alabama calls attention to this condition in the following editorial:

"Two years ago the Secretary of the Association issued a statement to the profession regarding policies against loss from liability imposed by law for damages on account of bodily injuries or death suffered by any person or persons in consequence of error, malpractice, or mistake. At that time the members of the Association were warned not to do business with any company that could not present proof that it had qualified with the office of the State Superintendent of Insurance.

"Despite such admonition it appears that certain ones have fallen prey to wildcat liability insurance with the result that they have no redress when protection is needed. This further warning, therefore, is given and concluded with the fol-

(Continued on page 1182-adv. xiv)



MANGANESE

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An Aid In Fighting Chronic Sepsis

Chronic cholecystitis, chronic prostatitis, chronic colitis are but a few of the rather common conditions which give rise to a state of chronic sepsis.

Fellows' Syrup has proved to be of decided value in aiding the fight against the constant septic factors. Its ingredients: Manganese and Iron regenerate the impoverished blood stream; Calcium re-excites the dormant defensive mechanisms; Sodium, Potassium and Phosphorus overcome the troublesome psychoasthenic elements; Strychnine is of value as a stimulant to the respiratory asthenia; and Quinine is a distinct metabolic stimulant.

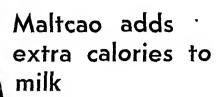
Fellows' Syrup in these conditions supplies the required mineral elements. The dose suggested is one teaspoonful in half a glass of water four times daily.



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(Continued from page 1180—adv. xii) lowing statement from the Superintendent of Insurance:

"'Persons (physicians) seeking redress from unauthorized companies must do so in the courts of the State of domicile of the company. Alabama courts have no jurisdiction over such cases.'

"If any member of the Association is in doubt as to the policy he holds, he should ask the Secre-

tary for advice regarding it."

NEWSPAPER PUBLICITY IN SOUTH CAROLINA

The July Journal of the South Carolina Medical Association contains the annual report of the State Committee on Public Health and Instruction which says:

"We instituted a plan of public instruction on fundamental and vital matters of health through the lay press by clear and concise articles, written by the doctors of S. C., but printed unsigned. Prior to the letters being sent to many and various doctors scattered all over the state, Dr. Young wrote to practically every S. C. newspaper, outlining the plan and asking for editorial co-operation. Quite a number of editors replied and promised their assistance.

"After the incoming medical papers from the doctors had been received they were carefully read and edited. In some instances they had to be considerably abbreviated, so as to conform to the space requirements. The articles were then sent to Dr. Hines who distributed them at proper intervals to the newspapers who had agreed to publish them, and who had kindly offered their columns free. Later on some of the editors became weary and supported us but feebly, while one opposed us as being propagandists, and selfish. The great majority however have been very kind and most helpful. To the press in general we are grateful for counting all sorts of newspapers from daily to weekly, etc., sixty-five of them have printed some or many of our articles. Without their assistance nothing could have been done.

"The subjects ranged from Appendicitis and Prevention of Heart Disease, to the Education of a Doctor, Prevention of Diphtheria, and Preparing for Motherhood. The committee feels that the campaign has not been all that we could have wished; that is we would have preferred more contributions, and more papers published. But even so a large number of people have read some of the material, and some have become interested and edified. No one can say whether we really have succeeded, but all in all the Committee believes that the State Association has made a beginning in educating our citizens as to what Modern Medicine stands for, and what Medical Science offers to those who come for help in time."

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EMERGENCY RELIEF ADMINISTRATION IN NEW JERSEY

The August issue of the Journal of the Medicol Society of New Jersey carries the following announcement of the methods which have been adopted by the Medical Relief Committees of the Medical Society of New Jersey, at the invitation of the State Emergency Relief Administration. This announcement has been sent to every County Medical Society in the State:

"We have agreed to set up in each County a special committee, to be known as the Medical Relief Advisory Committee, to cooperate with the County Director in order that the principles set forth in this plan may be started into operation.

"The Committee, therefore, requests you to take the following immediate steps:

"1. The County Society shall appoint or elect a committee, of not less than five members, to be known as the County Medical Relief Advisory Committee.

"2. This Committee shall immediately prepare, for submission to the County Director, a list of licensed physicians within the county who are willing to accept Emergency Relief work.

"3. The Committee shall contact the County Director of Emergency Relief, at once, to arrange a fee schedule for Emergency Relief clients.

"4. While the maximum fees of \$1 for an office call, \$2 for a house visit, and \$25 for an obstetric patient, have been agreed upon; the rate for your individual County shall be based upon a proportion of from 1/2 to 3/3 of the prevailing average fees in your County.

"Several parts of the plan are worthy of spe-

cial attention:

"Doctors shall strive to take care of these clients in the home and shall refer them to the hospital for emergency conditions only.
"The method of submitting bills should be care-

fully studied and it should be noted that no patient shall be charged to the Emergency Relief Administration without proper authorization.

"The Committee stands ready to assist, in any way possible, to help in organizing or to smooth out troubles. We have promised the Emergency Relief Administration the whole-hearted coopera-

tion of the profession."

The authorization for medical calls, the presentations of bills, costs of hospitalization, and other administrative details fill a page of the Journal. The plan is an excellent example of cooperation of the State officers with the medical profession in providing medical service to the poor on a basis which is satisfactory to the patient, the doctor, and the State.

GRADUATE EDUCATION IN WASHINGTON STATE

The June number of Northwest Medicine has the following editorial announcement of a course of lectures to be given to the medical profession by the University of Washington.

"The University of Washington Extension Department will present its medical lectures, July 17-21, at Guggenheim Hall, Seattle. Since there is no medical department connected with this institution, these lectures represent the effort of the university to contact the medical profession of Washington and the Northwest each year in an endeavor to bring them the latest developments in the progress of different branches of medical science. During this designated week lectures will be delivered each day by Dr. L. A. Buie of the Mayo Clinic on Proctology; Dr. C. F. Fluhman of Stanford University Medical School on Ob-

stetrics and Gynecology; Dr. T. B. Futcher of Johns Hopkins University Medical School on Medicine and Therapeutics and Dr. A. C. Strachauer of University of Minnesota Medical School on Surgery. The details of the program of these lectures are presented in the announcement on page 7 of our advertising section. The lectures will be delivered at such morning and afternoon hours as to interfere least with the practice of those in attendance. Each evening a lecture will be delivered on non-medical topics by leading members of the University of Washington faculty. This occasion has always been profitable for social contact, bringing together for a period of the week medical friends from widely separated localities. The management trusts that a good attendance will be present.

HEALTH INSURANCE IN WEST VIRGINIA

The April issue of the West Virginia Medical Journal contains the following editorial on an experiment in health insurance in the State:—

"A new plan of sickness insurance has been inaugurated in the southern section of the state which appears to have considerable merit. The organization is known as Associated Hospitals, Inc., and its directorate is made up of one representative from each hospital in the area covered

(Continued on page 1186-adv. xviii)

A Maternity Support Typed for the Large Woman

In properly fitting an expectant mother with a maternity support, a tall, slender figure requires a straight-line model; a small, petite figure, a short, lightly boned one; a large, well-developed figure, a full, long-hipped one. Camp garments are proportioned to all figure types in stature and other individual respects.

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Combines the shrinking effect of Ephedrine, the antiphlogistic and astringent actions of Bismuth Oxylodide, with the antiseptic and healing qualities of Boric Acid and Zine Oxide.

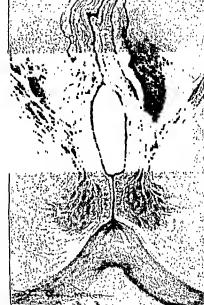
THE SHAPE:

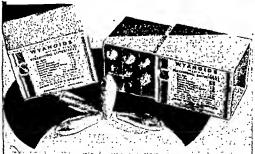
The improved "torpedo" shape of Wyanoids is anatomically correct. It conforms to the contour of the canal, is easily inserted, easily retained.

Wyanoids allay inflammation, relieve tissue engorgement and pain. They are soothing, healing, non-irritating, and since they do not contain opium, may be used at frequent intervals without harmful or constitutional effect.

Control the integrity of your prescriptions by specifying Wyeth's pharmaceuticals

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PHILADELPHIA, PA. WALKERVILLE, ONT.

(Continued from page 1184—adv. xvi)
by the corporation. Associated Hospitals, Inc.,

furnishes only hospital service to its members.

"The chief merit of this new organization is

that all hospitals within the area participate in the plan and thereby avoid the disastrous results of solicitation. All subscribers to the fund have free choice of both physician and hospital: The hospital bills of all patients are paid from the fund according to the service rendered. Service is not rendered in the case of injuries covered either by Workmen's Compensation insurance or automobile liability insurance.

"At the present time the entire southern section of the state is covered by scattered contracts for sickness insurance with a lay corporation owned and controlled by private interests at Welch. Therefore, the progress of this new cor-

poration, which is exclusively in medical hands, will be watched with interest. If this new group, operated along ethical lines, can take control of the sickness insurance field in southern West Virginia, then a great step will have been made. We will then have at least one example of doctors and hospitals controlling their own destiny.

"This Journal does not advocate the organization of health insurance plans throughout the state, nor does it endorse any particular plan in any particular community. We do feel that in some sections where there is an unquestionable demand for some health insurance plan, the doctors and the hospitals would be wise to work out a satisfactory solution before someone else works out an unsatisfactory plan. We see no reason why any county society or any group of hospitals should hold aloof from such a move."

INSANE IN NEBRASKA

A practical suggestion for relieving the overcrowding of the mental hospitals of Nebraska is contained in the following editorial in the May issue of the Nebraska State Medical Journal:

"The suggestion made by Dr. J. C. Nielsen, Superintendent of the Norfolk State Hospital, that in these times of financial stress, admissions be placed on a 'barter' basis, seems at first thought somewhat shocking. The suggestion had its origin in the fact that the available capacity of the hospital is taxed to the utmost, and additional buildings will not be available for at least three years.

(Continued on page 1187-adv. xix)

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(Continued from page 1186-adv. xviii)

"The suggestion, when brought out in the open, resolves itself into this: that when a county asks for admission of a patient, the hospital authorities suggest to the county authorities that they can make room for the new patient only on condition that the county authorities are willing to receive back and caré for in the county, one of their least troublesome, convalescent patients. Advice will be given by the hospital authorities to the county if they wish, of the best possible way

of earing for the convalescent patient, whether he should be boarded out with a family, whether he should be placed on a farm, as to what medical attention is necessary, etc. It will bring the state hospital in closer contact with the counties in its districts. It will necessitate psychiatric social workers in connection with the hospital in the future. It will be the first step in a program of mental hygiene in the hospital district.

"The proposition has considerable merit and should appeal to all thinking people."

INSURANCE OF MEDICAL CARE IN RHODE ISLAND

The House of Delegates of the Rhode Island Medical Society, meeting on May 18, considered the report of the National Committee on the Costs of Medical Care and then took the following action which is recorded in the July 1880 of the Rhode Island Medical Journal:

"It is the intention of your present Committee to continue its study and if possible formulate a scheme which under the control of the Rhode Island Medical Society shall provide adequate medical, nursing and hospital eare to families in the income group say between \$1,200 and \$3,000. Such a scheme would not include Workman's Compensation cases, contagious diseases, mental diseases, venereal diseases or tuberculosis. Such a scheme must include the right of every patient to choose his own physician.

"Studies have been made which show that (Continued on page 1188-adv. x1)



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While protective immunity and desensitization in a large percentage of cases follow the administration of this antigen, it should always be regarded as merely one adjunct to a well-balanced, composite program of therapy.

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OTTO F. GECK, M.D., Medical Director

Backlet upon request.

(Continued from page 1187—adv. xix)

the average yearly cost of medical care per capita in the United States is about \$30.00 Further it has been shown that 29.8 per cent of this is paid physicians in private practice and 23.4 per cent to hospitals, the remainder being paid nurses, pharmacists, etc. This makes the expense for physician and hospital \$16.00 per capita. On such a basis of facts it would seem possible for the Medical Society to devise a plan by which it could undertake to care for a group of 5,000, or better, 10,000 persons in the income group where illness is likely to be a catastrophe.

"In a family of three with an income of between \$1,200 and \$3,000, a cost of \$48.00 to \$60.00 per year for assurance of adequate medical care would not seem excessive. To devise such a plan requires study of the facilities in any community where it may be applied. Further, certain safeguards, as the personal payment for first calls must be set up. Also the period for which hospital facilities would be supplied must be studied."

JOURNAL OF MASSACHUSETTS

The New England Journal of Medicine for July 6, 1933 contains some of the annual reports of the officers of the Massachusetts Medical Society. The financial report of the New England Journal is as follows:

EXPENSES:

Printing	\$21,026.33
Postage and Mailing	6,020.50
Reprints	6,334.03
Engraving	1,557.93
Index	457.81
Salaries of Editors	3,316.67
Salaries, Clerks	5,980.01
Commissions	2,111.42
Rent	1,915.00
Office Expense	1,807.55
Miscellaneous	3,549.78
T-4-1	\$54.077.07
Total	φυ4,0//.0/
RECEIPTS:	

Advertising\$	21,826.10
Reprints	7,216.56
Subscriptions (exclusive of Massa-	
chusetts members)	7,133.39
Subscriptions from New Hampshire	528.51
Subscriptions from Vermont	429.29
Miscellaneous	2,141.88

Total	 .\$39,275.73

DEFICIT\$1	4,801.34
Number of members in Massachusetts	4,887
Net cost of Journal per member	\$3.00

Net cost of Journal per member

Miscellaneous



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WHY EAT CRANBERRIES?

Who doesn't relish rich red, tangy-flavored cranberry sauce? To the American people since the time of the Pilgrims, the tasty fruit has had a peculiar intangible appeal. Frosty September days usher in bright autumn colors and — cranberries. These latest of the season's berries lend color to the table and interest in the meal. They seem to prod jaded appetites into activity.

Since Colonial times the cranberry has been regarded as possessing certain health virtues, especially as a febrifuge (fever reducer) because of its cooling effect. However, it is only recently that this fruit has been proved to possess real nutritive value. Investigations extending over a period of three years at the Massachusetts State College demonstrate conclusively that cranberries are richly endowed with vitamin C. This is the vitamin which promotes growth, strengthens the blood vessels, and makes strong bones and teeth. As little as three cranberries a day, that is, about one-eighth ounce, sufficed to promote maximum growth and full protection from symptoms of scurvy in young guinea pigs over a 90 day feeding period. In this test all the

berries, the guinea pigs lived only 25 to 33 days.

Vitamin C is unstable and is often destroyed by cooking, stirring or straining. Would cranberries lose this Will o' the Wisp vitamin if made into sauce? Exhaustive feeding tests on whole-fruit cranberry sauces made from several recipes showed a retention of 80 to 90 per cent of the vitamin content of the fresh berries.

Other experiments carried on with white rats showed that the cranberry contained small but significant amounts of Vitamin A, the anti-infective vitamin. The latter is thus called because of its function in aiding the body to resist infections of all kinds. This vitamin is found in greatest abundance in cod liver oil. It is fully retained when cranberries are made into sauce or jelly.

Thus we see that we may not only enjoy the attractiveness and flavor of cranberry sauce, but at the same time we are helping ourselves to vitamins—and health.—Adv.

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BLOOD CHANGES IN INTESTINAL OBSTRUCTION

By DANA W. ATCHLEY, M.D., NEW YORK, N. Y.

Read before the Section on Surgery, at the Annual Meeting of the Medical Society of the State of New York, at New York City, April 4, 1933.

TT is my purpose to discuss briefly that part of the physiological response to intestinal obstruction which involves the water and salt equilibria of the body. It is no longer necessary to defend the assertion that alterations in these substances play an important role in producing the clinical condition with which we are so familiar. My emphasis on the chemical aspects does not imply that I either ignore or belittle the role of such other factors as hypothetical toxins, tissue necrosis or local circulatory disturbances. I do not feel that our present state of knowledge justifies one in engaging in a controversy as to the relative significance of the various components that unite to form the net result of intestinal obstruction.

There is no step in the advance of medical science during the past twenty years that is more encouraging than the increasing tendency to interpret disease processes in terms of underlying physiological dynamics. More and more we speak of clinical mechanisms rather than clinical pictures. By this approach we have learned that in many instances the primary etiology of a disease condition is not the direct cause of the more serious complications or even of death if it ensues. Successful treatment of the primary etiology may leave us with a patient who remains seriously ill until secondary physiological disturbances are controlled. The cause of death may not be due to the fundamental etiological agent, but to the physiological response of the individual to that agent, in many instances a functional rather than an anatomical response. And it is often true that the functional response is unusually susceptible to appropriate therapy.

There is no section of physiology more satisfactorily understood in this regard than electrolyte and water physiology. The contributions of many workers have clarified the processes by which the body maintains its fluid and salt concentrations at constant levels. Moreover, in a great variety of diseases the

sequence of events leading to a disturbance in water and salt equilibria have been studied and the resulting hypotheses have brilliantly survived the pragmatic test of therapeutic application, May I review a few of these diseases and indicate thereby the setting in which we place our concepts of the abnormal physiology

resulting from intestinal obstruction.

One of the first clinical conditions to receive sophisticated appraisal was cholera; in 1909, Rogers pointed out that many of the patients under his observation during an epidemic in the Philippines were tremendously dehydrated. If he had had the proper chemical facilities he would doubtless have been able to demonstrate a striking decrease in serum salts and water. I was much interested to find accidentally a statement over one hundred years old com-menting on the thickness of the blood in cholera. The mechanism of fluid and salt loss in a disease which causes profuse watery diarrhea needs no elaboration. Rogers found that the administration of intravenous salt solution greatly decreased his case mortality. Water and salt depletion in cholera cause a marked drop in blood volume, thus producing a state of shock. The prostration and circulatory paralysis once thought to be dependent on a toxin derived from the cholera bacillus has been proved to be due in large part to easily remediable disturbances in salt and water metabolism.

In the past ten years many other pathological states have been included in this group of diseases with secondary physiological problems. As insulin began to be used in diabetic coma, it was noted that certain patients continued their downward course long after glycosuria and ketone acid production had been completely controlled. Eventually these patients died with a normal blood sugar and blood bicarbonate. It was soon recognized that secondary and independent physiological processes are initiated by the acute diabetic state. A patient in such a state loses tremendous

quantities of water and salt and when it occurs, a fatal outcome is usually not due to overproduction of acid, but at least in part to the shock that follows rapid dehydration. We have been able to show in careful balance experiments at the Presbyterian Hospital that removal of insulin from a diabetic is followed by immediate and excessive loss of water and salt. This occurs with glycosuria alone, but is greatly augmented when acidosis developes. It requires very little exaggeration to say that death in simple diabetic coma is due to shock and need not occur if the physiology of the situation is clearly understood.

I would like to describe one more interesting example of this general pattern; again, more in the field of medicine than surgery. Dr. Loeb, in our clinic, has demonstrated recently that many of the symptoms occurring in Addison's disease are dependent upon the loss of sodium from the body. He has kept a patient with typical Addison's disease practically symptom free for many months by the addition of an excess of sodium choride to her diet. A few days on a salt poor diet has on two occasions caused a relapse to the picture of acute adrenal insufficiency. The similarity between this picture and that seen in other states dependent upon salt and water depletion needs no comment, although, of course, it would be unwise to affirm that the adrenal cortex has no function other than the control of sodium excre-

long believed that the was symptoms following extensive burns were related to the absorption of a toxin from the destroyed tissues. This conception is fading into obscurity as the profound effect of the serous exudation from the burned areas is more certainly appreciated. Decrease in blood volume with resulting circulatory paralysis is without doubt a most important feature in the dynamics of this serious accident to the organism. It is more reasonable to believe that the benficial effect of intravenous salt solution is due to the restoration of normal blood volume than that it is due to the neutralization of a toxin.

The surgeon should be particularly interested in that type of salt depletion which occurs when the secretions from structures associated with the gastro-intestinal tract are diverted to the surface of the body by such operative procedures as gastrostomy, duodenostomy, pancreatic fistula, etc. These secretions may contain as high a salt content as blood serum and if their loss is ignored it will lead to a clinical condition analogous to those that I have just described. The effect of proper treatment upon such a patient is often spectacular.

I have tried to indicate that there is a fundamental identity in the clinical and physiological responses to salt and water depletion, occurring in a variety of disease conditions without the slightest intrinsic relationship to each other. Prostration, low blood pressure, dehydration and ultimately, the state of shock with peripheral circulatory, rather than cardiac, failure, constitute this oft repeated clinical pattern associated with loss of water and sodium chloride (particularly sodium) from the body.

It is obvious that the typical case of high intestinal obstruction fits readily into this group. Hartwell in 1912 recognized the importance of dehydration, thus greatly advancing the therapy of this condition. workers have described the chemical alterations of the blood in high intestinal obstruc-However, the first analysis of the mechanism as a whole was made by Gamble in 1925. His carefully planned experiments included not only complete electrolyte analyses in the blood, but, also, detailed studies of the composition of the gastro-intestinal contents and vomitus. Gamble was able to prove that all the profound chemical changes occurring in the body fluids were dependent upon the loss of gastro-intestinal secretions. He quite properly emphasized the importance of base loss, principally sodium. As stated in the foregoing discussion, it is the loss of this component, i. e. sodium, which so seriously effects the individual in states characterized by electrolyte and water depletion. Our attention was focussed on the chloride ion for many years, for the simple reason that chloride analyses are easy, whereas sodium analyses are very difficult. Ingenious theories were elaborated with chlorine in the role of a protecting agent, neutralizing hypothetical toxins. seemed incompatible with theories knowledge, but they could not be disproved until it was possible to account for all the chloride loss by accurate analyses of vomitus and other excreta.

While it is possible to understand the serious effects of high intestinal obstruction upon the basis of sodium and water loss, there is present in pyloric obstruction another process which is somewhat different in nature. As you well know, gastric juice contains a high concentration of HCl so that an alkalosis is produced if vomiting is greatly prolonged. This secondary or perhaps tertiary physiological response to obstruction is easy to combat and probably is rarely responsible for a fatal outcome. Its essential symptom is tetany and it yields readily to therapy directed toward the salt and water depletion.

A uniform observation in high intestinal ob-

struction is the presence of an elevation of blood urea. This nitrogen retention has been explained in many ways. It was long considered a result of damage to the kidney by the toxins formed in the obstructed gastro-intestinal tract. Others assumed excessive protein destruction by the same toxins. Gamble suggested that the severe dehydration causes an alteration of renal function due to lack of available water for the kidney. Elevation of blood urea is a consistent observation in the various types of salt and water deplction that I have mentioned this morning. But, in addition to dehydration and more or less dependent upon it, we find in all of these conditions a tendency to the production of circulatory stasis and shuck. There is always a drop in blood volume and, as previously stated, the inevitable outcome of a rapid drop in blood volume is shock. The capillary stasis that accompanies shock affords a simple explanation for the temporary suspension of renal function, that causes nitrogen retention in these pathological states.

Lower intestinal obstruction is a process less clearly understood than high obstruction. The secretions of the intestinal tract remain within its lumen, increased pressure in the gut interferes with its blood supply, bacterial growth is present; indeed, so many other faetors are introduced that accurate appraisal is well-nigh impossible. However, no one can deny that salt and water depletion play some role in every case and must never be forgotten in planning therapy. It should be restated that an individual can lose tremendous quantities of water and salt into his gut and that as long as reabsorption does not take place, this fluid is as unavailable to the blood stream as if it had been vomited. Gamble was able to produce all the clinical and chemical disturbances of pyloric obstruction in rabbits. These animals do not voinit, so the lost water and salt simply accumulated statically within the stomach, whence it was removed by the experimenter at autopsy and accurately analyzed.

In summary, may I point out again that the chemical results arising from the secondary physiological effects of intestinal obstruction produce a pattern very similar to that found in several disease conditions fundamentally different, but having the common denominator of salt and water depletion. The mechanism of this depletion in intestinal obstruction seems to consist in the rapid removal of water and electrolytes (mainly sodium chloride) from the circulating blood, thence to be vomited, or to accumulate statically within the intestinal lumen. This sequence of events occurs in an individual to whom the ordinary routes of salt and water replacement are obviously closed.

The end result of such fluid and salt loss is peripheral circulatory failure with profound inhibition of all normal tissue activity. The elevation of blood urea that ensues is probably an expression of this effect upon renal tissue. The higher in the intestinal tract that the obstruction occurs the more completely does this mechanism dominate the picture. While it is probably safe to say that the clinical pattern of pylorie obstruction is wholly a result of these well understood physiological processes, the student of low intestinal obstruction finds a variety of disturbances wholly unrelated and combining to form a resultant clinical problem difficult to analyze. However, no matter what its relative value may be, this chemical component is always present and must be reckoned with when therapy is being planned. is obvious that the presence of tissue necrosis when the gut is strangulated is an additional force toward the production of shock.

Treatment of the phase of intestinal obstruction that has been the subject of my discussion is essentially a replacement therapy. Salt and water have been lost from the circulating blood, hence salt and water must be replaced therein. This should be done by the intravenous administration of adequate amounts of normal salt solution or Ringer's solution. I wish first to emphasize strongly the necessity for using salt solution rather than simple glucose solutions. It is impossible constructively to combat dehydration with glucose solutions; water cannot be retained in the body without its skeletal structure of salt, in fact, I have seen patients thoroughly dehydrated by the constant use of 10 per cent glucose solutions. In such patients the water could not be retained without sodium and the constant diuresis caused by the glucose and water washed out more and more salt, thus augmenting the salt depletion already accomplished by the intestinal obstruction. This is no academic point; theory and practical experience unite to warrant the statement that the use of glucose solutions alone in this condition as well as in any other state of dehydra-tion may be actually harmful. There is no more frequent and, in light of modern knowledge, more inexcusable mistake than this one. If glucose administration is desired, be sure that it is given in salt solution. In my opinion the nutritive effect of glucose is negligible, but it has a definite role in combating ketosis and should be used routinely in children and obese individuals. Ketosis is a complication to be avoided as far as possible because it also sets in motion a physiological response tending to salt and water depletion, as I pointed out when discussing diabetic coma. The ideal solution is 5 per cent glucose in normal saline,

because glucose in a 10 per cent solution cannot be oxidized rapidly enough in many instances, to prevent its action as a diuretic.

When I suggested the use of adequate amounts of intravenous fluids I meant literally adequate. We have been very timid in our use of intravenous therapy in these conditions. One need not fear overstrain on the heart from large amounts of intravenous fluid when the patient is suffering from salt and water depletion, particularly if the infusion is given with a 20 gauge needle. His rapid pulse and low blood pressure do not mean cardiac weakness He must but peripheral circulatory failure. be treated steadily until the evidences of dehydration disappear whether it be two liters or seven liters that are required. Our mistakes have practically always been on the side of too little rather than too large amounts.

The route of administration of salt solution should be exclusively intravenous when the dehydration is advanced and shock is a part of the picture. The absorption of water from the subcutaneous tissues and the rectum is far too slow in peripheral circulatory failure. The fluid must go into the vein directly and speedily. In mild cases or later in the course of therapy, intravenous drip, clyses and rectal taps may be employed, always using salt solution, of course.

My discussion has been confined to one of the secondary physiological effects of intestinal obstruction, viz., salt and water depletion. I have not attempted to appraise this complication in relation to the other known components of the clinical picture, simply indicating that the higher the obstruction, the more responsible it appears to be for a serious out-We are familiar with this mechanism of salt and water depletion as a serious complication in many disease conditions such as diabetic acidosis, diarrhea, severe burns and Addison's disease, and it always tends to result in a state of shock, with widespread inhibition of tissue activity. Therapy consists of the intravenous replacement of salt solution as rapidly as possible until it is evident that the complication no longer exists.

THE CAUSE OF DEATH IN HIGH OBSTRUCTION

By J. E. SWEET, M.D., NEW YORK, N. Y.

Read before the Section on Surgery at the Annual Meeting of the Medical Society of the State of New York, at New York City, April 4, 1933

THIS problem of intestinal obstruction has been actively before the profession for a good many years. The catastrophic character of the clinical picture has very naturally and very properly indelibly impressed itself upon the mind of every surgeon who has encountered a case. On the other hand the many changes involved in the body processes following an intestinal obstruction have excited the interest of laboratory workers from practically every laboratory field; with the result that an answer to the problem has been found in the field of bacteriology and in each of several of the branches of physiological chemistry, as, for instance, in disturbances in water balance due to the loss of water, in an upset in the acid-base metabolism, or acidosis, in the production of toxic products of digestion, and so forth. But the continued flow of papers upon the subject proves, if nothing else, that an answer acceptable to all the diverse interests involved, has not yet been forthcoming.

I sometimes think that much of the confusion which is evident in medical publications is because of the fact that many of the workers, particularly in special fields, are not familiar with the clinical picture as it occurs in human medicine, nor with the facts of human pathology. As I see it, all research work in medicine, no matter how abstruse, starts from the patient, and must,

if it is at all to the point, eventually revert to the patient. Thus, several things stand out, which have not always been borne in mind in research studies. First is the clinical similarity between acute pancreatitis and high intestinal obstruction, a similarity so complete that few experienced surgeons will venture a differential diagnosis. second clinical fact is that in both these conditions the picture of extreme shock is strikingly unlike the clinical picture of shock following the excessive loss of blood in one respect, namely, that the patient's mentality remains active, even hyperactive, to a time long past that at which the blood pressure reading would indicate an anemia of the brain. The first symptoms of loss of blood following a severe hemorrhage are exhibited by the brain; fainting, loss of consciousness. Clinically there is not in every case any great loss of water and salt from the body by vomiting; and conversely, there are clinical conditions, such, for instance, as Asiatic cholera, in which a much more pronounced loss of body fluid is not accompanied by any of the symptoms which characterize the picture under discussion.

In the experimental field there are two other conditions which closely simulate the picture of high obstruction. The one is acute anaphylaxis in the dog, the other is the condition produced by the complete removal of the adrenal glands.

To this group of four conditions which seem to result in a common ending may be added another more closely related finding in the experimental field. If the content of an obstructed loop is extracted with hot water, precipitated in an excess of alcohol, the precipitate again treated with hot water and reprecipitated with alcohol, a highly toxic product is obtained which, injected into a normal animal may reproduce the complete picture of obstruction. And if the intestinal eontent of an animal killed by this poison is treated in the same way a similar toxic product is found. And yet there has been no mechanical obstruction, at least, of the intestine; the possibility of a paralytic ileus cannot be ruled out. I say this toxin may produce death, because of two animals as nearly alike as can be chosen in every respect and injected with the same toxic dose, one may react but slightly, while the other may be dead within six hours.

My belief has therefore been, for a long time, that the pathological process in the pancreas, or in the intestine, is not in itself the actual cause of death, but that this process within the pancreas or the intestine starts off something in the body which, if excited to a sufficient degree, is the actual fatal process; and that this is why the operative relief of the primary difficulty as time elapses becomes less and less a curative procedure. The situation is comparable, I believe, to anaphylaxis, in which a very small dose of foreign protein sets off a fatal process in a sensitized animal.

A further experimental finding must not be lost sight of. If both adrenals are removed, the intestinal content will be found to contain the same, or a similar toxin.

There is no doubt that loss of water from the body aggravates the condition. There is no doubt that addition of water and sodium chloride is a life extending procedure. There is no question of the chemical changes in the blood which have been reported. There is, however, at the same time, I think, a fair question as to how many of these changes are primary and how many are secondary or symptomatic. The fundamental trouble seems to lie in the problem of the water balance of the tissues themselves. Perhaps it would make it elearer to consider it a condition the exact opposite of diabetes insipidus. In diabetes insipidus a lesion of some portion of the brain base, that portion of the floor of the third ventricle known as the hypo-thalamus, or of the pituitary itself, results in such a disturbance of the entire body that the cells can no longer hold their normal content of water. The result is an excessive output of fluid from the kidneys and the effort to compensate by excessive water intake, i.e., excessive thirst. The condition before us presents the opposite picture, the body eells are evidently taking up more than their normal sup-ply of water. The fluid volume in the blood vessels is therefore diminished, the blood is thickened, substances which should normally be excreted pile up in the blood, such as the non-protein
introgen. And because the blood salts are involved in the process, either primarily involved,
or merely because they are dissolved in this water,
the blood salts are disturbed and the acid hase
relationships are upset. The addition of fluid
and sodium chloride will undoubtedly help such
a condition, but I still feel that it does not follow
that the loss of water and salt is the primary and
causal factor.

We must seek this factor in the fundamental mechanism which performs the opposite function to the function of that portion of the hypo-thalamus or the pituitary which seems to control the passage of water from the tissues. All the functions of life are effected by a balancing of two forces, one exciting, one inhibiting. From the recent work upon the adrenals it seems to be conclusively shown that perhaps the main function of the adrenals is to preserve the water balance of the tissues by balancing the action of this center in the hypothalamic region. The center in the brain normally keeps water in the tissue or normally counteracts the adrenal function of withdrawing water from the tissue. When the brain control is gone, the adrenal function eauses water to be withdrawn in excess, when the adrenals are gone the brain center functions to exeess, water is drawn from the blood stream into the tissues to the extent of so called shock.

Such an idea would explain the value of sodium chloride which, by its osmotie action would tend to withdraw water from the tissues.

In this disturbance of water balance may lie the explanation for the difference which is to me so striking in the function of the higher centers in the primary shock following severe hemorrhage, and in this secondary shock under consideration. The brain function would presumably be disturbed by a loss of water from its cells as readily as by an anoxemia. In post-hemorrhagic shock, with intact adrenals, the water supply of the brain cells is exhausted by the body's effort to obtain the proper blood dilution. In this toxic shock, the water supply of the brain cells is at least maintained if not increased; hence, if merely maintained, a continuation of normal brain function, if increased, perhaps the explanation of the hyperactivity.

But perhaps, above all, there would lie in such an explanation of the processes underlying such a clinical picture, the reason for the clinical indication which becomes daily more clear, early operation before the process shall have produced irrecoverable damage to the adrenals.

The idea of a relationship between the adrenals and intestinal obstruction is to me, at least, by no means a new thought. In a paper read in 1912 the problem was discussed with particular atten-

tion to the similarities in the symptomatology of acute pancreatitis and high obstruction. In this paper I noted:

"One of the most constant pathological findings in our work has been an extensive destruction of the adrenal glands following intestinal obstruction, a picture of an acute necrosis affecting chiefly the medulla.
"The most typical symptom of the conditions I have

grouped together is the collapse and shock. Now shock is not a clinical entity. There is a shock due to central influences and there is a shock due to purely peripheral conditions. I believe the adrenals to be engaged in maintaining blood pressure by the control exercised by the specific adrenal products over the arterioles of the periphery. I believe I am right in the assumption that the shock of these abdominal conditions is a shock in which the blood pressure primarily falls. The centers, as evidenced by the continued functioning of the higher centers, are not primarily affected. After the shock in-duced by severe hemorrhage there comes first the evidence of the anemia of the higher centers, fainting and loss of consciousness. In peripheral shock the centers would remain intact until the blood pressure had fallen to a degree which would cause central anemia.

"Because the absorption of pancreatic ferments has been shown to be the cause of death in acute hemorrhagic pancreatitis, because the clinical picture of acute obstruction of the upper bowel so closely resembles that of acute pancreatitis; because the loss of the normal functions of the adrenals would explain the most striking symptoms of these conditions, the collapse and shock, and the adrenals are found to be seriously damaged in intestinal obstruction; because of the relations between the pancreas and adrenals, I conclude that the cause of death in acute hemorrhagic pancreatitis, in high intestinal obstruction and in post-operative ileus is the absorption of pancreatic products by causing destruction

of normal adrenal activity.
"I would ask your pardon for presenting an evidently unfinished paper were it not for two things; first, the final proof of my supposition demands methods and reactions not yet discovered—we are treading beyond the limits of our present knowledge."

Since the above was written, the work upon the adrenals which has been but recently published by Swingle and his collaborators² has supplied these methods and reactions not discovered in 1912, and has established the similarity between the symptoms following adrenalectomy and the symptoms of secondary shock. Some of the conclusions reached by these authors are as follows:

"(1) The function of the adrenal cortical hormone is the regulation and maintainance of a normal circulating volume of fluid within the vascular system. In the absence of the hormone, fluid is continually lost from the circulation presumably by transudation through the capillary walls, with the result that the adrenalectomized animal is unable to maintain his normal blood volume, and eventually dies from circulatory collapse due to insufficiency of circulating fluid.

(2) Accompanying the progressive decrease in blood

volume is a progressive fall of blood pressure to the death level. The decline in arterial pressure is appar-

ently a direct result of the decreased volume of circu-

lating fluid.

"(7) The blood-urea and non-protein nitrogen also vary inversely as the blood pressure. The decreased renal function, so evident during adrenal insufficiency, we attribute to the changes in circulation previously mentioned, i.e., diminished blood volume, decreased pressure, and presumably, therefore, to decreased filtration pressure and blood flow in the kidney.

"(11) It is our opinion that all the manifestations, symptoms and physiological peculiarities, which have been described as occurring in adrenalectomized animals are merely results of a progressively falling circulation due to decreasing volume of circulating fluid, in an animal which is unable to compensate (as do normal animals) for its low blood volume and blood pressure by

dilution

"(12) The striking similarity between the symptoms of adrenal insufficiency and those of traumatic or secondary shock, as reported in the literature for man, is too obvious to be ignored. The cardinal features of traumatic shock are likewise the cardinal features of adrenal insufficiency—viz., the depleted blood and plasma volume, lowered arterial pressure, hemoconcentration and inability to dilute the blood (uncompensated human cases). The really essential point in secondary slock is failure of the blood-diluting mechanism and loss of power to increase the blood volume. This is also the primary cause of the symptoms of adrenal insufficiency."

When I have weighed all the evidence which I have but briefly outlined here, I come to the conclusion that the cause of death in high intestinal obstruction is adrenal failure. You may say this is but begging the question, merely changing it so that it now reads, "what is the cause of the cause of death in high obstruction." I grant this, but I might point out that an explanation of the complex changes which occur in the body, the loss of water, the loss of sodium chloride, the blood concentration, the increase in non-protein nitrogen and so forth, and so forth, being offered by the loss of the function of the adrenals in controlling the water balance of the body, leaves us, perhaps, more free to pursue the essential problem.

I am personally satisfied that a toxic substance perhaps histamine-like, not normally found in the intestinal tract arises under the conditions of obstruction—that this toxin injures the adrenals, but the intestine of an animal after bilateral adrenalectomy without obstruction seems to contain the same toxin. A vicious circle is set up in which the greater the injury to the adrenal, the greater the production of toxin. Therefore, unless the removal of the primary cause, namely the relief of the obstruction be carried out before the adrenals are too far gone, this vicious circle between the adrenal and the intestine may continue. with the result that the operation accomplishes no

purpose.

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DISCUSSION OF PAPERS OF DOCTORS ATCHLEY AND SWEET By SAMUEL STANDARD, NEW YORK CITY

WE have here two papers both dealing with the same subject. Both are concerned with a cause of death, both look for this cause beyond the field of involved intestine to some secondary factor or factors ultimately responsible for death. Both postulate a functional death arising from a precedent organic derangement. Although traveling along the route of a common idea, each finds his destination remote from the other. Doctor Atchley adhering to factual findings in the blood chemistry during the progress of the disease following it in its development, its maintenance, and its subsidence finds, he believes, sufficient evidence to determine the functional derangement of the disease, a method of controlling this derangement, and an explanation for death.

Doctor Sweet recognizing a common clinical syndrome in intestinal obstruction, acute pancreatitis and bilateral adrenalectomy, assumes a common etiological factor, namely,

adrenal insufficiency.

Since Doctor Sweet's deductions are elinical, we most look to post-mortem findings for evidence of adrenal injury following death from intestinal obstruction. We have had none on the Third (New York University) Surgical Division at Bellevue Hospital. The assumption of a common etiological factor because of a clinical similarity is always a dangerous one. A well known example is the common syndrome associated with increased intracranial pressure which, however, gives us no clue as to the underlying pathology producing it. To postulate a toxic substance of unknown origin with the difficulties involved in proving or disproving it, leaves no open path for progress. It appears much safer to work on factual findings today, and if, ten years from today these are found to be wrong our change of opinion would constitute so much progress.

The changes in blood chemistry that Doctor Atchley mentions do occur. They are obvious with marked vomiting, and where vomiting

does not occur, Gamble has well explained the loss of fluid base and chloride by the presence of unabsorbed fluid within the intestinal tract which for physiological purposes is beyond use because it cannot be absorbed. The acceptance of the disturbance in salt and water metabolism as a basis for the clinical syndrome in intestinal obstruction offers less perhaps diagnostically than therapeutically. Our present knowledge in bio-chemistry is insufficient to apply quantitatively to complex reactions within the body. Our explanations, therefore, for the fall of chloride, fall of base, rise in non-protein nitrogen and loss of fluid may be considered incomplete. However, the fact is that these findings do occur and the more important fact is that if we replace these losses clinical improvement follows. I should like to stress the point that Doctor Atchley also emphasized, that the body cannot retain water without salt. This is an important concept in the parenteral replacement of fluids,

With an intact renal function the kidney may be expected to select for retention or excretion those substances needed or not needed by the body provided a sufficient amount of water is available for adequate urinary volume. On this basis Hartman and Ellman have suggested the use of their "combined solution" which may be administered in alkalosis or acidosis leaving it to the kidney to achieve and maintain the homeostatic equilibrium in the

blood stream.

It is a significant indication of the general trend of surgery to have this section on surgery opened with a paper dealing with fundamental physiological concepts in blood chemistry and in endocrinology. It arouses the thought that the surgical patient is being considered more and more as a complete physiological problem, with a short interim of the surgical procedure as part of his treatment. The time before entering the operating room and after leaving it is taking on the importance it deserves.

THE TREATMENT OF INTESTINAL OBSTRUCTION By JOHN J. MORTON, M.D., ROCHESTER, N. Y.

From the Department of Surgery, the University of Rochester School of Medicine and Dentistry, Rochester, New York, Read before the Section on Surgery, at the Annual Meeting of the Medical Society of the State of New York, at New York City, April 4, 1933.

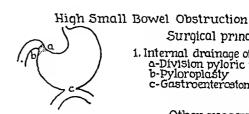
ANY surgeon can be rightly proud of a low mortality rate in his operations for intestinal obstruction as it is a testimonial to his diagnostic ability, technical skill, and surgical

judgment. There is no condition which calls for more critical analysis of symptoms and signs in order to arrive at an early diagnosis. There is no surgical problem which demands more versatility in the technical handling of it. And finally there is no place in surgery where correct surgical judgment gives a response more surely; or where faulty judgment is more certainly followed by disaster.

The treatment of intestinal obstruction can be divided into that for the mechanical forms i.e., high small bowel obstruction; low small bowel obstruction; strangulation obstruction; and obstruction to the large bowel; and that for the paralytic type of obstruction.

The high small bowel mechanical obstructions are well illustrated by the complete blocks at the pylorus as noted in hypertrophic stenosis in the new born, or the obstructions to the stomach in ulcer or cancer. These conditions are associated with dilatation of the stomach; persistent vomiting with loss of fluids and essential salts, leading to dehydration, demineralization, and to shifts in the acid-base balance of the body, either toward an alkalosis or an acidosis. There is also a deficiency in absorption of foods which causes depletion of the energy storehouses of the body and undernutrition. The problem in these cases is to provide internal drainage for the dilated viscus; to restore the loss of water and salts to normal. levels; to bring about equilibrium in the acid-base balance; and to supply quickly absorbable energy producing food stuffs. Internal drainage of the stomach can be obtained by division of the pyloric ring, by some form of pyloroplasty, or by a gastroenterostomy. The mere internal drainage of this viscus will help to restore the water and salt balance, but studies of the blood chemistry will give valuable information in regard to the special needs in a given case. Normal physiological saline, Ringer's or Hartmann's solutions can be introduced into the body by several different These normal solutions are much to be preferred over any hypertonic intravenous medi-However, sodium chloride salt can be supplied rapidly by giving a 2% solution by hypodermoclysis or a 3% or 5% solution intravenously. Intravenous hypertonic solutions such as this should be given very slowly—500 cc. of 5% solution should take over one hour to administer. Also since an increased secretion into the bowel and an active stimulation of peristalsis results from such medication it should never be used until the viscus has been decompressed. To supply nutrition in an easily assimilated form a 25% solution of glucose intravenously is probably the most useful method. 250 cc. of a 25% solution can be injected every 4 to 6 hours, taking about one hour for each treatment. If given more rapidly a portion is lost in the urine. Glucose can be given by proctoclysis in 5% solution although there is a dispute as to whether it is completely absorbed by this route. In some cases it may be necessary to give glucose subcutaneously. can be done in a 2% solution. Glucose should al-

ways be given with saline and usually also with By itself, it inhibits peristalsis, pulls fluids from the tissues into the blood, and causes stimulation of the kidneys to increased output of salts and water, all of which effects are harmful. (See Figure 1.)

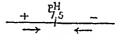


Surgical principle 1. Internal drainage of viscus a-Division pyloric muscle b-Pyloroplasty c-Gastroenterostomy

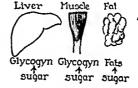
Other measures

salts l and water Normal level calls THE स्रवास Depletion

2. Fill up salts and water reservoir a-Subcutaneous) Normal salt sol b-Intravenous Ringer's c-Rectal Rartmann's



3. Establish acid base equilibrium a-Prevent loss by vomiting b-Supply acid or basic ions as necessary



4 Fill up food energy reservoirs a-intravenously Sugar b-Subcutaneously + Insulin or c-Rectal

FIGURE 1

The low small bowel obstructions differ from the high small bowel obstructions in the fact that the small bowel is suspended on a mesentery which may at any time lead to partial strangulation by twisting or kinking. In this sense a low small bowel obstruction can refer to any loop from the ligament of Treitz to the ileo-cecal valve. This condition is associated with distention and dilatation of some loop or loops if seen early, but usually by some dilatation all the way to the duodenum as the early diagnosis is rare. Distention in itself is accompanied by diminished absorption, increased secretion, and slowing or stoppage of the circulation through the loop. There results thus a loss of fluids and essential salts varying with the amount of vomiting or with the amount of dilatation of the loops with their trapped secretions. A large quantity of fluids and salts can be stored in these hugely dilated loops and it is just as much lost to the patient as if it had been vomited. Demineralization, shifts in the acid-base balance, and deliydration may thus be expected in these cases. There is also an upset in the nervous mechanism which is not yet clearly understood. In the late stages of these obstructions frequently there are areas of focal necrosis in the bowel wall which theoretically can expose the capillary bed to poisons within the loops. The patients, too,

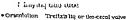
certainly appear toxic in the later stages but the evidence for a toxin is as yet meagre. The problem in these cases is to decompress the distended loops; to restore the salt and water loss; to reestablish the acid-base equilibrium; to replenish the food energy reservoirs; to return the bowel to its normal functions; to compensate for the plasma loss from the blood; and to overcome the toxaemia. Decompression of the distended loops can be brought about in a number of ways, but of the first importance to the surgeon is a definite orientation so that he does not fumble about first in one direction and then in another. To get orientation in a small bowel operation, it is necessary to start at some fixed point. The ligament of Treitz and the ileo-cecal valve can serve this purpose. The surgeon thus can either start above and trace down the distended bowel, which is the method usually taught. Or he can better start below and trace up the collapsed loops. avoids trauma to the distended loops, makes for little handling of them, and brings the operator quickly to the lowest obstructed point. The distended bowel can be decompressed by release of the obstruction in the majority of cases. In complicated multiple obstructions a lateral anastomosis around the obstruction between a distended and collapsed loop is often the simplest and best solution. Low enterostomy with slow graded decompression has been recommended in the late cases, the tube being alternately clamped and released for withdrawal of small amounts of material. After a period of such treatment when the patient's condition has improved the obstruction can then be managed surgically with more safety. In my opinion this step is very seldom necessary because in the late cases there is always some degree of paralytic obstruction as well and even when the obstruction is released it may take two or three days for the distention to subside, thus in essential preserving the principle of a graded decompression. High enterostomy in the upper iejunum has also been advocated. We believe that this part of the intestine can be just as effectively handled by an inlying duodenal catheter kept in place or replaced from time to time as necessary. Enterostomy below the obstruction for the introduction of therapeutic solutions can at times be employed. Introduction of salt solution and glucose in sufficient quantities as discussed previously will serve to do almost everything else that is necessary. Blood transfusion also is very valuable for bringing about more normal blood relationships and for counteracting the shock and toxic symptoms. The restoration of the bowel to its normal activities can usually best be left to its own natural return of function. This point should receive emphasis, too much forcing or tampering on the part of the physician often produces more harm than good. In case that the peristaltic action does not seem likely to return perhaps the best stimulation we have is

the intravenous injection of hypertonic salt solution, 20 cubic centimeters of a 10% sodium chloride solution being used. This should take five minutes to administer. It can be repeated two or three times if necessary. A larger hypertonic sodium chloride solution can be employed if the blood chlorides are much reduced. In such a case 500 cc. of 5% sodium chloride can be given intravenously over a one hour period. The application of heat to the abdomen is often very useful in promoting peristalsis. It can best be applied by electric light and cradle. At times hot stupes or hot water bags or an electric pad will serve the purpose but all these must be carefully watched by the nurse. All food and fluid should be withheld by mouth until normal peristalsis has been resumed. It is often useful to leave an inlying duodenal tube to keep the stomach and upper bowel decompressed and to save the patient from vomiting until the normal peristaltic activity is reestablished. As far as drugs are concerned we believe, that in most cases the more drastic stimulants do more harm than good. On rare occasions small doses of physostigmine or eserine may be of help. Morphine should be discontinued as soon as possible after operation as it may cause diminished and even reversed peristalsis in some patients. A mild cathartic such as milk of magnesia or citrate of magnesia is often serviceable after the reaction to operation has subsided. Mineral oil may also be used to advantage during this same period. In late cases of obstruction, there is so much derangement of the normal relationships of salt, plasma, and fluid balances or perhaps toxaemia, that there is often little that we can do to change the picture. The patient is already overwhelmed by these changes when he is first admitted and as far as medicine is concorned he is too late for help. (See Figure 2.)

Low Small Bowel Obstruction

Surgical principle

• L Decompress obstructed loops



Other measures 2 Fill up salts and water reservoir

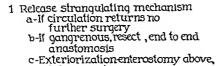
- 3 Estoblish acid-base equilibrium
- 4 Fill up food energy reservoir
- 5. Restore bowel function &-Hypertonic salt sol b-Insulin & glucose e-Mild cothartic drugs
- 6 Restore blood volume Fluids
 and balance Transfusion 7 Combat toxemia

FIGURE 2

Strangulation obstruction requires early diagnosis if anything is to be accomplished. Fortunately, the strangulated hernia is usually being recognized early enough by the profession and by the laity. The internal strangulations, on the other hand, still furnish a good share of fatal In strangulation obstruction the great danger is necrosis, gangrene, rupture and peritonitis. There is also supposed to be absorption of toxins from the strangulated loops. There is very little change in the chemistry of the water and salts of the blood but the non-protein nitrogen may be high. There is a decided fall in blood volume and loss of blood plasma into the loops The surgical problem in all in some cases. strangulation obstructions is to release as early as possible the strangulating mechanism. If the circulation returns into the bowel no further surgery is necessary except repair of the wound. borderline cases, past experience often is of the greatest assistance to the surgeon in judging the viability of the bowel. In case there is no evidence of returning circulation or in case of doubt it is safer to resect the gangrenous loop well beyond the damaged tissue and then perform an immediate end to end anastomosis. The anastomosis can be made safely in bowel which has a normal glistening appearance, a good circulation, and an active response to stimulation. Accurate placing of the sutures into the submucosa, with a minimum of diaphragm at the anastomosis and approximation of serosa to serosa are essentials in the technic of this procedure. The anastomosis can be made by the closed (Parker-Kerr basting stitch), or open methods, and silk is the suture material of choice. When the condition of the patient is critical, the gangrenous bowel can be exteriorized and an enterostomy performed above the damaged loop. After the condition has improved, a later operation can be done more safely. In theory this manoeuver should be useful but in practise it seldom is. Focal

Strangulation Obstruction

Surgical principle



later resection

Other measures 2 Restore blood volume

a-Blood transfusion b-Salt and glucose

3. Combat toxemia Figure 3

necroses can be turned in under mattress sutures. Supplementary therapy in strangulation obstruction consists in restoring the plasma volume and in combating the toxaemia. The plasma volume is often markedly diminished. It is best restored by transfusion. When a donor is not readily

available the next best measure is to supply glucose and salt solution. There is usually no change in the blood chlorides in strangulation obstruction and there is no necessity for treating for dehydration, demineralization or changes in the acid-base balance. No specific therapy has been devised for the treatment of the toxaemia which is assumed to be present in these cases. (See Figure 3.)

Obstruction to the large bowel varies considerably with the location of the obstruction. In cancers of the cecum and those of the rectum complete obstruction is rarely observed because it is over-shadowed by other symptoms before it reaches that stage. Profound anemia, weakness, loss of weight and strength, a palpable mass and bleeding from the bowel, all serve to call attention to some major disease process. The obstructions in these types are usually only partial for this reason. It is surprising, also, how small a lumen may remain through these growths without evidence of complete obstruction. In contrast, the annular, napkin ring carcinomas of the transverse colon, of the descending colon, and of the recto-sigmoid junction often give rise to complete obstructions. The principles of the treatment of obstructions to the large bowel from other causes do not differ from those for carci-Volvulus, an exception, should be considered as similar to strangulation obstruction, and should be treated accordingly without fur-

In a complete or nearly complete obstruction to the large bowel there will be distention and stasis in the bowel above the obstruction, backing up of material in the small bowel, loss of appetite, failure to assimilate food; loss of weight and strength; and often anemia and infection when an ulcerative lesion is present. The surgi--cal problem is first to decompress the distended bowel above the obstruction. This can be done either by an external opening,—cecostomy or colostomy; or an internal anastomosis around the lesion,—ileo-colostomy or colo-colostomy. If the condition which caused the obstruction is inoperable, a permanent external or internal colostomy is all that can be offered. A permanent external colostomy should be as simple as possible in its execution. It can be placed in the left external rectus muscle about one inch below the level of the umbilicus; or through a small oblique incision half way between the anterior superior spine and the umbilicus, when the obstruction is in the rectum. If the inoperable obstruction is elsewhere in the large bowel, an internal anastomosis around it can always be performed and is preferable. Patients should be given instruction in the care of a permanent colostomy as it will make a great difference in their comfort. Following operation the colostomy opening should be irrigated daily so that it may be cleansed and free from irritation. With care the bowel can be trained to have

one evacuation daily so that a small dressing ean then be applied without elaborate apparatus Some patients prefer to empty the colon by an enema every morning, and can thus be sure of freedom from discomfort during the day elastic webbing band, as it gives with the motions of the body, is important in maintaining the dressings accurately and snugly over the colostomy opening If the condition is operable, the next problem is to build the patient up by high caloric foods, liver extract, iron, and transfusion, as necessary There is no hurry about getting these patients ready for the next stage of the operation which usually means a resection of the diseased bowel segment A mild cathartic and rectal irrigations twice daily with warm saline will serve to keep the large bowel well emptied and will allow infection to subside Mixed vac cines of streptococci and colon bacilli have been advocated by intraperitoneal injection 72 hours before operation We have not had enough experience with this procedure to be sure of its It is certain, however, that once the peritoneum has been infected in a preliminary operation the patient acquires a decidedly enhanced resistance to subsequent procedures. The bowel usually in such cases can be opened with impunity as the peritoneum will care for considerable soiling without trouble. Resection can be either primary with end to end anastomosis, a two or three stage Mikulicz procedure, or modifications of the above The dangers from any anastomosis in the large bowel are leakage from the suture line, fistula, and peritonitis For these reasons the ex-

Lorge Bowel Obstruction

Surgical principle Decompress proximal bowel
 a External Cecastomy
 Colonomy

b Internal Anastaround obst (Cobcalostom)

Other measures 2. Restore blood volume Transfusion Combat anemia Trans its on Liver extract Liver Bu ld up reserve High coloric dict Transitusion Mechanical cleansing

Fremas Co onic irrigation Periloneal immun zation Hazed cultures

7 Resection a End to end anast Mikulicz c Modified procedures of asb

FICURE 4

ternal types are preferred as safer by most sur geons The internal anastomoses can be walled off by introducing drains to the neighborhood or by plastic procedures with the omentum about the suture line Surgeons of large experience can be so unorthodox as to do a primary resection with immediate anastomosis without a preliminary or any other colostomy, but this is unsafe for the

average man The convalescence is likely to be over a long time in all cases Transfusions after operation and general tonics are indicated (See Figure 4)

Paralytic obstruction from any cause is associated with dilutation of portions of or of the whole gastro intestinal tract. There is no peristalsis present, the secretions accumulate, distention increases, respirations become embarrassed, the pulse gets weak and rapid, and symptoms of shock appear The problem in these cases is to make the controlling nervous mechanism function As far as surgery is concerned there is nothing to offer except enterostomy which ordinarily is a futile gesture. The therapy consists in trying to stimulate peristalsis. This is helped by reducing distention of the upper abdominal gastro intestinal tract by introducing a duodenal tube and leaving it in place for siphon drainage. This also relieves pressure on the diaphragm and eases the respirations Enemas of various types and rectal tubes may take away the distention of the lower bowel Heat should be applied to the ab The patient should be moved about frequently, rolled from side to side, or even made to lie on his abdomen These shifts in position are sometimes useful Hypertonic salt solution, pituitary extracts, eserin and other stimulating drugs may at times be of use but just as often may eause a deleterious reaction Spinal anesthesia occasionally brings about an almost miraculous relief It should not be used for toxic paralytic obstruction or for patients who are in criti-The only difficulty with spinal cal condition anesthesia is in predicting what it will do There is no way to judge this and consequently we are always uncertain as to the result until it is actually tried Splanchnie anesthesia, a more ideal procedure, requires considerable skill and practise in its application Consequently it is ruled out for the average clinic. Fluids and salts can be supplied as necessary subcutaneously or intravenously (Se Figure 5)

Paralytic Obstruction

Surgicol principle

Moke nervous mechanism function properly a-Enterostomy b Inlying duodenal tube Other measures

2 Heat to abdomen Cradle & light Stupes Hot water bags Electric pad 3

Chonge of position

Supply fluids & salts

Spinal onesthesia

Splanchnic onesthesio

FIGURE 5

The choice of anesthetic is important. If possible the inhalation anesthetics should be avoided in the average patient. Ether may cause retching and vomiting at the time of operation or follow-This is a reversal of the gradient of intestinal motility. The danger of aspiration during operation is a real one. There may also be hypoventilation of the lung bases following operation but this can be minimized by rebreathing carbon dioxide at the close of operation. Ether is also recognized as dangerous in the shock states although in small doses it stimulates the cardiac output. In early cases of obstruction it can be used to get relaxation. Nitrous-oxide-oxygen and local anesthesia will often be of service. Spinal anesthesia gives excellent relaxation, and would be ideal if the fall in blood pressure could always be effectively counteracted. Ethylene and nitrous oxide-oxygen alone do not give sufficient relaxation, requiring much more handling of the bowel when they are employed. Avertin gives a drop in blood pressure and insufficient relaxation unless supplemented by local infiltration. Local

abdominal block is excellent in some instances Hyperventilation should be a routine following operation no matter what anesthetic has been used.

Finally, surgeons should take into consideration prophylactic measures against intestinal obstruction whenever a laparotomy is performed. The peritoneum should be handled gently and large crushing bites with curved clamps should not be taken to expose the peritoneum for closure. These injuries cause necrosis and invite adhesions with the small intestinal loops in their neighborhood. The peritoneal closure should be accurate in as thin a line as possible. Drains, when they are used should not be carried across the small intestinal loops but should be led out by lateral stab wounds. Omentum should be utilized to cover in any raw areas to which small intestine might adhere. Amphetin, which has been advocated intraperitoneally for the prevention of postoperative adhesions, has not proved satisfactory in our clinic for those patients who have a tendency to repeatedly obstruct.

Discussion

Dr. Alexander Nicoll, New York:

In all types of obstruction the distention of the stomach by fluid contents is a matter of grave danger. Dr. Morton has pointed out that these fluids—toxic or not—have already been lost to the organism; their mere presence in the stomach and upper intestine is incredibly shocking to the patient, and the response of the patient to their removal is always definite, and frequently remarkable; the place for them is OUT. An indwelling duodenal tube is excellent provided the patient can accommodate himself to it-and provided close observation of its patency is possible. Frequent gastric lavage for the patient in whom the duodenal tube is ill borne is often a life saving method of treatment in the first 48 hours after operative relief of the obstruction. ever method is used the stomach MUST be kept

I believe that these patients suffer from a real toxemia, and to combat this condition and supply both fluids and salts it is my feeling that the use of normal saline is without superior; there is no way to compare with intravenous infusion, and the addition of glucose to the saline appears to be relatively unimportant; when glucose is used it should be balanced with insulin. Normal saline by the intravenous method is my first love, I am wedded to it—and remain faithful.

In speaking especially of small intestine obstruction Dr. Morton recommends approaching the obstructed point by the method of tracing upward the collapsed loops. This is quite contrary to the usual procedure, and has such obvious advantages that I want especially to thank him for a valuable suggestion.

In the matter of obstruction with strangulation I would like to add a word of extreme conserva-Resection is to be avoided if at all possible, for two major reasons: (1) the patient is in the poorest possible condition for extended surgical procedure and (2) resection of bowel loops which seem to be thoroughly devitalizedif not actually necrotic—is frequently not necessary. The power of Nature to repair dull, thick, flabby, inert loops of intestine in hernial sacs containing cloudy fluid of foul odor has been demonstrated to me a sufficient number of times to make me feel that when the surgeon is faced with a situation in which the pathology is such that the balance for and against resection appears even—it is well to remember that Nature has been doing some remarkable repair work much longer than any of us have.

In regard to large bowel obstruction: We see a class of case in this city—perhaps especially in the city hospitals—admitted with definite intestinal obstruction, in patients past 45, in which it seems probable that the obstruction is due to carcinoma of the large bowel. The patient has been too long without medical attention and it is obvious that no more than a palliative colostomy may be done. It is the custom on some services to proceed to a simple colostomy without formal exploration. I think this is a mistake and that in the long run it is wiser rapidly to explore under spinal anæsthesia in order that the future treatment of the patient may proceed based upon a diagnosis more definite than that of mere intestinal obstruction.

Concerning anæsthesia, I would like to quote

Doctor Morton verbatim, 'The only difficulty with spinal arresthesia is in predicting what it will do". My orders, at the moment, on my Division at Fordham Hospital, are that spinal anæsthesia shall be used only when there is a definite contraindication to the use of inhalation an æsthesia. In spite of my distrust of spinal anæsthesia, and my fear of it—which I acknowledge—I believe that it is well used in intestinal obstruction—other than that due to strangulated

lierma The perfect relaxation which spinal an asthesia gives makes exploration easy, quick, and gentle and permits good closure of the operative wound with minimum extrusion of intestines and resultant replacement trauma. The ideal anses thetic lies in the future it will, perhaps combine the pleasant and gentle induction of avertin, the perfect relaxation of spinal, and the safety of other

THE NON-OPERATIVE TREATMENT OF RENAL PATHOLOGY

By HENRY G BUGBEE, M D , NEW YORK, N Y.

I resented before the New York County Medical Society, May 1st 1933

THE treatment of kidney pathology is so closely associated with the etiology, pathological changes, symtomatology, and diagnosis, of renal lesions, that even an outline of treatment directed toward its relief would be inconsistent, were not, at least, a brief reference made to these aspects of the subject

The structure and function of the kidneys are such as to render them particularly susceptible to pathological changes, and especially to infections. Composed of minute tubules of great length and tortuosity, their secretory filters lying in close apposition and surrounded by a dense network of fine capillaries, the kidneys are called upon to climinate the waste products of the body in health and disease

From their anatomical position in close relation to the abdominal viscera and peritoneum, with their intimate blood, lymphatic, and nerve supply, and the association of urinary with other body functions (especially of the circula tory, respiratory, and gastro intestinal sys tems) they are susceptible to a variety of pathological changes which are not always detected, correctly diagnosed, and easily treated Pathology in other parts of the body may give rise to symptoms referable to the urinary tract, and renal pathology may cause symptoms in other parts, so that the kidneys must be borne in mind in treating any con stitutional disease studying distant pathol ogy, and the various disturbances of body function

Pyogenic Infection

The more important symptoms which lead one to suspect kidney pathology, are pain, local tenderness, disturbances of urinary function, pyuria, hematuria, bacteriuria, and the presence of an abdominal tumor

The most common type of renal pathology

is that due to pyogenic infection. That infections of the kidney are not more common is, in part, due to the fact that the kidneys, through the endothelial cells of the capillaries, possess a remarkable phagocytic action by means of which they dispose of large numbers of bicteria

Much recent experimentation his been car ried out with the object in view of ascertaining as to whether the healthy kidney climinates bettern, and the observations of Helmholz and others who injected animals with various bettern, — colon, streptococcus, stephylococcus and virdnis—recovering the urine from the bladder with a pipette, through a suprapuble cystotomy, after searing the bladder wall, showed that bacteria were not present in the urine from healthy kidneys, although colonies were found in the glomeruli and in the capillaries between the tubules, thus sustaining the results of experimentation carried out by earlier investigators

An overwhelming dose of bacteria may reach the kidneys, and give rise to an acute bilateral infection, but contributing causes are often necessary to produce kidney infections most important of which are obstructive in terference with the outflow of urine at any part of its course, general and focal infections, trauma congestion from exposure, and the

presence of a foreign body

Any infection, local or general, may be a contributing factor, the injection, intravenously, of organisms obtained from abscessed teeth have produced kidney infection while infections of the tonsils sinuses, and the presence of boils and carbuncles have frequently been noted. Following the influenza epidemic of 1918, the writer reported a series of cases of acute pyelonephritis secondary to this infection. A lowering of resistance in the kidney with the introduction of bacteria seems to be

the requirement, rather than a specificity of

certain bacteria for kidney tissue.

Investigations have shown that the colon bacillus is the most frequent cause of renal infection, being present in from 60 to 89 per cent of all cases, either alone, or associated with other organisms. It is found in an acid, occasionally neutral urine, appears in a variety of forms, and may produce a mild bacteriuria or complete destruction of kidney tissue. Staphylococcus aureus and albus are next in order of frequency, followed by bacillus proteus vulgaris, typhoid, streptococcus, gonococcus, pyocyaneus, and influenza.

While bacteria may gain entrance to the kidney by the ascending route, i. e., through the ureter, often aided by bladder reflux; or by the ureteral lymphatics; by direct extension from the bowel or inflammatory foci; or direct extention from the bowel through the lymphatics; nevertheless the most common mode of infection is descending, or through the blood

Cocci infect the glomeruli, producing suppurative areas with cortical abscesses which may even extend outside the kidney with the formation of a perinephritic abscess; while, in colon bacillus infections, the organisms are excreted into the tubules and extend into the pelvis spreading the infection and rapidly appearing in the urine.

Types of Infection

The most common types of renal infection may be classified as acute and chronic pyelonephritis, infected hydronephrosis, and pyonephrosis; other less common and more severe types are acute pyaemic kidney, focal suppurative nephritis, infected infarcts and carbuncles.

In acute pyelonephritis, the organisms, in the majority of instances, gain entrance through the blood stream, give rise to inflammatory reactions in the glomeruli, invade the tubules giving rise to a medullary nephritis which extends to the pelvis. If drainage of the pelvis is maintained, the constitutional reaction and pathological changes in the kidney will be slight; but if obstruction to the urinary outflow takes place, localized or general suppuration may ensue. Retention through back pressure upon the secreting surface of the kidney, if allowed to remain, or not spontaneously relieved, gives rise to serious pathological changes in the kidney. This picture represents the so-called acute pyelitis. If retention in the kidney pelvis is already present and infection ensues, the condition is known as an infected hydronephrosis. If the obstruction is not relieved, a marked or complete destruction of the kidney takes place, pyonephrosis being the result. Thus, it will be seen that whether one is dealing with an acute pyelonephritis, infected hydronephrosis, or pyonephrosis, depends upon the extent and duration of the urinary obstruction.

Acute pyaemic kidney constitutes part of a general pyaemia. Focal suppurative lesions, often spoken of as septic infarcts, are unilateral; the kidney is enlarged, the areas may be multiple, and necrosis may take place; resolution, however, is the rule.

The symptoms of kidney infection vary according to the type of infection, and especially the secondary conditions present. They may be slight or fulminating reactions, or may be masked by a general toxaemia; or, in chronic infections, there may be no symptoms pointing to either kidney, the condition frequently being discovered through urinalysis.

Acute Pyelonephritis

The most frequent type of acute kidney involvement is acute pyelonephritis. The patient, following an infection of a tooth, sinus, the intestinal or genital tract, influenza, or furunculosis, as a result of some obstruction to urinary drainage, or, possibly without any of these predisposing conditions, is suddenly seized with a chill, fever, pain in the loin, local tenderness, the kidney may be palpable, and abdominal distention and constipation are usually present. There may be no pus in the urine and no bladder symptoms. If untreated, there is little remission for several days to two weeks, the temperature fluctuates, the pulse is seldom high, leucocytosis low, and sweats are common.

At this stage, rest in bed, a limited diet, thorough clearing out of the intestinal tract, and a complete flushing of the urinary tract with water are the indications. Water should be given by mouth, by rectum, and, if necessary, under the skin and in the veins. Alkalies may often be administered with benefit, through promoting diuresis and by changing the reaction of the urine, inhibiting the growth of the colon bacillus. Urinary antiseptics have comparatively little value at this stage. Urotropin, sometimes effective, may, on the other hand, cause kidney congestion or vesical irritation, and the analin dyes and balsams may be more efficacious during the acute stage.

If the local symptoms of pain and tenderness do not subside and the temperature drop, the indication is to establish drainage, and for this purpose nothing takes the place of the ureteral catheter. The response is almost instantaneous. Pressure upon the kidney is at once relieved; there is a cessation of septic absorption; and the catheter may be retained for days, during which time the kidney pelvis may be irrigated at frequent intervals.

With a subsidence of the local symptoms,

and a drop in temperature—which usually denotes the establishment of kidney drainage—pus, blood cells and bacteria appear in the urine, and frequency of urination and dysuria become pronounced symptoms. In the absence of urinary obstructions, acute infections have a tendency to subside spontaneously, or under medical treatment. If associated with obstructive lesions which are not relieved, they tend to progress toward complete kidney destruction after a long intermediate stage of chronic infection.

Chronic Pyelonephritis

In chronic pyclonephritis the infection is usually bilateral, the urine may show a bacteriuria or pyuria; there may be little febrile reaction; frequency and dysuria may be present, slight, or absent. Seldom is renal pain present except in cases of urinary obstruction or calculus. The symptoms and progress of the disease depend largely upon the interference with drainage, and, in this type of infection, not only is it essential to eliminate any possible extraurinary focus of infection, encourage climination from the intestinal tract, and build up the general body resistance, but, with the accurate methods of diagnosis available, a complete investigation of the urinary tract is most essential to determine the possible presence of obstruction to urinary drainage. By means of cystoscopic examination, ureteral catheterization, urinalysis, functional kidney tests, pyelography and intravenous urography, light may be thrown upon the subject which will lead to the adoption of measures which may save the kidney and clear up the infection. The majority of the instances of pyonephrosis represent neglected cases, often the result of prolonged medical treatment. Symptomless pyuria usually means upper urinary tract infection, and if the cause of the infection cannot be definitely localized in the lower urinary tract or genital tract, the kidneys should be investigated at

In chronic renal infection, repeated catheterizations and ureteral dilatations may prove beneficial: the removal of calculi which may be causing obstruction, the relief of pressure upon the ureter, and of obstruction of the lower urinary tract, are essential in promoting a cure. The removal of abscessed teeth, infected tonsils, the drainage of sinuses, increased elimination from the intestinal tract, the cure of localized suppurations, as a boil, or carbuncle, may result in the clearing up of the kidney infection. Flushing with water is essential, and urinary antiseptics and changes in the reaction of the urine are often more beneficial than in acute infections.

Vaccines are of doubtful value; intravenous medication is well worth trying in obstinate cases, and for this purpose Uritone, Arsphenamine and Mercurochrome have been employed.

Infectious in Children

The same types of acute and chronic infections of the kidneys are encountered in

children, in the following groups:

(1) in previously healthy infants, particularly girls, the colon bacillus being the most common infecting organism, there is the same train of symptoms; the intestinal reactions, however, are often more severe than in adults. (2) In poorly nourished infants, associated with other infections, the symptoms often being masked by the original condition, and (3) Recurring and persistent infections secondary to urinary obstruction usually due to the presence of congenital anomalies of kidney, ureter, bladder, or urethra.

The treatment of acute and chronic infections of the kidney in infants and children is the same as in adults; the tendency is, however, because of the more indefinite picture, and a hesitancy to submit them to instrumentation, to prolong medical treatment, when a complete urological investigation could be carried out with just as much safety and with as satisfactory a result, as in adults, and might demonstrate an underlying lesion which would prohibit a cure by such means.

Infections During Pregnancy

Renal infections during pregnancy are comparatively frequent. Retention of urine in the renal pelvis due to pressure upon the ureters—by the enlarged uterus—usually more marked on the right side—is present in most cases of pregnancy, and is more pronounced from the fifth to the seventh month.

Acute infection, presenting all the characteristics of acute pyelonephritis, may appear suddenly, should be treated as other cases of acute renal infection, and no hesitancy should be felt in establishing ureter catheter drainage if relief is not obtained promptly through or-

dinary medical measures.

Septic Infarcts

Cases of focal suppurative nephritis and septic infarcts are acutely ill and toxic, the symptoms are severe, and enlargement and tenderness of the kidney will be noted, with few urinary symptoms. Although nephrectomy was originally advised for this condition, it will usually subside under palliative measures.

While carhuncle of the kidney is a severe type of infection, it is not as acute and ful-

It occurs minating as the septic infarcts. subsequent to opening a boil or carbuncle in some part of the body, is a coccal infection, and may involve a considerable amount of Urinary symptoms may be kidney tissue. slight, and it must be differentiated from acute embolic kidney and renal abscesses. The treatment is surgical.

Perinephritic Abscess

Perinephritic abscess may be acute or chronic, and occurs spontaneously or in association with an acute or chronic kidney infection. A sudden rise of temperature, with progressive pain in the side, a gradual enlargement and tenderness with even swelling and redness in the loin, and a leucocytosis, together with x-ray findings which show a loss of the psoas outline and a curvature of the spine with the convexity away from the affected side, make the diagnosis clear. Often, however, the symptoms and physical findings are largely absent or obscured, and its presence is not discovered until the process has become extensive and may have caused severe damage to the kidney.

In cortical infections of the kidney, urinalyses may be negative, but the kidney is often enlarged and tender; temperature and chills are commonly present, and diminished renal function will be noted.

Pyonephrosis is primarily a surgical disease; its presence should be recognized and it should be treated as such.

The Rôle of the General Practitioner.—Much can be done by the general practitioner, in the prevention of renal infections, by recognizing their frequent occurrence, the many elements entering into their etiology, and, through regular health examinations, to detect, and, in so far as possible, eliminate such factors. This should lead to the removal of all foci of infection, regulation of intestinal function, increased elimination, brought about by changes in diet; increased fluid intake, regulation of the habits of individuals; and by the examination of sterile specimens of urine (catheterized in the female), for pus, blood, and bacteria, it should be possible to detect infections in their incipiency, and, if they are not readily eliminated by medical measures, to have the picture clarified by a complete urological examination.

Renal Tuberculosis.—In no class of urological cases can the general practitioner be of greater service than in the management of cases of Exhaustive studies have been tuberculosis. carried out during the past ten years which have somewhat modified our views of renal tuberculosis, These studies by pathologists and urologists connected with sanitariums where large numbers of cases of general tuberculosis are under observation for periods of years have shown that the only finding in very early cases of renal tuberculosis may be the discovery of tubercle bacilli in the urine; that the presence of tubercle bacilli in the urine denotes renal involvement; and that probably 70 per cent of the cases of renal tuberculosis are at first bilateral; also that very early non-destructive kidney lesions sometimes heal. The examination, by Medlar, of 100,000 serial sections of the kidneys in thirty patients who had died of advanced pulmonary tuberculosis, but who had not had clinical symptoms of renal involvement, showed, in 22 cases, that renal tuberculosis was present, and in every case in which both kidneys were examined, the disease was bilateral. He also found, in running through serial sections, evidence of occasional healing of minute initial lesions.

At the time when active symptoms of renal tuberculosis are manifest and such patients come under the observation of the urologist, destructive lesions are present, and, if the disease is unilateral, nephrectomy is indicated. Is it not possible that if those who care for cases of pulmonary, as well as other types of general tuberculosis, regularly searched the urine for the presence of tubercle bacilli, and made guinea pig inoculations, that occasional very early cases of renal tuberculosis would be detected which might be cured by general hygienic measures and heliotherapy? recognizing the fact that persistent pyuria and dysuria often denote renal tuberculosis, and that if in all such cases its possibility should be considered, fewer cases would pass the stage when the disease is surgically curable; and, furthermore, with the building up of resistance (a body force which has often been clearly demonstrated in the study of tuberculosis) the end results, when surgery is emploved, would be more satisfactory.

Renal Calculi.—When one considers about 50 per cent of all kidney operations are associated with lithiasis, the importance of this disease becomes apparent. The great amount of experimental work that has been carried out during the past few years. in an effort to ascertain the cause of stone formation. has brought out certain facts which are strongly suggestive and once again link the kidnevs with other body pathology and disturbances of function.

The relation of diet to stone formation, and especially the deficiency of Vitamin A, has been claimed by some to be a vital factor; the action of protecting colloids in holding the solution of crystals, and the influence of infection upon stone formation, have been shown to be more than coincidental. The injection of bacterial cultures—taken from the urine of persons with renal stones—into the pulp and root cavities of the teeth of dogs, have caused root abscesses and led to the formation of eal-culi. In certain instances, bacteria have been found to constitute the nucleus of a calculus, and, in others, calculi have been found to consist of an accumulation of bacteria. Gastrontestinal dysfunction seems also to have an intimate connection with stone formation.

As renal calculi are multiple in 40 per cent of cases and bilateral in 10 per cent, the seriousness of the condition is evident. Not every renal calculus should be removed; although some are spoken of as silent stones—which may be true as far as symptoms are concerned—they are not actually, or even potentially, inactive in so far as their ultimate effect on the

kidney is concerned.

Here, again, by periodical health examinations, the physician may, through regulations of diet and intestinal function, and the elimination of focal infections (especially when crystals are found in the urine), do much toward the prevention of calculus formation. The presence of a calculus should be suspected not only when patients complain of lumbar pain or colic, but when pus and blood cells are found in the urine; in every such case an x-ray should be taken, that a calculus may be discovered as early as possible and eliminated with a minimum of kiduey damage.

Once again, the physician is in a position of grave responsibility when he discovers the presence of blood cells in the urine, or, when the patient tells him of having hematuria which may have disappeared and his urine is then normal. That every case of hematuria should have a complete urological examination has been proved many times; and the discovery of a renal tumor that has given rise to no other symptoms than hematuria has often been noted. When a renal tumor has reached

sufficient size to be palpable, operation may prove of little avail, and, while deep radiotherapy may have a palliative effect, the hope for the patient lies in the performance of an early operation.

Polycystic Kidney.—Polycystic kidney disease is a condition which can well be handled by the physician, for, being a bilateral lesion, surgery is seldom indicated, and then only to relieve some complication such as severe hemorrhage or infection, in which instances, drainage of the cysts may rarely be indicated. These kidneys may reach large size, and when they do their irregular outline is often characteristic. Such patients, under a medical regime such as that instituted for interstitial nephritis, often live many years in comparative comfort.

The presence of an abdominal tumor should lead one to suspect a renal anomaly; mid-line tumors suggest a horse-shoe kidney; and the presence of a single kidney is always a possibility. Such anomalies, because of their interference with drainage, render the kidneys more susceptible to infection and other pathology, and, with the means of diagnosis available, such a possibility should always be

eliminated.

With the time allotted, it has been possible to only touch upon some of the more important phases of kidney pathology and their nonsurgical management—in the execution of which the physician plays a rôle that is in some ways the most important. He is the one who should most often discover the pre-pathological stage; who can institute measures of preventive urology, and also detect the carliest signs and symptoms of renal pathology, which may lead to its elimination by medical means; or see that the patient has the advantage of a complete urological examination at a time when the kidney may not only be saved, but its function restored.

DIETARY CONTROL OF CHRONIC HYPOTHROMBINEMIA IN CHILDHOOD

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A BLEEDING tendency is not infrequently observed as a persistent manifestation of apparently well children. They are undernourished for their body build, and are not derived from hemophilic families. Usually the bleeding symptoms are trivial and only presented as a complaint incidental to an irrelevant acute illness. Epistaxis and easy bruising are outstanding symptoms although other bleeding disturbances may occur. Physical examination is usually negative, and the clot-

ting time is prolonged or even normal; but determination of the clotting constituents reveals a decreased prothrombin or fibrinogen content of the blood. The anti-thrombin concentration is usually increased, but the platelets are normal in both quality and quantity. We have observed no evidence that the vascular endothelium is at all affected as judged from the tourniquet test and microscopic examination of the capillary nail beds.

Such benign bleeding manifestations are

evidences of nutritional deficiency. The outstanding factor common to all is a hypothrombopenia. Both prothrombin and fibrogen are derived from the liver. Their decrease in these cases is not a result of impaired liver function, but rather the consequence of protein deficiency. Prothrombin is a protein substance which, according to our observations, increases in the blood following high protein

diets, especially those containing viscera and gelatine. With the increase in prothrombin there is a diminution of the bleeding symptoms. The associated anemia in these undernourished children is unrelated to the bleeding, but is a result of nutritional deficiency.

The prevalent supposition that hemorrhage follows anemia is unfounded. We do not observe bleeding in acute or chronic anemia

Increase in Blood Clotting Function on A Clotting Dietary in Chronic Hypothrombinemia in Children*

Case	Prothrombin	Fibrinogen	Antithrombin	Platelets	Lysis	Index
A. J	0.60 0.80	0.36 0.64	1.4	210,000 350,000	33 40	0.10 0.50
B. S	0.60	0.37	2.2	260,000	19	0.10
	1.00	0.64	1.0	325,000	38	0.60
A. S	0.01	0.56	10.5	260,000	10	0.01
	0.90	0.75	1.0	275,000	34	0.70
H. R	0.60	0.60	1.5	150,000	37	0.10
	0.90	0.60	1.0	. 200,000	37	0.40
J. T	0.80	0.32	1.1	350,000	30	0.20
	1.00	0.37	1.0	350,000	30	0.30
М. М	0.60	0.30	1.2	150,000	27	0.20
	0.80	0.50	1.0	230,000	30	0.40
А. Н	0.60	0.60	1.5	175,000	37	0.20
	0.90	0.60	1.0	190,000	31	0.50
М. О	0.80	0.28	1.0	340,000	50	0.20
	0.80	0.60	1.0	345,000	48	0.40
F. M	0.60	0.30	1.2	150,000	27	0.20
	0.80	0.50	1.0	230,000	30	0.50

^{*}There was an interval of one month between determinations.

DIET TO INCREASE CLOTTING FUNCTION OF THE BLOOD

Food	Measurements	Protein	Carb.	Fat	Calories	Acid	Base	Vitamin	H_2O
Breakfast:							_		
Stewed Fruit (Fresh)	4 tablespoons	.2	3.8	.2	18.3		2.01	ABC	18.
Evaporated Milk	2 tablespoons	3.8	4.5	3.7	66.8		.7	ABCDEG	27.
Egg	1	6.7		5.3	76.8	5.55		ABDEG	37.
Bacon	2 strips	2.1		13.0	129.5			AB	4.
Whole Wheat Bread	1 slice	.9	5.2	.1	25.9	.3		AB	4.
Gelatine	1 Tablespoon	9.0			37.0]
DINNER:	-					1	}	ļ	ļ
Potato	4 tablespoons	1.0	8.4		38.5		2.8	ABC	30.
Butter		.2		17.	158.9		 .	ADG	1.
Liver		19.0		5.3	123.7		j		73.
Milk	Half-glass	3.3	5.	4.0	71.2		1.81	ABCDEG	87.
Gelatine	1 Tablespoon	9.0			37.0				
Supper:	•					(i
Brain]	8.8		9.3	118.9				81.
Spinach		.8 3.1	2.3	.2	14.6		16.20	ABC	54.
Egg Yolk	1			6.7	75.	5.33	1	ABD	1.
Bone-marrow		.2	•••	9.2	83.6		l <u></u> .		::.
Stewed Fruit (Fresh)	4 tablespoons	.2	3.8	.2	18.3		2.01	ABC	18.
Gelatine	1 Tablespoon	9.0			37.0				

even when the hemoglobin is as low as ten per cent and the red cells drop to one million. Never does hemorrhage occur in severe chlorosis or in any of the anemias unless there be bone marrow injury. Such is not the case in these children with mild recurrent bleeding following trauma. Furthermore there is no evidence of hemorrhage in the severest hydremias. Then the blood proteins are reduced to one third their normal level, which produces no disturbance of the nutrition of the vascular

endothelium. The basis for the hemorrhagic tendency in the group of children here presented is a diminished prothrombin or fibrinogen content of the blood, corrected within two weeks by the administration of a high protein diet. We have observed a hypothrombinemia in a group of boys who were referred to us as possible hemophiles. Thus has the "clotting diet" become effective in the control of a chronic hemorrhagic condition confused with hereditary hemophilia.

THE EXTERNAL EXAMINATION OF THE EYE IN THE DIAGNOSIS OF GENERAL DISEASES

III. THE IRIS, PUPIL AND LENS

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The third of a series of three papers read before the Dallas Southern Clinical Society, Dallas, Texas, April 1, 1931,

H. Iris

(1) Iritis

- (a) Causes: Syphilis, tuberculosis, diabetes, gonorrhea, rheumatism (focal infection)
- (b) Differential diagnosis
- (2) Effect of drugs (mydriatics, miotics) in health and disease
- (3) Normal iris reflexes
 - (a) Pupillary contraction
 - 1. Direct light reflex
 - 2. Consensual light reflex
 - 3. Convergence accommodation reaction
 - 4. Eyelid closing reflex of von Graefe
 - (b) Pupillary dilatation
 - Psychic reflex
 - 2. Ciliospinal reflex

H. The Iris

(1) Iritis—It is important to be able to diagnose iritis in the acute forms and in the insidions subacute and chronic forms. Whenever signs of iritis are detected the physician must conclude that it is caused by a general systemic disease, except when iritis follows traumatism or a perforating injury of the eye. Acute iritis can usually be diagnosed by the contracted pupil, the marked circuncorneal congestion that persists even after the instillation of epinephrine, and especially by the detection of blood vessels in the iris. In subacute and chronic cases, posterior adhesions may form between the iris and the anterior capsule of the lens, with practically no evidence of inflammation. It is important that the

(4) Pathologic iris reflexes

(a) Pupillary inequalities(b) Paralysis of the iris

(e) Weakened action of the iris (paresis)

(d) Ärgyll Kobertson pupil

(5) Affections of the sympathetic nerve

(a) Paralysis of the sympathetic nerve to the iris

(b) Stimulation of the sympathetic nerve to the iris

I. Lens

(1) Cataract—etiology general causes—

(a) Senility

(b) General diseases (c) Congenital

Local causes—

(d) Trauma

(e) Eye diseases

general practitioner detect iritis not only in order to determine the etiology, but also in order to save the eye, and to make the differential diagnosis from glaucoma. Glaucoma is a condition of the eye characterized chiefly by increased tension of the eyeball, i.e., increased intra-ocular pressure. The treatment usually prescribed for iritis might permanently damage a glaucomatous eye.

Increased tension may also accompany acute and chronic iritis. If the ciliary body, as well as the iris, is inflamed, an exudate may appear in the anterior chamber, and deposits may be found on the posterior surface of the cornea. If this condition is not recognized early the function of the eye may be seriously damaged by the forma-

TABLE I DIFFERENTIAL DIAGNOSIS

	Acute Conjunctivitis	Acute Glaucoma	Acute Iritis	
Age	Any	Usually over 35	Rarely under 20	
Pain	None	Severe, continuous	Especially at night	
Vision	Good or slightly blurred	Much reduced	Somewhat reduced	
Secretion	Mucopurulent	None or watery	None or watery	
Conjunctiva	Conjunctival congestion, especially of eyelids	General congestion, especial- ly scleral	General congestion, especially circumcorncal	
Cornea	Clear	Cloudy, sometimes rough	Cloudy	
Depth of Anterior Chamber	Unchanged	Shallow	Unclianged	
Iris	Unchanged	Discolored	Vessels congested, posterior synechia	
Pupil	Unchanged	Dilated, sometimes oval	Contracted, synechia (adhesions between pupil and the lens capsule.	
Tension	Normal	Markedly increased	Normal or occasionally raised	
Fields of Vision	Normal	Concentric contraction, en- largement of blind spot	Generally normal but central scotomata are not rare	
Treatment	Astringents, antiseptics	Eserine, pilocarpine, iridec- tomy (atropine contraindi- cated)	Atropine	

Summary

Acute conjunctivitis is characterized chiefly by mucopurulent discharge.

Acute glaucoma is characterized chiefly by hardness of the eyeball (increased tension).

Acute iritis is characterized chiefly by contracted pupil and circumcorneal congestion.

tion of adhesions (posterior synechiae) between the iris and the anterior capsule of the lens.

- (a) Causes of iritis—The commonest causes of iritis are syphilis, tuberculosis, diabetes, gonor-rhea, and so-called "rheumatism." We prefer to classify the rheumatic group under focal infections
- (b) Differential diagnosis—It is almost impossible in most cases to determine the cause of the iritis from the appearance of the iris. Gonorrhea, diabetes and focal infections usually produce a superficial inflammation, whereas tuberculosis and syphilis usually produce a deeper inflammation and are frequently characterized by the presence of papules in the iris.

Appropriate antisyphilitic treatment usually effects a rapid disappearance of these lesions in syphilitic iritis, whereas in tuberculous iritis the papules and the inflammation of the iris exist for a long time, and the papules recur at intervals. In determining the etiology of iritis, careful bacteriologic studies, determination of the blood chemistry, roentgenograms and the most careful physical examinations are indicated. When one finds a mildly positive reaction to the intracutaneous tuberculin test, and several complicating focal infections, our impression is that the complement fixation and agglutination tests and

other serobacteriologic examinations with bacteria recovered from various foci sometimes give valuable information concerning the area of focal infection to be attacked first.⁶

(2) The effect of mydriatics and miotics on the pupil in health and disease—Cocaine dilates the pupil by direct stimulation of the sympathetic fibers. When the sympathetic is paralyzed, even a 5 per cent solution of cocaine will fail to dilate the pupil. Epinephrine dilates the pupil by direct action on the dilator muscle.2 De Schweinitz has shown that epinephrine becomes very active when the sympathetic is cut, or when the superior cervical ganglion is removed. Rischard concluded from his experimental study of the innervation of the iris that the oculomotor nerve has no direct action on the iris. When sympathetic innervation is experimentally eliminated, the iris The oculofails to respond to any stimulus. motor nerve can therefore act on the muscles of the iris only through the sympathetic nerve. He believes that the iris contains a single muscle innervated directly by the sympathetic nerve and that the oculomotor nerve acts indirectly by inhibiting the action of the sympathetic. action is analogous to the nervous mechanism of the urinary bladder. Atropine, duboisine, and hyoscine dilate the pupil and paralyze accommodation through direct action on the ending of the ciliary nerve which supplies the ciliary muscle (the muscle of accommodation). The action of these mydriatics is unchanged in sympathetic paralysis. The miotics are esertine and pilocarpine. They produce marked pupillary contraction and spasm of accommodation. The action of these miotics seldom lasts longer than a day but the action of atropine lasts for six or eight days or even longer.

- (3) Normal iris reflexes-The pupil is made smaller by contraction of the circular band of muscle called the sphincter pupillae. It is one millimeter in diameter and lies at the pupillary border of the iris. This muscle is innervated by the third nerve. The pupil is dilated by the dilatator pupillae which is innervated by the sympathetic. For the careful study of pupillary reflexes, without complicated apparatus, moderate illumination should be obtained if differences in the size of the pupils are to be detected. Paralysis of one cervical sympathetic may remain unnoticed in illumination of high intensity, for under this bright light both pupils may be small and approximately equal. To test the direct light reflex as well as the ciliospinal reflex, the patient should look into the distance and his attention should be diverted if possible.
- (a) Pupillary contraction—The direct light reflex should be tested by directing light into each eye separately and noting the pupillary re-action. The bulb and condensing cap of the May ophthalmoscope are ideal for this purpose. The consensual reaction is observed by throwing the light into the right eye and observing the pupillary reaction of the left eye and vice versa. action is brought about through the decussation of the fibers of the optic nerve in the chiasm and also through association fibers between the nuclei of the two sides of the brain. To test the convergence-occommodotion reaction the patient is asked to look from a distant to a near object (a dot on a card or the white head of a small pin at 10 inches). Differences in equality, regularity and reaction should be noted. The pupils should contract when the eyes converge on a This is caused rather by connear object. vergence than by accommodation because this reflex takes place even in highly myopic patients who have little or no accommodation. The contraction of the pupil under attempted forced closure of the eyelid, the eyelid closing reflex of von Graefe, is especially noticeable in facial paralysis.
- (b) Pupillory dilototion—Psychic stimuli cause dilatation of the pupil, and fear or anger may produce maximum dilatation. To test the ciliospinal reflex, the skin of the neck is pinched or stuck with a needle, or a loud noise may be made, to note whether dilatation of the pupil takes place under these influences. From these

statements it is evident that the width of the pupil is constantly changing as the result of psychie influences and under the influence of light, convergence, and stimulation of the cervical sympathetic. The diameter of the pupil in moderate illumination varies from 2.5 millimeters to 4 millimeters but is influenced by many factors. In babies and in old people the pupil is small; in myopic patients and older children the pupil is usually wider. In sleep the pupil is small due to the absence of sensory and psychic dilating stimuli. Auditory and sensory stimuli produce dilatation of the pupil even in sleep. In the excitation stage of the administration of a general anesthetic the pupil is dilated but reacts to light, the pupil becomes wider as sleep is produced, and in deep narcosis there is no reaction to light. If collapse occurs under anesthesia the pupil dilates and does not react to light. The pupil is also large at the time of death but after death it contracts, and atropine and eserine are ineffective.

(4) Pathologie reflexes—Normally, both pupils should be of the same size; inequalities usually

denote a pathologic change.

(a) Pupillary inequalities—Marked differences in refraction of the two eyes (anisometropia), congenital anomalies, rupture of the sphincter of the iris, anterior and posterior synechiae, mydrities. In unilateral blindness the pupil is usually large on the side of the lesion. The direct light reaction, the consensual light reaction from the seeing to the blind eye, and the convergence and accommodation reactions may be present. In bilateral blindness both pupils are wide but the convergence reaction is usually retained—the pupil may contract if the patient attempts to look at his own fingers. In rare instances even in complete blindness the direct light reflex may be retained.

(b) The cause of poralysis of the sphincter pupillae muscle may be in the muscle, the ciliary ganglion, the oculomotor nerve or the oculomotor nuclei. The most common cause of involvement of the oculomotor nuclei is congenital or acquired syphilis. Although these parts are seldom affected in tabes, in progressive paralysis involvement is noted in approximately 12 per cent of the cases. Diphtheria, influenzo, lead and olcohol poisoning are other causes. If the lesion is extensive accommodation is usually also affected.

(c) Weakened oction (paresis) of the iris—Corticol injuries, increased introcranial pressure, senile dementia and hysterio may weaken the action of the sphincter of the iris. Alropine, homatropine, hyoscine, duboisine, traumatic rupture of the sphincter and glaucoma are other causes of weakened action of the sphincter.

An iris which does not respond to light but reacts actively to accommodation and convergence is called (d) an Argyll Robertson pupil. The

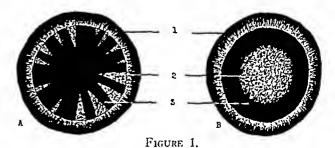
development of this condition is slow and may be unilateral; when fully developed the direct and indirect light reflex and the psychic and sensory ciliospinal pupillary dilatation are usually destroyed, but the reactions to convergence and to closure of the eyelids are unaffected. This lesion occurs in approximately two-thirds of the cases of tabes and about half the cases of general paralysis. It may also be caused by chronic alcoholism, nicotine poisoning, and injuries. Argyll Robertson pupil has also been seen in senile dementia, encephalitis lethargica, disseminated sclerosis, tumors of the midbrain, diabetes, syringomyelia, and recently Foster Moore has collected several examples of a nonluctic type which is congenital.

Adhesions between the iris and the posterior surface of the cornea or between the iris and the anterior capsule of the lens may cause irregular pupils.

(5) Affections of the sympathetic nerve supplying the dilatator pupillae muscle.

- (a) Paralysis of the sympathetic nerve—The pupil is small due to the unopposed action of the sphincter pupillae but mydriatics of the atropine, hyoscine, and duboisine group produce dilatation. Eserine and pilocarpine produce contraction. Cocaine is inactive because it acts directly upon the sympathetic endings. As previously stated, epinephrine has a marked dilating effect because it acts directly on the dilator muscle. symptoms are narrowing of the palpebral fissure due to slight ptosis from paresis of the superior palpebral muscle of Müller, dilatation of the vessels of the face and neck, with increased perspiration. This may also be revealed by observing the excessive perspiration on the hat band of the patient suffering with this lesion. enophthalmos may also be present due to relaxation of the orbital muscle of Müller.
- (b) Stimulation of the sympathetic produces exophthalmos with constriction of the vessels of the face, widening of the palpebral fissure and mydriasis. Lesions of the sympathetic pathways

to the iris are commonly caused by cranial injuries and spinal cord injuries. Pressure from aneurysms, glands, growths in the thorax and neck and simple goiter frequently have been reported as causes, but in a large percentage of cases no discoverable cause can be found. To summarize: paralysis of the sympathetic produces miosis, narrowed palpebral fissure and enophthalmos; stimulation of the sympathetic produces mydriasis, widened palpebral fissure and exophthalmos.



Two common types of cataract as they appear by focal illumination: A. cortical cataract; B, nuclear cataract; 1, iris; 2, cataract; 3, pupil.

I. LENS

(1) Cataract—Under normal conditions the lens is transparent and therefore not visible on inspection. When it loses its transparency, i.e., when it becomes cataractous, it may be seen as a grayish-white mass occupying the pupillary area in either of the two forms as shown in Fig. 1. The most common causes of cataract are as follows: (a) senility, the most frequent cause in patients over fifty years; (b) general diseases (diabetes, tetanus, epilepsy, poisoning by naphthalin, ergotism, pellagra); (c) faulty development (producing congenital cataract); (d) trauma. When the capsule of the lens is torn the aqueous is absorbed by the lens and cataract results. Excessive heat, sunlight or electric light may also cause cataract; (e) eye diseases. Infected corneal ulcers, retinitis and choroiditis may give rise to complicated cataracts.

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SURGICAL RELIEF OF INTRACTABLE PAIN

By FRANCIS C GRANT, M D, PHILADELPHIA, PA

From the Neuros are, cal Chaics of the Hospital of the University of Pennsylvania and the Graduate Hospital Philadelphia Pa Read before the Section on Neurology at the annual Meeting of the Medical Society of the State of New York April 5 1933

INCE the dawn of medicine a great part of the physician's work has been concerned with the relief of prin disease produces pain the plea of the sufferer is for its relief. Cure the disease if possible but first stop the pain Frequently, the condi tion is incurable and the patient doomed but if his pain can be relieved, his manner of dying will be less distressing For centuries opium was the only known analgesic Then Magendie identified the sensory functions of the posterior roots of the spinal cord and Mayo showed that the trigeminal nerve carried pain sensa tions from the face Little by little surgical measures for relief of pain were introduced beginning with peripheral section of cutaneous nerves followed by cutting of the posterior spinal roots supplying the punful segments until finally Spiller1 demonstrated the position of the pain fibres within the antero lateral columns of the spinal cord By section of these afferent pathways for prin within the spinal cord at the fourth thoracic segment complete analgesia for pain may be produced on one or both sides of the body below the ensiform cartilage Recently Toerster' and Peets have shown that cord section (cordotomy) of the antero lateral tracts may be performed with safety on one side at least as high as the second cervical segment thus carrying the level of anesthesia for pain as high as the elavicle Thus pain from carcinoma of the breast due to involvement of the brachial pleaus may be relieved

On the Neurosurgical Service at the University Hospital due to the interest of Dr Charles H Frazier in trigeminal neuralgia, methods for the relief of pain in the face were first considered The means of checking the agony of tic douloureux are too well known to require further comment. But the pain from cancerous lesions about the mouth and face especially when the disease involves the upper or lower lip, nose, maxillary antrum or dorsum or side of the tongue may be completely relieved by injection of alcohol into the second or third division of the trigeminal or by sec tion of its sensory root behind the ganglion And not only is the pain from the cancerous lesion itself relieved, but also radical methods for its removal are painless The patients willingly accept fulguration, excision, im plantation of radium or other treatment up to the limit of tolerance because of their free dom from pain So often patients with malignant disease in this region are encountered who are suffering severe and constant pain

and who dread further or more intensive treat ment because it aggravates their suffering. It seems certain that some of the cases in this series who are alive at the end of five years survived because their freedom from pain permitted them to sleep, to ext comfortably and to receive the maximum amount of treatment without an increase in their distress

It should be stated that the pain from malignant disease involving the floor of the mouth or tonsil with pain referred to the throit or deep in the err is not benefited by injections of the trigeminal Occasionally a sub-occipital cranicetomy with section of the fifth and ninth nerves and the upper three cer vical postenor roots has been attempted but the relief afforded has never been nearly as satisfactory as in those instances where the lesion lies completely within the sensory distribution of the fifth nerve (See Table I)

TABLE I

Table showing location of growth and results of treatment. Note that the least satisfactory results were obtained where the floor of the mouth was involved

Maxillary antrum and upper jaw		28
Pain relieved	18	
Pain partially relieved	4	
Pain not relieved	4	
Died	2	
Post ethmoid cells and maxillary antium		4
Pain relieved	2	
Pain partially relieved	2	
Cheek-Skin		9
Pain relieved	7	
Pam not relieved	7 2	
Check-Mucous membrane		4
Pain relieved	3	
Pain partially relieved	1	
Tongue		9
Pain relieved	7	
Pain partially relieved	2	
Inferior mavilla		12
Pam relieved	9	
Pam partially relieved	3	
Tongue and floor of mouth		16
Pam relieved	3	
Pun partially relieved	3 7 5 1	
Pain not relieved	5	
Died	1	
Total number of cases		82

Not infrequently carcinoma of the face or mouth metastasizes to the glands of the neck, forming large, solid nodules and causing much pain in this area. Under these conditions a laminectomy and rhizotomy of the appropriate cervical nerves, usually from the first to the fifth cervical posterior roots, can be performed to relieve the pain. By this procedure a band of anesthesia is produced extending from the vertex of the scalp to the clavicle.

When a mammary cancer spreads into the axilla or supra-clavicular triangle, producing pain in the arm and hand, the only method of relief hitherto available has been rhizotomy from the fifth cervical to the first thoracic posterior roots on the affected side. procedure, although it relieved the pain, has two serious defects. An extensive laminectomy of six or seven laminae is necessary and section of six posterior roots is a procedure accompanied by post-operative shock. thermore, when the posterior roots are sectioned, all types of sensation are abolished including position and muscle sense. Consequently, although the patient can move the arm freely, it is not a useful member, for loss of sense of position interferes greatly with proper function. High cordotomy of the antero-lateral tracts abolishes pain sensation but leaves touch and position unimpaired. Moreover cordotomy may be performed through a smaller incision with the removal of but three laminae and is, therefore, a much less formidable surgical procedure. We have had no experience with bilateral cervical Unilateral cordotomy in this cordotomy. region, properly performed, does not seem to interfere with the respiratory mechanism, as in our two cases the diaphragm and the intercostal muscles continued to function normally.

Due to the original brilliant clinical observations of Spiller, proving that the afferent tracts for pain passed through the anterolateral columns of the spinal cord and to the development by Frazier of the surgical technique for severing these tracts in the cord, cordotomy for relief of pain has been freely used in the Neurosurgical Clinic of the University Hospital. Seventy-four cordotomies have been performed upon seventy-one patients.

Cordotomy has three distinct advantages over other methods of relieving pain. First, since in the antero-lateral columns of the cord, the pain fibres are compactly collected, a section there produces the largest possible area of anesthesia. Secondly, pain and temperature sensations alone are obliterated without involvement of touch or position sense, and hence the usefulness of the lower limbs is not impaired. Lastly, the operation requires only

a small laminectomy and is, therefore, a much less exhausting surgical procedure. But cordotomy has the disadvantage that unless the incision into the cord is accurately placed, the pain may not be completely relieved or the motor pathways may be damaged, resulting in paralysis of the legs and interference with sphincter control.

The technique of cordotomy presents but one difficulty. If the section of the cord is not accurately made the pyramidal tracts may be injured or insufficient pain fibers sectioned to give complete relief. By the use of gas oxygen, plus novocaine, it is possible to cut the pain tracts under local anesthesia and to determine with accuracy the level of loss of pain sensation by sensory tests carried out in the operating room. Muscle power in the leg on the side of the section can be tested at the same time. This is a distinct advance in technique that has practically eliminated any damage to motor pathways. Reference to Tables III to VI gives in detail the results with this procedure. In the last 26 cases, there has been no evidence of motor weakness in the lower limbs and no sphincter involvement lasting over three days. In all these cases the relief of pain has been complete.

The point of election for performing cordotomy is the third thoracic spinal segment, lying beneath the tip of the second and the body of the third thoracic vertebrae. At this level, the cord is readily accessible. A lamirectomy of the second, third and fourth thoracic spines affords sufficient exposure for a unilateral section, although if both tracts are to be cut, the fifth thoracic spine may be included as a larger exposure is needed.

Recently two cases were encountered with pain in the arm due to metastasis from carcinoma of the breast. Both were active women who but for the pain would have had useful limbs. Rhizotomy would bring relief but interfere markedly with the use of the arm, for all sensation would be lost. In the first case, cordotomy was performed at the third cervical segment and the third, fourth, fifth and sixth cervical posterior roots were sectioned. pain was satisfactorily relieved and position sense being unimpaired, the arm and hand functioned normally. In the second case, cordotomy was performed at the same level but no posterior roots were cut. The result was equally gratifying. Unilateral cordotomy at the level of the third cervical segment seems to be a safe and, judging from the results, a justifiable procedure to relieve pain in the

In deciding upon the necessity for a unilateral or bilateral cordotomy, a careful description of the distribution of the pain is

E II. tomy

Table	TT
	•
Rhizot	оту
No. of Roots Cut Cou.	
5 1st to 4th cervical. 1 4th cervical to 4th thoracic 1 6th cervical to 4th thoracic. Malignant growth i	n neck. In breast
1 4th cervical to 4th thoracic Malignant growth 1 6th cervical to 4th thoracic. Malignant growth i	n avilla
1 6th cervical to 4th thoracic. Mangnant growth 1 1 5th cervical to 1st thoracic. Painful amputation	stump.
1 5th cervical to 1st thoracic. Painful amputation 1 4th to 8th thoracic. Tabetic crises.	
1 4th to 8th thoracic. Tabetic crises. 1 9th thoracic to 2nd lumbar. Malignant growth is	n groin a
	tint -nlief
In ten patients complete relief was obtained in seven; par tive deaths in this series. All patients having a malignant	growth (
tive deaths in this series. All patients having a mangiant	6.0,,,,,
the second secon	tus ata
essential. Occasionally patients have the more	tracts,
severe pain on one side with some distress	lateral.
upon the other, often so slight that it is over-	growin
shadowed by the greater pain and not referred	involve
to in their story. But when the major pain	tracts s
is relieved, the minor remains and may later	While
cause unexpected distress. It may be wiser	form t
under such circumstances to section both	twice i
under nach entamatantes to station stati	less, in
Table III.	as mor
	hands,
Analysis of results following cordotomy with relicf of	lateral
pain.	
71 Cases 74 Cordotomies	ous th
43 Males 29 Females	Is re
Bilateral cordotomy	cedure
Unilateral	conditi
District	and if
50 per cent relieved	capacit
50 per cent relieved	for its
	the aff
TABLE IV.	advise
Summary of types of painful lesions requiring cordotomy.	nal ne
	tuberc
Malignancy of the genito-urinary tract or genitalia 34 Malignancy of vertebrae	
Mangiancy of Vertebrae	painful
G. S. W. spine 4 Sarcoma hip 4	vis wit
Retroperitoneal sarcoma	nerves
Painful stump	doulou
Tabetic crises	perma
Osteoarthritis hip	But
Ong those in the contract of t	the pat
TABLE V.	ited tl
	Is it p
Complications following bilateral cordotomy.	who n
Vomiting 5	discon
Distention	of pair
Retention urine	with n
Died 6	vive.
Meningitis 2	are ar
Shock	cedure
Cachexia	from
	painfu
TABLE VI.	fully of
Complications following unilateral cordotomy.	
77 1.1	doses,
Vomiting 2 Distention 2 Retention urine 3 Motor weakness 2	at bes
Retention urine	be int
	rarely
Died4	rapidly

Cachexia Pneumonia

Pain not relieved. in groin and penis. Pain relieved 75%; codeine required. artial relief in two, and none in onc. There were no opera-it growth died within ten months of operation.

Result

Pain relieved; morphine free. Pain relieved 75%; codeine required.

Pain relieved; morphine frec.

Pain relicved; morphine free.

tracts, although the pain seems largely uni-If the malignant lesion is rapidly growing, and if the pain while still unilateral involves midline structures both anterolateral tracts should be cut to assure permanent relief. While bilateral cordotomy takes longer to perform than section of but one tract and has twice the chance of complications, nevertheless, in pelvic cancer it is often to be preferred as more certain in its results. In experienced hands, using the technique described, a bilateral cordotomy is but slightly more dangerous than a unilateral section.

Is relief of pain by operation a proper procedure? If the pain is produced by a chronic condition which of itself will not shorten life and if the pain is of sufficient severity to incapacitate the patient and requires morphine for its relief, the answer is unquestionably in the affirmative. No one today hesitates to advise operative relief for the pain of trigeminal neuralgia. Osteo-arthritic conditions, old tubercular lesions of the hip, tabetic crises, a painful amputation stump, injuries to the pelvis with scar tissue formation about the sciatic nerves cause suffering easily comparable to tic douloureux and cordotomy affords prompt and permanent relief.

But when the pain is caused by cancer and the patient's expectation of life is definitely limited then the question of expediency arises. Is it proper to subject a patient with cancer who may live for six months or a year to the discomforts of a surgical procedure for relief of pain when he can be kept fairly comfortable with morphine for the short time he will survive. While it is well recognized that there are arguments against further operative procedures in patients in a hopeless condition from malignant disease, nevertheless, to die painfully and slowly from cancer is a dreadfully distressing end. In spite of increasing doses, morphine gives only intermittent relief at best. Between hypodermics the pain may be intolerable. And the pain from cancer rarely lets up; is present night and day and rapidly exhausts the patient. It is this bad situation which operation can relieve. Even if death follows surgery, and although most of

these cases have had advanced cancer, the operative mortality has only been about 13% in the cordotomy and 6% in the sensory root avulsion group, it is a quick and merciful death. Operative recovery is followed by relief of pain. The patients can eat, sleep and unless bed-ridden as a result of their cancer, can go about their business undisturbed. It only requires one or two striking examples of the beneficial effects of relief of pain to arrive

at a correct answer as to the expediency of its surgical removal. Pain can and should be relieved promptly by surgical measures and the sufferer should be thus informed before he is so exhausted by his distress that he has become a hopeless operative risk.

My sincere thanks are due to Dr. Charles H. Frazier for his permission to report these cases and for the use of his records in the pre-

paration of this article.

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THE HEALTH EXAMINATION, LIFE SERVICE AND THE FAMILY DOCTOR By C. WARD CRAMPTON, M.D., NEW YORK, N. Y.

Delivered before the Medical Society of the County of New York April 24, 1933

ACIAL Progress. One of the most encouraging signs of the progress of the human race is the gradual increase in foresight it has shown in managing its own affairs. This sometimes may be observed in the lives of individuals. In the medical field, at the dawn of history, the doctors had for their patients only such as were already in mortal agony or in fear of immediate death. Centuries later we observe a tendency to seek the services of the physician at an earlier stage when pain and weakness reached the point of requiring the patient to seek his bed. Thus medical diagnosis and treatment were largely clinical, named after the old Greek word "cline," meaning bed or couch.

As time went on and foresight increased, physicians were called upon at a still earlier stage to serve those who were sick but yet able to get about. Today there dawns the period when foresight and intelligence are counseling men to apply for medical service before nature warns of the presence of disease. The human race is slowly advancing, it is calling on the doctor for counsel earlier and earlier in the course of disease. Sometimes men follow these counsels. All this is made possible by the fact that disease may be present and recognized before laggard nature has made it obvious by pain and disability, and the public are becoming aware of the fact.

That disease almost invariably shows preclinical signs is a fact that is slowly gaining recognition.

Warnings and Forerunners. Perhaps we may coin a new aphorism "Nothing in nature is sudden."

A stroke of lightning comes from slow gathering electrical tension, an earthquake is but a readjustment of increasing strains in the bowels of the earth, and an apoplexy is only the result of an accumulation of causes often tragically, but perhaps mercifully silent. But sudden?—no! Accidents and infections seem to be exceptions but are they not largely preventable?

In this thesis lies preventive medicine with its two large divisions preclinical diagnosis and its service of preclinical therapy which will be referred to later.

The destruction of men, of nations and races is never sudden.

The camel's back may break suddenly, it is true, and the last straw will get the blame instead of the long accumulated crushing load.

"Nature's discipline is not even a word and a blow, but a blow without the word."

—THOMAS H. HUXLEY

Constructive Medicine. The public has found out something else. They believe that they can get a higher degree of health, happiness, and efficiency than is indicated by the mere absence of disease. They want better lives. Some of them are looking to the medical profession for guidance, many are not. This is the field of positive or constructive medicine.

Health Examination the Essential, personal preclinical medicine and constructive medicine should be based upon exact scientific knowledge of all men in general and their environ-To this should be added exact, special knowledge of the particular man and his individual environment. This requires an examination of the man, his body, his mind, his environment and how he reacts to it. This is the health examination. It has many variations.

Kinds of the Health Examination One of the most interesting health examinations in history gives an example of what can be done by a high powered concentration of medical service operating under the conditions of mechanized efficiency

One hundred and fifty men, factory workers, were stripped and fined up. They passed in The physician made a quick, general observation of their carringe, gait and skin He listened to the heart, feeling the pulse at the same He looked at the tongue He called off his comment to a clerk and passed on to the next He gave one minute to each man This oneminute examination is a classic in the history of the health examinations, an example of extreme brevity and of high efficiency per unit of time and per dollar expended. It is a flash of medical technocracy. It is something upon which to ponder

School Eraminations There are other quick health examinations for example those done in the public schools The daily, morning hygienic inspection of one million pupils in New York City schools by twenty-five thousand teachers, is in principle a health examination. This is done every day for two hundred days in the year, and perhaps constitutes the most extensive health procedure that the world can display

Then there is the medical inspection of twentyfive million children by the medical school inspectors of the United States This takes longer and occurs less frequently I believe, however, that the twenty-five million examinations of school children should be made annually and that they should be made by qualified physicians in their own offices I believe also that they should not be paid for by the public, but by the parents who with the pupils, are the direct beneficiaries I believe that if the County Medical Societies throughout the country were seriously to undertake to bring these twenty five million pupils to the offices of the private physicians, where they belong, it would be done, much to the profit of the children to the advancement of the science and the practice of medicine

Boy Scouts and Camp Fire Girls There are various other forms of health examinations, in industry, in insurance practice in the field of the life extension institutes and in private practice The form to which I shall give my attention for the moment is that which has been adopted in principle and already begun to be put into practice by the Boy Scouts of America and the Camp Fire Girls These two organizations have a combined membership of over one and onehalf millions

In the future it is very likely that twenty five per cent of the population of America will have passed under the influence of membership in there two organizations for a year or more of their lives There are similar organizations that

are paying interested attention to this subject Combined they might reach almost the whole

population

When these two groups are under way, in New York City alone there might well be from five hundred to one thousand health examinations to be done annually by every qualified general practitioner These examinations will be done by some one, perhaps by physicians in the employ of insurance companies or life extension institutes, or under some economical and highly efficient mechanized plan of socialized medicine they will be done

General Utility Record The plan provides that each member will get a health examination As a result he gets the record and recommendation of the physician, in so far as it is expedient He keeps this record It is utilized not only in hus own organization, but, we hope, by the schools, the summer camp, the YMCA, the church or municipal playground, the athletic field or wheresoever physical condition is a requirement or a goal for attainment

Use to Physicians This record is of service when its possessor goes to another physician It is added to annually by successive clinical or preclinical examinations and it becomes a life record Upon it can be based a system of consistent life management service rendered by the physician It is designed to become the basis of the practice of the new-fashioned family physician and the basis of an important development in medical science

Life Record The medical feature of this life record includes among other things, the records of health examinations, and for this purpose the health examination includes the following factors

Factors in Health Evanination The health examination is, first of all, a regular medical examination for the discovery of pathological conditions, illness or disability present or threatenmg to come in the future. This is regular medical work and no honest and reasonably capable physician should liesitate to undertake it

It is thorough however, and has two phases It is the regional examination in which the body is gone over from head to toe. It is concurrently also an organic examination where all findings are reviewed and classified under orgamzed systems One must get a workable understanding of the circulatory system, the digestive system, the autonomic nervous system and the several endocrine glands. Thus, we might say, the examination is both geographical (by regions) and organic (by systems)

Examination Routine As a matter of convenience, however, the examination is done in a practical routine procedure For example, the patient strips and, with a sheet or not, steps on the scales and is weighed. Those parts of the examination which can best be done while the

patient is standing are then done. The heart is examined, the blood pressure is then taken in the standing position and the pulse recorded.

The patient then lies down, the heart sounds are again observed, the blood pressure and pulse rate are again taken. Such parts of the examination as can best be done while lying down are then done.

The patient then sits up, reflexes are tested, gall bladder palpated, etc. Then he turns on the face for an examination of the spine. Standing again, a rectal examination is done on male patients and urine passed in two glasses. A catheter specimen is taken from adult female patients, and a pelvic examination is done.

The patient then dresses and an examination is made of the eyes, ears, mouth, nose and throat. The teeth and the sinuses should always be examined by trans-illumination. He is dismissed to return again in a few days when the laboratory reports are completed. He receives his instructions and is given such records as are expedient for him to have for future use.

Health Service. As a rule, the health examination is the beginning of a health service. The examiner becomes the health adviser. He treats, corrects and advises in the several departments of medicine in which he feels competent to serve. If he feels the need of special diagnosis, special surgery, or special therapy, he is the one to select a specialist and he is the one to whom the specialist should return his report and his patient. He should, however, send his patient to the specialist with a full report and require a full report in return. The specialist should have the advantage of the fullest available knowledge of the status of his patient. The following out of this procedure may result in much good.

It would be a better world if the 125,000,000 persons in the United States were to live their lives guided by competent medical advisers. The real burden of the cost of medical care would be lifted from costly emergency, despairing attempts at repair of wreckage. It should be expended for "pre-trouble maintenance." It is by some such process, rather than a resort to a mechanized form of socialized medicine, that the way forward may profitably be sought.

Scope of Health Examination. The health examination at its best is not only a search for clinical and preclinical signs of illness. It seeks to utilize all other sources of information in the

hope of getting guidance in the management of illness, of health and life in general.

Historical Data. It is good practice to have the patient contribute as much as possible to his own examination by furnishing on convenient blanks pertinent information concerning his heredity, his previous illnesses and operations and the way he is handling his life with reference to sex, diet, exercise, work, sleep and recreation. His mental status is quite as important as his physical status. It is good practice to let him reveal his chief anxieties, his chief incentives, his attitude, his satisfactions and his outlook. With these facts in mind, the examiner has a far better chance of giving instructions that will be followed and become effective.

Anatomical Data. From the anatomical field something can be gained by observing the form structure, posture and constitution of the patient and recording height, weight and girth of the chest and abdomen.

Physiological Data. In the young, growth and physiological age, or the process of developmental ripening, must be watched, for their disorders may be quite serious. Posture has a significance all its own.

In the old, the hardening chest and the bulging, drooping abdomen may well be heeded as the anatomical signs of decreasing physiological vigor.

It is in the physiological field that we may reap valuable information very quickly and easily. If one takes the blood pressure both standing and lying down instead of only in the sitting posture, a useful index of circulatory efficiency is found.* If the patient is given 15 grains of ordinary carmine in three capsules with the evening meal, the speed and efficiency of clearance of the gastro-intestinal tract is indicated. The sedimentation test, blood test, Sergent test, the head lines and various other reflex data have their service.

The Health Examination, Life Service and the Family Doctor. The health examination is not an isolated event; it is a dynamic part of a continuing life record. The health examiner becomes the continuing life counselor. The establishment of such a relation of doctor to patient will mean much to medical practice, medical science and medical service. It may mean that the family doctor has come back.

^{*}This test has just been adopted by the National Collegiate Athletic Association of America as "a reliable estimate of cardiac reserve."

CONTRALATERAL CAVERNOUS SINUS THROMBOSIS

Following Chronic Purulent Otitis Media

By ADOLPH WEIZENHOFFER, M.D., SCHENECTADY, N. Y.

Read before the Schenectady County Medical Society, February 7, 1933.

N Feb. 1, 1932, I reported in this, the New York State Journal or Medicine, a case of contralateral cavernous sinus thrombosis following a furuncle of the external auditory canal resulting in recovery. The case now presented was also contralateral in position, but followed an acute exacerbation of a chronic purulent otitis media. This patient, unfortunately, did not recover.

On Aug. 24, 1932 Mrs. E. W. aged 68, cance to me with the following history. During scarlet fever in childhood she developed a running left ear which continued to discharge till her eighteently year. For some time previous to her present illness she had intermittent attacks of earache which seemed to yield to local applications of mustard plaster. The patient was certain, however, that she noticed no discharge during these attacks. For the past five days she had a severe left earache, for which she applied the usual remedy. She fell asleep on the plaster and on awakening found her ear and the side of her face badly swollen and inflamed.

on the side of her face badly swollen and inflamed.

On examination, besides the mustard burn, there was swelling and complete closure of the canal, giving the appearance of a furunculosis, except that the tenderness was less exquisite than one would expect. Two days later, the swelling having subsided, the canal was found completely filled with polyps. It was noticed now that the left corner of the mouth drooped slightly. The family insisted that this condition was always present. The patient, however, was able to close the left eye tightly and to raise the left corner of the mouth voluntarily.

Aug. 30. X-ray showed marked sclerosis of the mastoid, some posterior cell destruction and possible pus formation. Temp. 101, P. 88. Urlnalysis: Sp. Gr. 1006, no albumin, sugar or casts. The blood count was W.B.C. 15, 700, Polys 88%, Lymphos 10%. A blood culture taken at this time was reported 72 hours later as positive for Sambulogorer. Album.

tive for Staphylococcus Albus,
Aug. 31. The temp. varied from 98.6 to 101.4. There
were no chills or sweats. Spinal tap yielded a fluid
that was clear, colorless and under normal pressure.
There was a faint trace of sugar and the globulin was
not increased. The cell count was 6.

Sept. 2. Operation was decided on without waiting for the result of the blood culture. Just before operating it was first noticed that the right upper lid was red and swollen. The mastoid was of ivory hardness. On removing the surface of the bone in the region of the supramental triangle, pus was found oozing from the sieve-like perforations in the bone. A culture of this

pus showed diplitheroid bacilli. The lateral sinus was covered by dense bone and there was no exposure. On removing the posterior canal wall, large quantities of green foul smelling pus welled up under pressure, much more than could have been held by the niddle car cavity alone. The middle car was cleaned out rapidly, the posterior canal wall was lowered, the bridge removed and flaps made. The upper half of the incision was closed with metal clips and drains placed in the lower half and in the canal.

Sept. 3. The facial palsy scemed more marked, the left eyelid not closing completely. The right was more swollen and red, there was proptosis of the cychall, chemosis of the conjunctiva and ocular movements were somewhat restricted. The temp. varied from 103 to 104. Blood count: R.B.C. 3, 400,000, Hb. 55%. W.B.C. 19,600, Polys 88%, Lymphos 9%. A transfusion of 300 cc. of citrated blood was given.

Sept. 4. The temp, varied from 102.4 to 104, pulse 100. Patient was drowsy and restless. The car was draining profusely, the discharge being foul smelling and brownish from admixture of blood. The right eyelid was more swollen and red and could not be opened and the exophthalmos was more marked. The left upper lid was now slightly swollen and red, motion of the eyeball was normal but the pupil was dilated and reacted sluggishly to light.

Sept. 6. Patient was much weaker. Transfusion of 300 cc. of citrated blood will glucose was given. Blood taken three days previously for culture was sterile. The left eye was wide open and the swelling of the lid was gone, while the condition of the right eye was unchanged. The temp, rose to 102, the pulse to 140 and the patient died that night.

The presence of polyps and of fetid purulent discharge point to a strong probability that a chronic purulent otitis had been active though mild for a long time. The infection entered the blood stream through the floor of the tympanum into the jugular bulb. The profuse purulent discharge during and after operation point to an extension of the process intracranially. It is impossible to say whether it remained outside the dura or had penetrated the brain substance, for it is possible for the infection to pass into the brain without involving the subarachnoid space. There surely was no general meningitis as was shown by the spinal tap and the absence of any meningeal symptoms.

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For list of officers of County Medical Societies, see this issue, advertising page xxii.

THE EXECUTIVE SECRETARY

When several groups of members in casual conversation at a medical society fall naturally into the discussion of a topic, that subject is one in which physicians generally are deeply concerned. A common topic of informal conversation at the meeting of the First District Branch on October 11, was the recent appointment of an executive secretary by the Westchester County Medical Society, the host of the Branch,

Doctors have always been ready to say that the medical society should take some action on whatever condition is under discussion; but the difficulty has been to find anyone to devote time and energy to doing that duty. The extensive provisions for giving free treatment to the indigent sick have made every doctor aware of his own personal interest in the problem of the effective distribution of medical service; so that what formerly concerned him in only an academic way has become of vital importance to him in carning a living. It has been necessary that a few physicians in every county should devise methods by which both the physicians and governmental officials should cooperate together, the physicians supplying medical service and the welfare officers paying the doctors for their services. While the county society gets the credit for the new development, yet the actual work of establishing the coordination has fallen on two or three mem-

Other problems besides the medical care of the indigent are pressing for solution in every county society. There are the medical examination of school children, the treatment of erippled children, child welfare in all its phases, and the care of the blind and deaf. If

a small committee of physicians were assigned to the solution of each problem of a county society, the incubership of that society would be exhausted in the appointments.

It is unthinkable that any considerable number of administrative problems of a county society can be solved by the voluntary service of its incinbers. The only effective solution is the employment of an executive secretary whose principal duty is to carry out the details of the plans of the society and its officers and committees. Now and then a society has been fortunate enough to have a member who has donated five or ten hours a weck to administrative work in the name of the society. The county societies of New York and Kings have medical directors of activitics, while Nassau and Westchester have full-time executive secretaries. Some of the local representatives of the State Department of Health have acted in the names of their county societies. Now and then a county society has had the assistance of a secretary of the county tuberculosis association. All the precedents support the proposal of an executive secretary for every county medical society.

GROUP INSURANCE

One of the most important benefits of membership in the Medical Society of the State of New York is that of sharing in group insurance against malpractice suits. The conditions under which members may share in that protection are printed on page 1228 of this Journal.

The Medical Societies of nearly all the States make provision for protection, and their Journals often call attention to the increasing number of suits brought against physicians for alleged malpractice as an argument for joining the State Medical Societies. Yet the ratio of the number of suits to the total membership in those States is smaller than that in New York. The annual report of the Secretary of the Medical Society of the State of Pennsylvania, for example, lists only thirteen new suits instituted during the year 1932, although the Society has 7,555 members, or slightly more than one-half of the number of members in New York State.

The annual report for Ohio, with 4.920 memhers in its State Society, also shows thirteen snits instituted during the year, a rate far below that of New York.

Although New York State has a high ratio of suits, yet the premium on the indemnity insurance is about that of other States. The principal reason for the low cost of the insurance is the efficiency of the defense offered by the Medical Society of the State of New York. Very few suits have intrinsic merit, and skill in presenting the cases in court results in verdicts for the doctors practically always. Every case is tried by the Society's own counsel, who is familiar with the courts of New York State as well as the physicians. The value of this feature of group insurance cannot be overestimated.

Ohio and some other States which do not include indemnity insurance in their defense against malpractice suits advise physicians to take out insurance against possible judgments, warning them against the risk of insuring with companies which cannot legally write insurance in those The experience of New York State demonstrates the value of the plan of employing its own permanent counsel. Juries are likely to favor a plaintiff when they know that the insurance company, and not the doctor, will have to pay the damages. In New York the Counsel appears as the representative of the Medical Socicty of the State of New York, and therefore of the doctor defendant. A juryman takes a personal interest in the fate of his family doctor.

The group insurance plan of New York State is specially devised for the physicians of the State; and every doctor is urged to adopt it. However, he is to be reminded that cessation of membership in his county society automatically cancels his insurance, but the unused part of the

premium will be returned to him.



MEDICAL PROGRESS



Panaritiums and Phlegmons.-In treating panaritiums and phlegmons, says R. Klapp, the principle to be observed is that of saving the surrounding healthy tissues from necrosis. Early use of antiseptic dressings frequently has the opposite effect, destroying the tissues but not the microorganisms. Friedrich's practice of primary excision of wounds within the first 6 hours is a sound one for all fresh injuries with lacerated margins. When for any reason this cannot be done, dressings of balsam of Peru offer the next best method. Neglect of these measures is responsible for the development of panaritiums which, according to the tissue invaded, are cusubcutaneous, tendinous, periosteal, osseous, or articular. The first two are the most important, since they represent as a rule the beginning from which the infection spreads to the deeper tissues. Spontaneous healing is not to be trusted: the necrosis should be extirpated as early as possible. Klapp makes a double incision, one on each side of the panaritum, and scrapes out all the necrotic tissue with a sharp curette, after which he draws a small strip of rubber through, under the bridge of skin, and ties the ends together with a thread to prevent the escape of the strip. When the dressing is changed, gentle lifting of the rubber will reveal whether there has been retention of pus, which is generally not the case. This method nearly always results in regeneration of the parts after a few Panaritiums of the tendon sheaths are more difficult to recognize, but the patient, if properly questioned, can often tell the exact time, even to the hour, when the pain, previously circumscribed, began to involve the entire flexor side of the finger or even the whole finger. Upon the early recognition of tendon involvement often depends the saving of the tendon and its func-Two incisions on each side of the finger are indicated, to give the pus four avenues of escape. This method has the further advantage of not exposing any tendon and of preventing adhesions between tendons. Bone panaritiums are generally confined to a terminal phalanx, and under x-ray control are as a rule seen to form sequestra that can be removed without sacrificing the phalanx. Joint panaritiums are recognized by circumscribed tenderness, confined to a ring around the joint. Early treatment with irrigations of a 1:1000 solution of rivanol is useful, with removal of any sequestrum that may have formed. Should a phlegmon of the forearm follow a panaritium of the thumb or little finger, the so-called paronychial space must be opened for free drainage by double longitudinal incisions in a volar direction, upon the radius

and ulna.—Münchener medizinische Wochenschrift, July 14, 1933.

Occupational Dermatitis.-W. G. Harvey calls attention to the greatly increased incidence of occupational dermatitis due to the greatly increased use of chemicals in industry and in the home. For the proper diagnosis and treatment of these affections much more than a mere knowledge of skin lesions is requisite. Painstaking and subtle inquiry and a detailed knowledge of industrial processes, as well as of chemistry, is needed, and experts in these lines may have to be consulted. It is regrettable that dermatologists are not in agreement as to the terms they employ. It would be helpful to have an ex cathedra pronouncement of the exact meaning of eczema, as well as of anaphylaxis and allergy. To Harvey eczema connotes a clinical syndrome, a particular form of dermatitis. Eczema in itself is not a full diagnosis. The London Hospital uses two excellent qualifying words—Sequeira's "diathetic" eczema, and O'Donovan's "exogenic" dermatitis. In the majority of cases of exogenic dermatitis there is a history of a capable irritant, the lesion is confined to the seat of its application, and heals quickly when, and only when, the irritant is absolutely withdrawn. In addition patch tests may give confirmatory evidence. On the other hand, a trade dermatitis may give rise to lesions appearing symmetrically, and in regions far remote from the application of the irritant. It cannot be said that we are surely familiar with a diathetic eczema. One of the most difficult problems is to assess the liability where a dermatitis is in part due to occupation and in part to some slight departure from normal of the patient himself-for example, xerodermatous skin. Harvey quotes authorities who claim that there is no such thing as Baker's eczema, that 50 per cent of the supposed cases are sugar dermatitis, and that it is useless to attempt desensitization to flour. Dye dermatitis, on the other hand, is essentially allergic. quency of an occupational cause in cancer of the skin is probably insufficiently recognized. Soot, tar, creosote, anthracene, mineral oils, and the x-rays are known to be carcinogenic. In the treatment of occupational dermatitis the first care should be prophylaxis. Persons whose skins suggest vulnerability should be excluded from skin irritant industries. These include the young and those with delicate looking, "thin" skins. Employers should see that the handling of noxious substances is reduced to a minimum by the substitution of machinery, and should supply all possible facilities to the worker for the proper cleansing

of his skin. Dust should be reduced to the utmost by means of special ventilators. In cases of occupational dermatitis, it is essential that the worker be removed from the irritant. In general, methods of desensitization seem to have met with only limited success.—British Medical Journal, August 19, 1933, ii, 3789.

Some Undesirable Tendencies in Using an Etiological Classification of Heart Disease .-Henry A. Christian, writing in the New England Journal of Medicine, August 31, 1933, ccix, 9, believes that while it is advantageous, whenever possible, to utilize ctiology in the classification of a given disease, an etiological classification may not greatly help the situation, especially if it is allowed to replace other criteria of classification. Something of this sort is developing in the classification of heart disease, where the tendency is to neglect the facts which have been derived from a study of anatomy and pathology. Diagnosis and treatment can be based at the same time on etiology, function, and structure, with a definite advantage over utilizing any single one of these. To make a diagnosis of rheumatic heart disease or hypertensive heart disease does not really help in the treatment of the patient. Until we know the cause of hypertension, we can know but little of what causes the so-called hypertensive heart disease, and, after all, it is very probable that some unknown factor has to enter in to produce cardiac failure even in the presence of hypertension. Much of this applies to arteriosclerotic heart disease, too, to use another term in the etiological classification of these affections. Syphilitic heart disease is a very definite etiological type, inasmuch as syphilis rarely causes other than heart disease with aortic regurgitation. Knowing its cause definitely gives a lead to part of the proper treatment, even though in many of these patients antisyphilitic therapy influences very little the symptomatology and hardly more the progression of the lesion. In cardiac disease associated with thyroid disturbance, diagnosis of this relationship, an etiological diagnosis, definitely brings much help in treatment. In rheumatic heart disease, it is helpful in the management of a given patient to diagnose just what is the anatomical condition of the valve and the degree of deformity of its structure. It is such refinements of diagnosis which tend to be lost at present in the utilization of an etiological basis of classification. Possibly it is this attitude toward diagnosis, which has delayed until very recently the recognition that aortic stenosis with practically no lesion of any other valve and usually accompanied by extensive calcification is not only a distinctive clinical entity but one of considerable frequency of occurrence. If clinicians of today were as diligent as their outstanding predecessors have been in seeking permission for postmortem examination of the patients whom they have followed in their illness,

they would make better anatomical diagnoses, which, interpreted in the light of more recent knowledge of etiology and function would give them a very helpful understanding of their patient's disease and its management.

Angina Pectoris. A Plea for Greater Optimism .- T. Stuart Hart, writing in the American Heart Journal, August, 1933, viii, 6, makes a plea for the more cautious use of the terms "angina pectoris" and "coronary thrombosis" and for a more optimistic attitude toward patients included in these categories. In the mind of the average layman these terms carry the implication of complete and incurable invalidism and sudden death. Physicians make use of the term "angina pectoris" so frequently that it seems as if almost any cliest discomfort may be labeled with this diagnostic tag. It is in the author's experience to see patients who have been told that they have angina pectoris or coronary thrombosis who present no objective evidence whatever of an or-ganic defect of the heart or aorta. The whole evidence offered is a statement of his subjective sensations made by the patient. In many instances an acute attack has not occurred under the observation of a physician. Many members of this group have a history and other evidences of a highly organized nervous system. The evaluation of this evidence is sometimes made more difficult by the patient's subconscious desire to secure sympathy, or to obtain financial relief from the opera tion of a disability clause in an insurance policy. In considering the condition of patients in whom a licart defect is suspected, the psychic element is too often neglected. There are many sources from which psychic trauma may come, such as the various sensations in the region of the heart of which the patient is conscious, the sudden death of a close friend or member of the family which has been attributed to heart disease, the injudicious statement of a life insurance examiner, or most often of all, the unguarded verdict of the physician who has been called in for an emergency. If we are to be of real service to our patients our attitude must be one of guarded optimism; pessimism is out of place. If an accurate prognosis for the individual is impossible one is still justified in assuming that a patient is likely to fill out years of useful living. The author feels that he is warranted in taking this attitude, since he sees from time to time a considerable number of patients in whom there seemed to be a definite diagnosis of angina pectoris or coronary thrombosis and who are living ten or fifteen years after the first attack. Some are doing full work with only occasional discomfort; others are living a life of limited activity with a modest amount of Mackenzie records a total of 33 individuals who lived for more than a decade after the first paroxysm of pain, and at the time the report was published 16 of them were still alive.

While the syndrome of angina pectoris should always be taken seriously, this label should never be attached without due thought and study. Whenever possible this term should be withheld from the patient, for it hangs above him like the sword of Damocles.

Epilepsy in Children.—A study of statistics, says Julius Zappert, demonstrates that in 35-50 per cent of epileptics the attacks began in early childhood, and in 10-12 per cent even in the first year of life. It is still uncertain whether traumatism at birth could be held responsible. ever a child has a convulsion for which no other cause can be assigned, one is justified in suspecting epilepsy. Two types of juvenile epilepsy can be distinguished: a continuous and an interrupted. It is not unusual for an isolated convulsion or a small number of convulsions in early childhood to be followed by a free interval of months or even years before any further disturbance is observed. Cases with irregular intervals of a few months constitute a transition from the interrupted to the continuous type, in which the attacks come at regular intervals of no great length. Frequently the convulsions come at first only in the night, and this may be the case for a period of years, until at length a diurnal attack appears. In many cases the convulsions are of the petit mal type. In another group attacks with varying characteristics may follow one another without any rule of conformity, so that the term variable type may well be applied to them. Much more usual than the typical grand mal attacks with clonic convulsions are the cases with tonic contortions limited generally to certain parts of the body, for example one half of the trunk and face, which, however, gradually pass to the other half, not infrequently ending with a few clonic convulsions. Only gradually is the consciousness lost; rarely is there initial shrill cry; the tongue is seldom bitten, but involuntary micturition is frequent. children report such prodromes as eructations, abdominal discomfort, dizziness, a sensation of sparks before the eyes, tingling of the face and tongue, and an inclination to groan and sigh. The difficulty of diagnosis lies in the fact that even in late childhood children have great and small convulsions from other causes. The syndrome of pycnolepsy, having many but brief attacks, has a very favorable prognosis. Even in true epilsepsy the prognosis is frequently good, especially under uninterrupted luminal treatment given over a period of years. Zappert is inclined to use the term epileptiform convulsions and to commend the case to time and further observation, postponing a positive diagnosis until the decision can be made more easily for or against epilepsy. — Münchener medizinische Wochen-schrift, July 28, 1933.

The Clinical Significance of Diastasuria.— In the Acta Chirurgica Scandinavica of July 28,

1933, Jens Foged states that after making 1099 analyses of the urinary diastase in 160 patients suffering with various forms of icterus, he has observed that the concentration of diastase in the urine does not exceed the normal values in patients with hepatitis and cancer of the pancreas, but that pathologically increased values are present in more than half of the patients suffering with stones in the common duct. The significance of this observation for differential diagnosis is obvious. When one is confronted with a case of icterus and is uncertain whether to make a diagnosis of hepatitis, cancer of the pancreas, or stones in the common duct, an increase in the urinary diastase will, with great probability, indicate the presence of stone in the common duct. It is of course necessary to exclude other possible causes of increased excretion of diastase (primary pancreatitis, epidemic parotitis, etc.), but this will as a rule not be difficult in an icteric patient with suspicious symptoms of stones in the common duct. Unless there are serious contraindications, Foged thinks that an abnormally high urinary diastase is an indication for operation. Even if the stones cannot be revealed by palpation, an exploratory choledochotomy should be performed. Neglect of this exploratory procedure has been chiefly responsible for the overlooking of stones in not a few cases. If no occlusion of the common duct is found, the clinician should not for this reason conclude that he has been mistaken in the result of the diastase test, for a pathological diastasuria is also found in 10-20 per cent of cases of uncomplicated cholelithiasis and cholecy-In this instance, therefore, the diastase test alone does not give sufficient information as to whether common duct stones are present or not. The finding of an increased diastase value, however, speaks so strongly in favor of an occluded common duct that the duct should be explored by all means available, particularly as a choledochotomy does not complicate the prognosis in any decisive degree. But it should be borne in mind that common duct stone does not always cause a pathological diastasuria. The finding was negative in 43 per cent of the author's cases. It is important to carry out a series of daily examinations before reaching a negative conclusion. increased excretion of diastase must be regarded as evidence of a pancreas irritated by the proccesses of the bile ducts, most frequently by retention of the pancreatic secretion due to an obstruction of the passage at the papilla of Vater.

The Influence of an Unsalted Diet upon the Gastric Secretion, and the Clinical Use of Such Diet.—Studies were carried out by Unverricht upon both healthy and sick individuals with reference to the effect of an unsalted diet upon secretion of gastric juice. Such diet is saltfree only in the sense of having had no salt added in its preparation. It is important in prescribing such a regimen to include in the diet a large number

of vegetable substances containing a relatively large amount of sodium chloride. The experiments confirmed Eimer's findings that in most individuals an unsalted diet causes an increase in the total acidity and free hydrochloric acid, that it does not impair the capacity of the stomach for digesting protein, and that pensin secretion remains normal. It thus becomes evident that the secretion of gastric juice is not dependent upon the artificial administration of sodium chloride, and that the small natural content of this substance in foodstuffs is sufficient for the formation of normal gastric juice. For clinical use the composition of the diet need not be so poor in salt as was that of the experimental diet, namely 0.5-1.5 gm. per day, but may reach 2-3 gm. daily. It is permissible to add 1 gm. more on 1 or 2 days each week if flagging appetite or muscle fatigue is observed. The unsalted diet has been used by Unverricht efficacionsly in cases of cardiac insufficiency, cirrhosis of the liver, essential hypertonia, and nephrotic hydrops. One must of course not curtail the use of salt systematically in chronic nephritic patients with hyposthenuria, since diuresis could not then be maintained without the danger of hypochloremia. This applies naturally only to those cases in which the diluting power of the kidneys for sodium chloride is already diminished. Since the extrarenal factors are the most important causes of the edema, and are the ones chiefly influenced by limitation of salt, it is justifiable in every case of edema, be its causes renal or otherwise, to employ this diet. Certain endogenous forms of obesity are favorably influenced by an unsalted diet. The desiccating action of this type of diet makes its use beneficial in certain types of skin affections, such as priiritus, eczema, psoriasis, etc., and also in bronchitis and bronchiectasia. Many cases of obstinate catarrh of the respiratory tract and also the secondary bronchitis of tuberculosis, have disappeared or been greatly improved by its systematic use .- Deutsche medizinische Wochenschrift, August 4, 1933.

Malarial Therapy in Leucemia .- According to M. Trombetti, writing in the Riforma medica of June 24, 1933, Rosenow, who claimed to have had excellent results from malaria therapy in leucemia, had in reality observed only a transitory improvement in one case of myeloid leucemia, and had then desisted from the treatment, considering that infectious diseases in general have an unfavorable influence upon leucemia, the course of which becomes accelerated, although the white blood count and the hyperplasia of the viscera seem at first to regress. In one of Hirschfeld's cases of pneumonia it caused a chronic myeloid leucemia to change into an acute leucemia. Paschkis has recently reported that he employed malaria therapy in the case of a man of 48 who had been syphilitic for a long time and in whom

the cerebrospinal fluid yielded a positive Wassermann reaction despite repeated specific treatments. The white count was 30,000, with 79 per cent lymphocytes and 2 per cent monocytes. On the 16th day the splenomegaly was slightly inereased and the white count was only 7900, with 66.5 per cent lymphocytes and 4 per cent monocytes. Half the lymphocytes were young, immature cells. When, however, the malaria was combated with quinine, the leucocytes rose again to 13,600, with 73.6 per cent lymphocytes and 3 per cent monocytes, which after 7 days became 24,400 leucocytes, with 77 per cent lymphocytes and 1 per cent monocytes. This new observation cannot, therefore, be regarded as encouraging for the malarial treatment of leucemia.

Appendical Oxyuriasis and Appendicitis .-Harold Gordon, writing in the Archives of Pathology, August, 1933, xvi, 2, presents a study of the incidence of oxyuriasis in 26,051 appendices, 311 (1.19 per cent.) of which showed the presence of oxyurids. In the first 20,969 appendixes in this series the incidence was 1.04. It would thus seem that there is an increasing frequency of appendical oxyuriasis. It was found that oxyurids occasionally cause minute mucosal lesions in the appendix. These lesions are accompanied by evidence of living tissue reactionpunctate liemorrhages, slight exudation, and necrosis. The lesions occurred in 12 instances only. To this condition the term "appendicopathis oxyurica" may properly be applied. In 256 instances, the parasites occurred in the lumen of the appendix without producing visible lesions. In 33 instances oxyurids were found in the wall of the appendix. Since none of the sections showed hemorrhage or reaction about the worms in the lymphoid tissue of the submucosa, Gordon is forced to conclude that penetration occurred subsequent to operation. This theory of postoperative migration explains all the observations of previous investigators as well as his own. Not only does it explain the otherwise insurmountable difficulty of complete lack of hemorrhage, but it also makes clear why no one has ever proved the production of inflammation by the carrying of bacteria from the appendical lumen into the tissues or on the bodies of the worms. type of invasion is, therefore, of no pathological or clinical significance. Less direct evidence can be adduced by a statistical comparison of the appendices without worms and those infested with oxyurids. Of the former, 26.37 per cent. showed severe inflammation; of the latter 22.85 per cent. Correction of the general operative group for age to correspond with the restricted age group favored by infestation with oxyurids yields a much higher incidence of inflammation (42.35 per cent.). The material of this study supports the view that oxyurids are not a significant cause of appendical pathological changes.



LEGAL



PHYSICIAN AND PATIENT—PRIVILEGED COMMUNICATIONS

By LORENZ J. BROSNAN, Esq. Counsel, Medical Society of the State of New York.

Some months ago in these columns, we discussed a case in which one of the Justices of the Supreme Court of this State was called upon to rule on the applicability of the privileged communications rule in the case where an autopsy has been performed. The principal case discussed in the article which appeared in the October 15, 1932 issue of this Journal, held that the statutory privilege against disclosure of information by physicians did not apply in the case where testimony as to autopsy findings is sought to be put into evidence upon a trial.

Recently, in another State a closely related question came before the courts, and in that case it was ruled that the professional privilege operated to bar the testimony. The situation precisely was that two doctors were called to attend a dying man and arrived to render aid, after he had passed away, and then made futile attempts to revive him. It is necessary, for an understanding of the case, to set forth the facts.

The deceased was at the time of his death a man of sixty, who weighed over two hundred pounds. He was over six feet tall and was in apparent good health. On the date of his death, he ate his dinner, changed his clothes and then went to his garage to work on his car. He was seen nearly two hours later still working on the car, and about an hour and a half thereafter he was found lying face downwards on the floor of the garage near the car with the engine still running. All of the garage doors were closed. There was some grease on the floor on which he would have possibly slipped and fallen, and there were bruises on his forehead and nose. The color of his face and chest was deeper than natural red. Two doctors were summoned who made attempts to revive him but where unseccessful.

In subsequent litigation the question arose as to whether the deceased had died by external violent and accidental means other than by inhalation of carbon monoxide gas. The question of suicide was not involved. The widow sought to establish by medical testimony, based upon hypothetical questions reciting the conditions under which he was found, that he died of concussion of the brain and cerebral hemorrhage. The defendant sought to establish, by the two doctors who worked

over the deceased, facts indicative of carbon monoxide poisoning. The question as to the admissibility of their testimony, in the light of the professional privilege statute, was taken up on appeal to the highest court of the State. That court decided that the testimony was not admissible, for the statutory privilege applied.

The statute under which the ruling was made was substantially the same as that in New York, reading as follows:

"A licensed physician or surgeon shall not, without the consent of his patient, be allowed to disclose any information or any opinion based thereon which he acquired in attending the patient in a professional capacity and which was necessary to enable him to act in that capacity."

In the opinion of the Appellate Court, the autopsy situation above referred to was discussed and distinguished as follows:

"The case is wholly unlike that of physicians called to perform an autopsy, because in such cases they are not there for the purpose of treating or ministering to the patient but are there merely to determine the cause of death. Most of the cases hold that information obtained by physicians in performing autopsies is not privileged under the statute. *** (the deceased) was probably dead when the doctors began their treatment; but we surmise this because the treatment failed to resuscitate him. We do not know at which precise moment he passed away. Had he been revived, of course anything that these doctors learned in their treatment would have been privileged."

The court in continuing the discussion of the case said:

"It is our opinion that the information obtained under circumstances such as these and the opinion based thereon where, in hope of reviving and resuscitating the patient, doctors examine him and give treatment, is privileged under the statute. They acquired this information in acting in a professional capacity for the purpose of enabling them to act in that capacity, not to determine the cause of death, but to prevent death if possible. If the patient were still alive at the time they commenced the treatment, but died during the process, we think that all would agree that the privilege

covered the situation. How can it be any different when the doctors do not know whether the patient is beyond hope of revivial? It would be an absurd result to say that the privilege depended upon the event rather than on the purpose of the physician. The Legislature could not have intended such a construction. The fact that the result is unfortunate cannot have been intended to terminate the privilege as of the moment of death. The privilege in so far as it relates to objective symptoms would be largely nullified if a physician were compelled to tell what he saw the moment after death occurred."

It should be noted that one of the Judges of the court dissented from the opinion of the majority of the court. He wrote a separate opinion in which he said:

"The purpose of the statute is to protect the disclosures of the living and not at all to make incompetent the appearance of the dead. It is in derogation of the common law, and therefore to be construed strictly rather than liberally. It is not to be extended by unnecessary implication, and I feel that this decision may lead to just that. It occurs to me that in every such case there is for the judge this preliminary fact question: Was the patient dead at the time of the observations concerning which the doctor is asked to testify? A corpse cannot be a patient within the meaning of the statute. So, if the determinative fact question is answered in the affirmative, the doctor should be permitted to testify concerning his post mor-tem examinations. Here it strikes me that any trial indge could have held on the evidence that the patient was dead at the determinative moment, thereby making the testimony admissible."

1227

Our Court of Appeals has stated the necessary elements to bring such a situation under the prohibition of the statute, to be as follows:

"1. The relation of physician and patient must exist. 2. The information must be acquired while attending the patient. 3. The information must be necessary to the physician to act in that capacity."

Should such a situation be presented in this State, the courts would be called upon to decide whether these elements are present. The intention that the relation of physician and patient should exist seems clear, but whether it ever did in fact exist seems open to question.

CLAIMED NEGLIGENT TREATMENT OF SYPHILIS

A young man and his wife consulted a general practitioner, stating to him that they had been married for eleven years and during that time she had become pregnant three times and each time had spontaneously aborted. The doctor became suspicious that both might have syphilis, so he suggested that Wassermann tests be taken. The patients consented and reports were received from the Board of Health laboratories which showed four plus for the husband but were negative for the wife. The doctor informed the man of the reports and suggested a course of injection treatments.

The man came back from time to time to the doctor's office and received a number of injections of neosalvarsan, in addition to which the doctor administered to him two injections of bismuth intramuscularly. patient then stopped returning for treatment to the doctor's office, and about ten days after the last injection the doctor was called to the patient's home, where he found the patient in bed with an extensive dermatitis all over his body. The doctor recognized the condition as an arsenical affection of the skin. He began giving the patient sulfactol injections intravenously and local applications. After ten such injections the patient's condition was gradually improving. At that point a dispute arose between the patient and the doctor, and he never saw the patient again.

malpractice action was commenced against the doctor by the patient, in which the plaintiff complained that the doctor was negligent in his treatment in administering excessive amounts of powerful drugs or poisons, and failing to administer appropriate antidotes to counteract the harmful effects of said drugs or poisons. It was claimed that as a result of the alleged negligence of the doctor, plaintiff was unable to attend to his work for eleven weeks.

The case came up for trial, and the doctor and his witnesses appeared in court ready to try the case. A statement was made to the presiding Judge by the plaintiff's attorneys that the plaintiff could not be located, and a postponement of the case was requested for the purpose of locating him. The defendant's attorney insisted upon proceeding to trial, no legal excuse having been shown to the court for the requested adjournment, and on the motion of the attorney for the defendant the action was dismissed by the court, thus terminating the matter in the doctor's favor, without trial.



NEWS NOTES



GROUP INSURANCE PLAN OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

The unsettled conditions during and after the war brought about a grave change in the attitude of the suing public toward the medical profession throughout the country, and particularly in New York State. Malpractice defense and insurance, which, prior to that time, had been minor factors in the practice of medicine, became increasingly difficult to handle and of vital importance to all medical men. The Medical Society of the State of New York promptly met the new situation by increasing the size and efficiency of its legal defense department, but the insurance companies doing business in this state, either through lack of knowledge or other limitations, were unable to meet the situation to the satisfaction of themselves or those who bought their policies.

It finally became necessary for the State Society to take the lead in devising a way to establish and preserve a stable source of insurance protection for its members. As a result of that leadership the present Group Insurance Plan of the State Society was organized and put into effect in May, 1921.

This undertaking is in effect a copartnership

between the State Society and the Aetna Life Insurance Company of Hartford, operating almost entirely under the supervision of the Society. Through it the medical profession for the first time has been brought into close cooperation with the insurance business; and a high degree of sucess in combating unjust suits and claims has resulted from the combined effort. While loss costs have thus been reduced, the operating costs have also been decreased from time to time so that today, after twelve years of operation, the plan is being conducted at a net cost to members of the Society, both as respects to loss and operating costs, far less than can be supplied by any other insurance company in this state.

From time to time, during the operation of the Plan, questions have arisen which required the adoption of rules by the Society to prevent unequal benefits flowing to a comparative small number of members at the expense of others. At the last meeting of the House of Delegates in New York, in April 1933, these rules were revised and codified for the information and

guidance of members generally.

REGULATIONS GOVERNING MALPRACTICE DEFENSE AND GROUP INSURANCE ADOPTED BY THE HOUSE OF DELEGATES AT THE ANNUAL MEETING, APRIL 3, 1933

Members Not Insured Under the Group Plan

The Medical Society of the State of New York will furnish to its members the services of the Counsel of the Society in actions brought for alleged malpractice, error, or mistake done or claimed to have been done in the legitimate performance of the duties of their profession as physicians under the following regulations:

The Counsel of the Society will serve as attorney in all actions for alleged malpractice, brought against members in good standing, who must be so certified by its Secretary, excepting as follows:

Members shall not be entitled to malpractice defense if the acts in the suit for which they make application for defense were committed prior to their admission to membership in the State Society.

Members shall not be entitled to malpractice defense if the acts in the suit for which they make application for defense were committed during a period when they were not in

good standing, according to Chapter XIV, Section 4, of the By-Laws.

Members shall not be entitled to malpractice defense while residing and/or practicing medicine or surgery outside of the territorial limits of the State of New York.

The Society will not undertake the defense of any member who, after consideration by the Executive Committee, is believed guilty of criminal abortion, feticide, homicide, or any criminal act or who has not complied with the recognized ethical laws in regard to these cases.

Members shall agree not to compromise any claim against them, nor to make settlement in any manner without the advice or consent of the Society given through its attorney.

In the event that a member sued or threatened with suit shall, without the advice or consent of the attorney of the Society, determine to settle or compromise any claim against him, he shall reimburse the Society for the expense incurred in undertaking his defense, and in default thereof, he shall be deprived of further privilege of malpraetice defense.

The Society shall not assume any responsibility for the payment of any sum agreed upon by arbitration in the settlement of claims, or awarded by court verdicts, or for making

payments for any purpose whatsoever. Members of the Society desiring to avail themselves of the privileges of this act shall make application therefor in writing to the Secretary of the Society, and it shall be shown to his satisfaction that they are members in good standing. They shall also furnish the Legal Counsel a complete and accurate statement of their connection with, and treatment of, persons upon which complaints against them are based, giving dates of attendance, names and residences of nurses and of other persons cognizant of facts and circumstances necessary to a clear and definite understanding of all matters in question, and shall furnish such other relevant information and execute such papers as may be required of them by the aftorney of the State Society.

In the event of any difference of opinion between a member of the Society and the Counsel concerning the eligibility of a claim for defense, or any other matter having to do with malpractice defense or indemnity, all details shall be presented to the Insurance Committee to be referred with recommendations to the Executive Committee of the Council for its decision.

The foregoing regulations are subject to such change as may from time to time be authorized by the Executive Committee of the Council or the House of Delegates.

Members Insured Under the Group Plan

All members in good standing shall be entitled to malpractice defense and indemnity in the Group Plan of Insurance on payment of the premium due on the policy selected; but the amount of insurance protection granted to any member may be limited at the discretion of the Executive Committee of the Council. subject to petition for reconsideration.

When upon the final completion of the defense of any suit or claim it shall appear to the satisfaction of the Executive Committee that the medical procedure, conduct or attitude of the member involved was such that it could not have the approval of competent medical opinion generally and that the continuance of such medical procedure, conduct or attitude would constitute a burden to the Society's Group Insurance Plan more hazardous than that contemplated in what is generally accepted as the competent practice of medicine, the Society shall have the right to

withdraw from such member the privilege of renewal of his indemnity insurance under that Plan. Nothing in this rule shall deny such member a rehearing by the Executive Committee. This rule shall also not abrogate such member's right to subsequent malpractice defense by the Society.

If an assured shall fail to maintain in good standing his membership in the State Society, according to Chapter XIV, Section 4, of the By-Laws, the policy, so far as it applies to such assured, shall be cancelled as of the date upon which he ceased to be a member in good standing. A notice to this effect shall be mailed to the member's last address, and the Company will return upon demand and surrender of his certificate, the uncarned premium due him on account of such cancellation. If the member is reinstated by payment of dues, the former policy cannot again be put in force but the member can secure a new policy under the same conditions as if he were a new member of the Society. This rule shall become operative if and when it is written into the policy of the Group Plan.

The Group Plan of Insurance shall insure a member within the limits of his policy against loss growing out of suits or claims for malpraetice, error or mistake, committed or alleged to have been committed by an insured member in the legal practice of his profession or by any assistant of such a member, whether in institutional or private practice, in the treatment or care of a patient previously seen and diagnosed by such a member and for whom the member has directed a course of treatment or care.

The Group Plan of Insurance shall not cover the liability of an insured member on account of the use of x-ray for therapeutic treatment, the employment of partners, associates, assistants, technicians or nurses to practice medicine in his name independently of his personal diagnosis and specific instructions as to the treatment or care to be given, nor shall it cover the liability which such a member may have by reason of his ownership in whole or in part of any association, partnership, clinic, hospital, sanitarium, dispensary or any enterprise other than his personal practice of medicine therein. The liability for such ownership constitutes additional hazards not contemplated under the Group policy or rates, and losses on account thereof shall not be charged against the experiences of the Group Plan. Protection against these hazards shall, upon request and the payment of an additional premium, be furnished by the carrier by en-dorsement upon members' Group Plan Certificate or under an additional policy of insurance when necessary.

The Group Plan policy shall not cover the liability which an insured member may have on account of injury to patients from causes other than medical treatment, care or advice, nor for injury to persons other than patients from any cause whatsoever. Protection on account of such losses can only be had under general liability or workmen's compensation insurance.

When in the course of duties imposed upon him as a medical officer of the State, or any political sub-division thereof, an insured member shall be required to render medical opinion, he shall be fully protected under his Group Insurance against the consequences of such an opinion provided it shall have been given to competent authority and not made public by him.

All members in the Counties in Greater New York and Rockland, Westchester, Nassau and Suffolk, desiring insurance protection in the Group Plan of the State Society, shall secure that protection through the Authorized Indemnity Representative of the Society, Mr. Harry F. Wanvig.

Members Insured by Companies Other Than the Carrier of the Group Plan

A member who elects to secure malpractice insurance protection from a company other than the Carrier of the Group Plan shall have the same right of defense by the Counsel of the Medical Society of the State of New York as those members not insured provided said carrier is authorized to do business in the State of New York. If the member desires this service under the circumstances, all the regulations as detailed above applying to members not insured under the Group Plan must be observed. At the time the action is

begun, and not later, the Secretary of the Society shall be furnished with the name of the Insurance Company, policy number, date of policy and amount of insurance carried. There shall also be presented at the same time a letter from an authorized officer of the Insurance Company certifying that the Company will assume the full cost of the defense including the fees of the Counsel of the Medical Society of the State of New York similar to those paid by the Carrier of the Group Plan in like instance. Also that he shall not be required to consult with or receive instructions from the Company as to the manner of defense, and that the Company will accept his opinion on the final disposition of the action.

As Companies other than the Carrier of the Group Plan usually compel the holders of their policies to accept defense by the Legal Counsel of the Company concerned, the above would not apply. It is essential, however, that members so insured shall also enjoy the benefits of the services of the Counsel of the Medical Society of the State of New York, if desired; but it is obvious that such service will be restricted by the rule of the Insurance Company cited above. Thus while the Legal Counsel of the Medical Society of the State of New York cannot be required under these circumstances to assume control of the defense or to appear as associate counsel, he shall be ready to render to the Counsel of the Insurance Company, if requested, a consultant's opinion and advice provided the Company concerned will compensate him for this service in the same manner as the Group Plan Carrier would do if the member were thus insured.

All previous resolutions heretofore adopted, pertinent to malpractice claims and defense, are hereby rescinded.

COMMITTEE ON PUBLIC RELATIONS

The regular monthly meeting of the Committee on Public Relations of the Medical Society of the State of New York was held on September 25, 1933, in the Arlington Hotel at Binghamton. There were present Dr. Sadlier, Chairman, and Drs. Hambrook, Cunningham, Johnson, and Ross; and Executive Officer, Dr. Lawrence.

Publicity: The committee discussed the ncessity of informing the members of the County Medical Societies of the functions of their Public Relations Committee, and of the activities in which the State Committee has taken the lead. One suggestion was that special bulletins be prepared and mailed to those particu-

larly interested in the public relations of physicians. Another was that special pages in the Journal be utilized by the Committee.

The committee reached the conclusion that since the Journal itself is designed to carry reports and news to the county societies and their members, provision should be made by each county society at some financial cost if necessary, for sending the news of its activities to the Journal regularly.

There was a discussion on the scope of the work of the county Public Relations Committees, and the items on which they should report to sectional conferences held by the State Committee. The decision was to urge the

county societies to supply the information that was outlined by the Committee as reported in the Journal of August 15, 1933, page 1010.

Fee Scale for Crippled Children: There was a report on an investigation of the fee scale followed by the State Department of Health in authorizing payments for operations on crippled children. An examination of many bills submitted by physicians showed that the fees were satisfactory in the great majority of cases, and in conformity to the fee list suggested by the Committee on Public Relations (Journal February 1, 1929, page 171; and June 1, 1929, page 702). However, the Committee felt that provision might be made for difficult cases and those involving an unusual amount of after care.

Lectures to Medical Students: The details of the lectures to be given to senior medical students by Dr. W. H. Ross, were discussed and the decision was to assign two doctors to accompany Dr. Ross as he gives each address, and emphasize the interest which practicing physicians take in the medical students.

Reference by House of Delegates: There was a preliminary discussion on five subjects referred to the Committee by the House of Delegates, as follows:

- 1. Why so few physicians form a part of the organization or are employed by national health organizations. (Journal, May 1, 1933, page 587.)
- 2. To take steps to prevent the State Department of Health from becoming an agency for the treatment of crippled children. (Journal May 1, 1933, page 597.)

3. In conjunction with the Committee on Public Health and Medical Economics, to draft a desirable Public Welfare Law. (Journal, March 1, 1933, page 288, and May 1, page 599.)

- 4. In conjunction with the Committee on Public Health and Medical Economics, and the Counsel of the State Society, to study the organization of the Public Health Council and regulations of the Sanitary Code. (Journal March 1, 1933, page 289; and May 1, page 599.)
- 5. In conjunction with the Committees on Public Health, Medical Economics and Legislation to study the regulations governing stateaided hospitals, with the idea of insuring their local autonomy. (Journal March 1, 1933, page 290; and May 1, page 600.)

Consideration of these recommendations involves the Committees on Public Health and Medical Education, on Economics, and on Legislation. They will be taken up at the November meeting.

Conference of County Chairmen: The afternoon session was a conference with the chairmen of the public relations committees of the counties in the vicinity of Binghamton.

Broome County: Doctor George S. Lape, of Broome County said that in the triple cities of Binghamton, Endicott, and Johnson, the indigent poor were well cared for. The work was not so well done in the rural sections of the county. There was a nurse in charge of the welfare work in the County outside of the three cities. He stated that "of five thousand ehildren having defects, thirty per cent had been corrected by the Humane Society." All health problems are taken up by the county society. In the cities there are school physicians. In the rural district the health officer frequently does the work. The physicians employed by the Johnson Endicott company do not now do as much private practice as they once did. Considerable study has been made of the water supply of country schools and it was found inadequate.

The Metropolitan Insurance nurses in caring for their sick asked permission to care for contagious diseases. The insurance company asked that they apply to the county society before taking further action on this work, and the opinion of the county society was against it.

They have only part time health officers in Broome County, but they do their work well. All health organizations in the county consult the medical profession before undertaking any The county society has adopted program. resolutions that, in their opinion, it is better to take care of welfare patients in their homes instead of in a county hospital with doctors on salary. It was brought out in the discussion that Broome County is large enough to have an executive secretary of the county society, so as to coordinate all of the activities of the society. About twenty per cent of the profession of Broome County are on salary by the Endicott Johnson Company. When these men practice, they usually do it for less than usual fees. Venereal disease control is carried out by the local health officers. In the care of indigent cases under public welfare, the doctors are paid one dollar in the office, and two dollars in the home, and confinement cases at the rate of twenty-five dollars. The city of Binghamton has five city physicians at a salary of nine hundred dollars each. It was brought out that Binghamton and many other cities have to do this under the city charter.

Chenango County: Doctor B. A. Hall said that the County of Chenango, two years ago, had two county nurses, who helped in clinic, anti-tuberculosis, and all kinds of county health work, but that the county concluded that they could not afford a nurse to do public health work, and now has only the help of lay

people, and what help some school nurses can

give.

In welfare cases the surgeon is paid for laparotomy, sixty dollars, and that indigent cases are well cared for. The county society is opposed to free clinics, but Doctor Hall said that the clinics were necessary to give diphtheria immunization, because doctors do not attend to it. Doctors were paid for venereal disease control work if they wanted to do it. Not many of them wanted to do it. The law says that the health officer must do it if no one else will, but that they cannot get extra fees for it.

The County lost the county nurses because of the need for economy. The relations of the welfare commissioner, the health officers and the doctors are satisfactory. Little school work has been done by the private physicians; it was nearly all done by the school physicians. In the larger towns of the county the defects are quite well corrected. In the smaller places it was not done well. The county society has thirty doctors and the population of the county is 31,000.

Delaware County: Doctor G. B. Maurer reported that the county government would not employ county nurses this year. The county medical society persuaded the Board of Managers of the County Sanitarium to appoint a tuberculosis nurse, which they could do under the law, and this nurse acts as the county They have in the county a central committee having a member each from the County Medical Society, The Red Cross, The Lions Club, The American Legion, and the Churches. This committee meets several times a year for the purpose of coordinating the health work, and to smooth out any difficulties that have arisen. A county health department is not likely to be organized in Delaware County. The efforts of the County Tuberculosis and Public Health Association "do not seem to go well." At the County Sanitarium the County Tuberculosis Committee insisted on having a full time man, but the county society objected to any change being made because the part time man'is satisfactory to everybody.

The relation of the welfare officer to the physician is satisfactory. The surgery is paid for if the patient is in the county hospital, otherwise it is not paid for. The county hospital is in connection with the poor house.

School examinations are rarely done by the family physicians; but the greater number are done by the health officer, or in the larger places by a school physician, and the position is passed around so that every three or four years a physician has the opportunity to examine his own patients.

The Delaware County Medical Society discusses its public relations fully as much as its scientific work. It was apparent from the discussion of Doctor Maurer that the physicians of Delaware County were active in all public aspects of medicine, and were active in their leadership.

Tioga County: Doctor Guy S. Carpenter said that there are twenty-two members in their county society, and four physicians in the county not in their society. At their medical educational meetings, the average attendance for the last course of five lectures was thirtytwo. For economic reasons the county does not now employ public nurses. The county society has four members on the county voluntary tuberculosis and public health committee. The Welfare Commissioner of the county works well with the physicians. Home visits are paid for. Hospitalization is paid for; but since Tioga County lies at the State line, and since the physicians over the State line in Pennsylvania charge nothing, the doctors are unable to charge in Tioga County.

Doctor Carpenter said it may be that the doctors are to blame and perhaps their not being paid was as much that they wanted to have their hospital successful as anything else.

Doctors of Tioga County have not been too cooperative in diphtheria immunizations, and it had been necessary to have free clinics do it.

If the physicians were more interested, they could carry on well-baby clinics. There had been a number of eclampsia cases in the last two years, believed to be the result of a lack of prenatal work. Dr. Carpenter said: "It is too bad that the dollar takes precedence over public health in many cases when the Boards refuse to appropriate money for public nursing. It will never be right until medicine assumes full leadership and full responsibility for public health."

Doctor Hambrook inquired what is being done in the hard of hearing in school work? The answer was, "Not much, and not much is likely to be done until the medical profession more actively undertakes to establish it."

Tompkins County: Doctor Dean Smiley said "Tompkins County has forty doctors and forty thousand population. They have three nurses in the county. The county society is in part opposed to a county health department, but many laymen in the county are anxious to have it.

"There is good care of the indigent poor. The county society has established a scale of fees and each welfare officer has a copy.

"No progress has been made in having the school examinations done by the private physician. All is done by school physicians. It is

well done by the health officer in Ithaca. In he county it is not so well done.

"Annual physical health examinations are not actively advocated by the doctors. uberculosis work in the county has not been very satisfactory, but now the State Tubercuosis Sanitarium located near-by will cure this The relationship of the county situation. society to the lay organizations is satisfactory when the physicians take leadership in them.

Doctor Johnson thought that, since most of us were taught in the medical schools only curative medicine, all older physicians would have to be "born again" before they took up annual physical examinations of well people. He thought that medical colleges should give more definite instructions on physician's examinations of well people, and that the lecture to students this year might stress the teaching of how to make a well person examination.

County Welfare Commissioners: Doctor Lawrence at the close of the meeting presented elippings from several papers showing the interest of county welfare commissioners in conferring with physicians so that the indigent person might have the advantage of being attended by his family physician. There was a general discussion on this subject and they concluded that the family physician could take eare of indigent persons at no extra cost to the tax-payers, and that better service would come by having the patient choose his own physician. In the hands of the family doctor, abuses of medical care would be corrected, and cases would not be placed on medical care unless they were entitled to it.

WILLIAM H. Ross, Secretary

GRADUATE EDUCATION PROGRAM

Dr. Thomas P. Farmer, Syracuse, Chairman of the Committee on Public Health and Medical Education of the Medical Society of the State of New York, has announced the following program of four courses of instruction for the members of County Medical Societies.

Course on Physical Therapy for the Niagara County Medical Society, arranged and given by Dr. Richard Kovacs, 1100 Park Avenue, New York, to be given at 424 Pine Avenue, Niagara Falls, on Tuesdays at 8 P.M.

October 17, 1933-Heat Measures; including diathermy. October 24-Low frequency currents. Electro-diagno-

sis, massage and exercise. October 31-Ultra-violet adiation. Physical therapy in medical conditions.

November 7-Physical therapy in surgical, gynecological and other conditions.

Course on Dermatology and Syphilology for Columbia County Medical Society, arranged by Dr. George M. MacKee, 209 West 59th Street, New York, to be given in Hudson, on Fridays, at 8:30 P.M.

October 13, 1933—The Diagnosis, Cutaneous Mani festations and Clinical Course of Syphilis. Dr. Fred Wise, 200 West 59th St., New York,

October 27-The Diagnosis and Treatment of The Common Skin Diseases (exclusive of eczema, drug cruptions, cancer, and syphilis). Dr. Henry D. Niles, 114 East 54th St., New York.

November 10—The Modern Conception of Eczema with Special Reference to Dermatophytosis. Dr. George M. Lewis, 200 West 59th St., New York.

November 24-Drug Eruptions. Dr. E. Win. Abram-

November 24—Drug Eruptions, Dr. E. Win, Adramowitz, 835 Seventh Ave., New York
December 8—The Diagnosis and Treatment of Cutaneous Cancer and Precancerous Lesions. Dr. George M. MacKee, 200 West 59th St., New York.
December 22—Cutaneous Tuberculosis and Allied Con-

ditions. Dr. Anthony C. Cipollaro, 200 West 59th St.,

Mew York.

January 5, 1934—The Modern Conception of Allergy:
Its Relation to Dermatology. Lantern Slides. Dr.
Marion B. Sulzberger, 200 W. 59th St., New York.

January 19—The Treatment and General Management of Syphilis. Dr. Isadore Rosen, 330 Park Avenue,

New York

New York.

Course on Infections, for the Monroe County Medical Society, arranged by Dr. Frederick T. van Beuren, 630 West 168th Street, New York, to be given in Rochester, at 4:30 P.M.

October 23, 1933-Bacterial Invasion of the Human Body. Dr. Frank L. Mclency, 180 Fort Washington Ave., New York.
October 24-Alkeumatism. Dr. Franklin M. Hanger, Jr., Presbyterian Hospital, New York.

October 25-Infections of the Hand and Arm. Dr. Hugh Auchincloss, 109 East 67th St., New York.

October 26-Infections of Bones and Joints. Dr. Clay Ray Murray, Presbyterian Hospital, New York.

October 27—Puerperal Scpsis. Dr. Benjamin P. Watson, 16 East 90th St., New York.

Course on Gastro-Enterology for the Rockland County Medical Society, arranged by Dr. A. F. R. Andresen, 88 Sixth Avenue, Brooklyn. to be given in Pomona, on Wednesdays.

October 11, 1933-Modern Conception of the Peptic Ulcer Problem. Dr. A. F. R. Andresen, 88 Sixth Ave., Brooklyn, New York

October 18—The Treatment of Various Types of Colitis. Dr. John B. D'Albora, 27 Eighth Avenue, Brooklyn, New York.

October 25-The Diagnosis and Treatment of Gall Bladder Disease. Dr. A. F. R. Andresen, Brooklyn,

November 1-Gastro Intestinal Manifestations of Food Allergy. Dr. Frederick Schroeder, 290 Park Place, New

November 8-Gastro Intestinal Carcinoma. Dr. A. F. R. Andresen, Brooklyn, New York,

FIRST DISTRICT BRANCH

The Twenty-Seventh Annual Meeting of the First District Branch of the Medical Society of the State of New York, was held on Wednesday, October 11th, 1933, in Valhalla, in the Grasslands Hospital,—the County Hospital of Westchester County. There were 170 members registered. The meeting was called to order by Dr. S. J. Kopetzky, Vice President.

Dr. Andrew A. Eggston, President of the Medical Society of the County of Westchester, welcomed the members to the Hospital, which is not only the tuberculosis hospital of the County, but is also a general hospital for the treatment of the poor who suffer from any disease.

Dr. Eggston described the progress which the Westchester County Medical Society had made in perfecting an organization by which the physicians are able to exert their proper influence in controlling the methods of bringing medical service within reach of every person in the County. Only as the medical profession provides all the services that the people need, and as he receives an equitable reward, can the individual physician prosper. The Westchester County Medical Society, with 55 members, has taken an important step in employing an executive secretary who should attend to the details of the relations of physicians to other organized bodies engaged in public health. Concerning the executive officer, Dr. Eggston said:

"Voluntary management is no longer sufficient to cope with all the problems which confront the medical organizations. During the past year we have accomplished many things for the solidarity of our local society, and the very essence of our success has been the employment of an executive secretary whose duty is to promote the welfare of the medical profession which supports his position."

A morning scientific session was held on the general subject of cardiac arrhythmias. Dr. James F. Rooney of Albany, discussed the subject, "The More Common Cardiac Arrhythmias.—their significance and treatment"; while Dr. Frederic C. Conway, also of Albany, gave a paper on "The Use of Quinidine Sulphate in Cardiac Arrythmias."

At noon an operative clinic was held in the operating amphitheatre by Dr. George C. Adie, Director of Surgery in the Grasslands Hospital. Dr. Adie demonstrated the operation of thoracoplasty on a tuberculous patient, explaining the indications for the operation and the results which may be expected from it. The passed a luncheon in the Hospital at one is passed a C. Knight Deyo, President of the years a physic his own patient.

First District Branch, introduced some of the officers of the State Society.

Dr. Frederick H. Flaherty, President, discussed some of the commendable developments in the participation of the State in the distribution of medical services, particularly the provision that medical services to the indigent and worthy poor should be given by family doctors on a fee basis. Official visits to the medical societies throughout the State had revealed a growing cooperation between physicians and the welfare officers, so that working agreements had been already reached in over half of the counties, although both the physicians and the welfare officials were unprepared only a year or two ago. The realization of the mutual responsibilities of both the medical profession and governmental officials in the care of the indigent will lead to their better cooperation along other lines.

Dr. Daniel S. Dougherty, Secretary, received a hearty ovation as he spoke of the kind remembrances of the members during his recent illness. Dr. Dougherty spoke of statements in the daily press that medicine had gone backward; but he was certain that it had progressed everywhere, although not always along the lines advocated by non-medical leaders.

Dr. Orrin S. Wightman, Editor, appealed to the officers of the county medical societies to send news of their activities to the Journal in order that the profession might profit by their experience.

Dr. James E. Sadlier, Chairman of the Committee on Public Relations, urged committees of the county societies to make contacts with the local governmental officials, and the lay welfare organizations, in order that the medical profession might secure the adoption of proper methods of distributing medical services to those who need assistance in obtaining it.

The program of the scientific session in the afternoon consisted of three features:

Dr. Lewis M. Hurxthal, of the Lahey Clinic, Boston, Mass., showed motion pictures illustrating normal and abnormal cardiac mechanism and electrocardiograph.

Dr. Howard Lilienthal, of New York, gave an illustrated lecture on recent types of operation in pulmonary tuberculosis.

An illustrated lecture on the management of tuberculosis cases under collapse therapy was given by Dr. J. Burns Amberson, of New York

The meeting was a decided success from a social as well as scientific standpoint.

FIFTH DISTRICT BRANCH

The twenty-seventh annual meeting of the Fifth District Branch of the Medical Society of the State of New York was held in the High School Auditorium, Oswego.

The Fifth District is composed of seven county societies in the north central part of the State, whose memberships are as follows:-

Herkimer	43
Jefferson	86
Lewis	18
Madison	
Oneida	
Onondaga	
Oswego	44
Total	741

There were 110 members in attendance, and the President, Dr. Edward R. Evans of Utica, presided.

The following officers were elected:

President: William A. Groat, Syracuse. First Vice-President: LeRoy F. Hollis,

Lacona. Second Vice-President: M. M. Gardner, Watertown.

Secretary: Fred C. Sabin, Little Falls. Treasurer: Hermann G. Germer, Canastota

Dr. F. H. Flaherty, President of the Medical

Society of the State of New York, called attention to the major problems now confronting the medical profession, especially the relation of physicians to the medical relief plans of the State of New York.

Dr. Thomas P. Farmer, Chairman of the Committee on Public Health and Medical Education of the State Society, discussed some of the public health problems with which the physicians of New York have to deal, and described the graduate courses conducted by the State Society.

The following program of scientific session was carried out:

"The Treatment of Hernia by the Use of Fascia; and More Especially Human Preserved Fascia," Harry W. Vickers, M. D., Little Falls.

"The Results of Biliary Tract Surgery," Allen O. Whipple, M.D., Professor of Surgery, Columbia University.

"The Management of Uterine Bleeding," Thomas P. Farmer, M.D., Syracuse.

of Puerperal "Present-Day Conceptions Sepsis," Benjamin P. Watson, M.D., Professor of Obstetrics and Gynecology, Columbia University.

"Facts Concerning the Temporary Emergency Relief Administration," James N. Vander Veer, M.D., Albany.

FRED C. SABIN, Secretary.

ONTARIO COUNTY

The July Bulletin of the Ontario County Medieal Society has the following description of the third quarterly meeting of the Society.

The meeting was held in the Lafayette Inn, Geneva, on July 11, 1933, with twenty-four members present, and Dr. Harry M. Smith, President, in the Chair.

Dr. Adrian S. Taylor was elected to membership.

Dr. S. A. Munford, of Clifton Springs, Chairman of the Committee on Medical Economics, discussed some of the details of the relations of physicians to the Welfare officials of the County. (These relations are described in the Journal of August 1, 1933, page 934.)

The chairman also urged the members to cooperate more actively in making a survey of the incomes of the physicians of Ontario County, so that the Society would have tangible evidence of the actual cost of giving medical service to a

patient.

Dr. W. S. Clapper of Victor, Chairman of the Public Health Committee, reported on diphtheria immunization, calling attention to the necessity that school districts should furnish a eensus of the children. He also said that the superintendent of public schools would meet with the Public Health Committee in the near future and plans would be perfected whereby a much larger proportion of the children would be immunized than has been possible heretofore.

There was a general discussion on the subject of a revision of the fee bill. The President was authorized by vote to appoint a committee to carry out the necessary investigations and to make recommendations at the autumn meeting. Drs. C. H. Jewett, T. W. Maloney and J. W. Howard were appointed to serve as this com-

Dr. Grove spoke of the activities of The Geneva Academy of Medicine and the plans for the Winter. He outlined an attractive program and extended a cordial invitation to the members of the county society to attend the meetings and to hecome members of the Academy.

The scientific program consisted of a paper on "Trichonoma Vaginalis" by Drs. George M. Gelser, and George W. O'Grady of Rochester.



BOOK REVIEWS



INFANTS AND CHILDREN. Their Feeding and Growth. By Frederic H. Bartlett, M.D. 16mo. of 409 pages. New York, Farrar & Rinehart, Inc. [c. 1932].

This book should serve as an excellent guide for intelligent parents in the care of infants and children. It is not too technically worded, yet it answers the questions of many parents specifically. The author seems to have a keen insight into the psychological makeup of both child and parent, for he suggests treatments adaptable to the home, and even suggests what to tell the child in order to have success. There is an excellent chapter on habits and his method of solving the problem of the child who won't eat is very logical.

Of the many guide books for parents in the care of children, this book should be very valuable because of its sound logic and its reasonable explanations and sug-gestions for treatment. It is packed with good ideas for the physician, too, which are the products of the author's years of experience with children.

DAVID EDWARD OVERTON.

OPERATIVE SURGERY. By ALEXANDER MILES, M.D., and D. P. D. WILKIE, M.D. Octavo of 590 pages, illustrated. New York, Oxford University Press, 1933. Cloth, \$5.25. (Oxford Medical Publications.)

The scope of this book on general surgery, while not covering all the ground of operative surgery, has been written to provide for the needs of undergraduates in medicine, house surgeons and men in general practice where minor operations are performed in the office. The descriptive work in this volume of 590 pages is clear and concise. There are 321 illustrations, which is a large number for a publication of this size. The methods which have been selected for description are those most generally favored by the various contributors to this work, and the text represents, in a general way, the present-day practice in the Edinburgh School of Medi-

This volume should prove a valuable contribution to R. F. H. the young physician.

INHERITED ABNORMALITIES OF THE SKIN AND ITS APPEN-DAGES. By E. A. COCKAYNE, M.D. Octavo of 394 pages, illustrated. New York, Oxford University Press, 1933. Cloth, \$8.00. (Oxford Medical Publications.)

This exceptional book covers a field that has had only slight attention from other medical authors. It covers the subject thoroughly and in great detail. Many of the subclassifications cover abnormalities of which only one or two appear in the literature. In each case the ab-normality is carefully and completely described, and then its connection with inheritance is discussed. Altogether, this work is very much worth while and one that should be in the library of every dermatologist. It brings to-gether in one book an immense amount of research and makes it available in such a manner that it can be consulted readily and quickly. tion and commendable in every way.

John C. Graham. sulted readily and quickly. It is a valuable contribu-

TEN YEARS OF OBSTETRICS AND GYNECOLOGY IN PRIVATE PRACTICE. By John L. ROTHROCK, M.D. Octavo of 209 pages. New York, Paul B. Hoeber, Inc., 1933. Cloth, \$3.00.

A curious rather loosely knit record of ten years experience in the private practice of obstetrics and gynccology. An interesting clinical report of the author's man-

agement of 1750 obstetrical cases, and 1345 gynecological cases. The obstetric series covers a wide range of conditions; the gynecological list of operations includes many cases which hardly come within the sphere of a gynecologist. Discussion of procedures is intentionally superficial, and no attempt is made to consider any subject broadly. Purely a personal record, the author shows good results, although his methods often differ widely from generally accepted practice. Of no value to the specialist, it is difficult to appraise its practical value.

CHARLES A. GORDON.

MEDICAL CLINICS OF NORTH AMERICA. Published every other month by the W. B. Saunders Company, Philadelphia and London. Per Clinic Year (6 issues): cloth, \$16.00 net, paper, \$12.00 net.

Vol. 16, No. 1, July, 1932. (Philadelphia Number.) There are two clinics in this issue of the Medical Clinics which are especially worthy of the physician's attention. In reference to injuries to the spine the author states-"I have never seen a case operated upon in which anything was done by the surgeon to hasten recovery." Also -"I have seen patients with spinal cord disease and signs of a complete transverse lesion lasting for weeks ultimately recover entirely." There are other remarks tending to disparage surgery in spinal injuries.

Three cases of acute gastric ulcer with complete medi-

cal cure, as demonstrated by roentgenological study, are

also reported.

Phenylhydrazine seems to be the accepted method of treatment in Vaquez disease at the present time, not because it has any distinct virtues, but because nothing has

as yet been found to be very helpful for that disease.

We are advised to avoid drastic reductions in the blood sugar level in old diabetics lest undernutrition of the heart muscle in the presence of coronary disease lead EMANUEL KRIMSKY. to serious consequences.

Vol. 16, No. 2, September, 1932. (Chicago Number.) This number consists of a symposium on diseases of the heart, the vascular system and the kidneys. It is a Chicago Number, the contributors being mostly from that city's medical schools and hospitals. Beginning with congenital heart disease in infancy, it discusses cardiac conditions through adult life and senility. All the chapters are clinical, simply presented and appeal directly to the general practitioner, who undoubtedly will greatly benefit by their study. Concluding the monograph are chapters on pneumonia, peptic ulcer, including its mucin treatment, ascites, poliomyelitis, carbon monoxide poisoning and carcinomata and cysts of the pancreas.

JOSEPH BENDETSON.

Vol. 16, No. 3, November, 1932. (University of California Number.) This issue is more than a series of case reports. While in every instance clinical records serve the basis of the text, we find disease interpreted in the light of disturbed physiological function. In the same way, therapeutic measures are recommended on the basis of logical deductions.

The entire book is confined to lectures given by Doctor Meakins of McGill University during a visit to the University of California in 1929.

Doctor Meakins deals with common clinical conditions and for that reason his method of approach should be of especial interest. The topics include tetany, acute rheumatic fever, nephritis, tuberculosis, hypertension and arteriosclerosis. There is nothing sensational about what he has to say but he leaves one with the constant

impression that an examination is more than a mere recording of data but requires a searching and an analytical interpretation of the entire picture.

Vol. 16, No. 4, January, 1933. (Boston Number.) Minot tells us that certain persons with prolonged coagulation time of their bloods who are usually diagnosed as cases of hemophilia are in reality sufferers from a dietary deficiency. He describes a case in question which responded slowly but surely to a strict but specific dietay regimen and on this therapeutic response he made his diagnosis. The importance of diet as a sole factor in the therapy of this and other apparently unrelated conditions should therefore be of especial interest.

Christian maintains that well-elubhed fingers in the absence of a chronic pulmonary lesion such as bronchiectasis should justify a congenital etiological basis for the cardiac disorder. In another chapter in this issue Blotner tells us just the opposite, namely, that in subacute bacterial endocarditis—an acquired condition—marked clubbing of the fingers is to be looked for.

In the chapter on goiter the writer maintains that "a drop in the basal metabolism in response to iodine and a rise when its administration is stopped constitutes pathog-nomonic evidence of Graves' disease." Joslin and his associates offer a statistical study on Diabetic coma. There is a valuable chapter on nitroglycerin collapse a condition with which many a physician has been un-pleasantly surprised. That a typical, acute arthritis may in reality be part of a cancer or of a syphilis pic-ture is discussed. For agranulocytic augina pento-nucleotide seems at present to be the best agent even though its action is uncertain.

Vol. 16, No. 5, March, 1933. (Baltimore Number.) This number should appeal to the general practitioner because it stresses clinical medicine in simple every-day language and because it describes the trials and successes which we practitioners encounter every day. It espe-cially serves to keep us reminded that every symptom, however trivial it may seem, demands an exhaustive investigation.

And so we find a chapter on diarrhoea, one on epileptiform seizures, one on various gastric symptoms, and one on obesity. The chapter on status lymphaticus is by no means convincing and serves to revive the moot issue as to "What is status lymphaticus?" There is some encouraging news about the response to trichlorethylene inhalations in cases of trigeminal neuralgia. For cases of ehronic cardiospasm the Plummer hydrostatic dilator is favored by the contributor on that subject.

There is nothing seusational about any of this information and many a reader will feel reassured that his own methods are beyond reproach.

Vol. 16, No. 6, May, 1933. (Mayo Clinic Number.) While progress has been monumental in various fields of medicine it has carried with it certain insidious ele-ments of danger. On that account contributions which aim to remind us of such inroads should be welcomed. Alvarez tells us that this "training of plusicians has developed the bad habit of expecting to find in each patient something organically wrong that can be cured by medicine or surgery." He places the responsibility for such a vicious state of affairs on the deans of medical colleges. The deans might easily shift it to higher-

In the chapter on Colitis, a therapeutic regimen is prescribed in which diet alone is emphasized. Colon irrigations, drugs, and vaccines are looked upon with disfavor.

The estimation of the amount of indican in the blood is said to be of definite value in severe cases of renal insufficiency.

y one

There is a short but valuable article by Plummer warning the physician never to rely on a single basal metabolic determination. Case reports showing a favorable decline in the basal metabolic rate without the use nf iodine are presented. Only when the rate is consistently high on repeated examinations should a diagnosis of hyperthyroidism be made.

EMANUEL KRIMSKY.

A STANDARD CLASSIFIED NOMENCLATURE OF DISEASE. Edited by H. B. Logie, M.D. Compiled by the National Conference on Nomenclature of Disease. 12mo of 702 pages. New York, The Commonwealth Fund, 1933. Fabrikoid, \$3.50.

The "Standard Classified Nomenclature of Disease" is the result of at least three years of careful work by the National Conference on Nomenclature of Disease, Dr. George Bachr, Chairman of the Executive Commit-tee, and Dr. H. B. Logic, Executive Secretary. The basic plan of classification of nomenclature de-

pends upon a dual method of classification-etiological

and topographical (anatomical).

The list is somewhat larger than previous nomenclatures of disease and is, therefore, more complete. There is an alphabetical index at the end of the volume which greatly facilitated employment as a reference volume by clinicians, public health officials and record room clerks A system of code numbers, for disease, is supplied for optional use, especially designed for large hospitals, the federal services, insurance companies and municipal health departments, which employ a punch card system for tabulating more speedily, statistics.

The volume is very attractively gotten up, printed with good type and paper. The nomenclature has been approved by a long list of national organizations headed by the American Medical Association and should be a long step forward in the direction of uniformity in medical terminology.

E. P. MAYNARD, JR.

THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgcry. Series 1932. Chicago, The Year Book Publishers, [c. 1933]. Urology, edited by John H. Cunning-Ham, M.D. 12mo of 464 pages, illustrated, Cloth, \$2.25.

This little work is a storehouse of information compiled by an outstanding leader in the field. It represents the urological literature, both American and foreign, covering the entire field of Urology for the year 1932. The majority of important contributions are presented together with a concise consideration of each. One is impressed with the tremendous growth of the specialty during the past year as evidenced by the mass of accumulated material.

It is to be noted further that dermatology and syphilology are not included and that these subjects are oc-

cupying an increasingly limited field among Urologists.

There is a great deal of value in this book. As a matter of fact, in the reviewer's lumble opinion, this type of work will have a tendency to replace the former stereotype text-book method. One can conveniently ob-tain the most up-to-date information and, as each author rain the most up-to-date information and, as each author is quoted, he can readily refer to the general literature, if he so desires. The indexing of reprints of current contributions is a problem and this little book fills a valuable niche in keeping abreast of the most recent contributions. The work is indexed by subjects as well as by authors. It is worthy of note that very few pages are devoted to a consideration of groupers. are devoted to a consideration of gonorrhea.

Augustus Harris.

wa--.



OUR NEIGHBORS



THE NEW ENGLAND MEDICAL COUNCIL

The Rhode Island Medical Journal of August contains the report of Dr. F. T. Fulton, delegate to the New England Medical Council, which is composed of delegates from the six states, meeting twice a year. Dr. Fulton reported as follows:

The New England Medical Council was established in 1926. Each year our Association sends to the meetings of this Council three delegates, the President and Secretary of the Society being

delegates ex-officio in addition.

"Apparently there has been no report before the House of Delegates of these meetings since the Council was established. It is the custom of the Council to hold two meetings each year. The proceedings of these meetings are published in full in the New England Medical Journal. Members of our Society are probably less familiar with these proceedings than of those of other states, inasmuch as we have our own medical journal, and the New England Medical Journal is probably not so universally read.
"Inasmuch as I automatically go off the com-

mittee at the coming annual meeting, I have been asked to give some report of the Council meetings, a thing which ought to be done at least

once a year.

"This report must necessarily be quite sketchy, and will cover the meetings of the last three years, most of which meetings I have attended.

"The meeting on February 19, 1930, had for the subject of discussion, 'The Relation of Clinics and Health Association to the Medical Profession.' Papers were read by Dr. Roger I. Lee of Boston, Dr. D. L. Richardson of Providence, Dr. George Blumer of Yale, and Dr. George H. Bigelow of Boston. At this meeting there were an unusual number of papers. More commonly there is one paper which presents the subject for discussion in a general way, and a more or less general discussion follows.

"September 25, 1930, 'The Practice of Medicine in Industry' was the subject. This paper was read by Dr. Harold W. Stevens of the Harvard School of Public Health, and was discussed

by Dr. Cecil Drinker, Professor of Physiology at Harvard, Dr. R. S. Quinby of the Hood Rubber Company, and Dr. W. Irving Clark, Surgeon

to the Norton Company, Worcester.

"On February 12, 1931, Herbert E. Locke, Esq., of Augusta, Me., attorney for the Maine Medical Association, read a paper upon 'The Malpractice Suit; Why and Wherefore.' The Malpractice Suit; Why and Wherefore.' subject was very ably presented from the point of view of the legal profession rather than that of the medical profession, and was followed by a very interesting discussion.

"The next meeting was on December 1, 1931, at which time Dr. Stephen Rushmore of Boston presented a paper on 'The Medical Practice Act.' At this meeting the health officers from all the states of New England were present and there was a very general and quite a satisfactory dis-

cussion of the subject.

"March 10, 1932, the discussion of Mr. Locke's paper on 'Malpractice Suits' was carried over from the meeting of a year previously. In the evening of that day, Dr. Iago Galdston of New York, and Dr. Morris Fishbein of the Journal of the American Medical Association, spoke upon the subject of 'Medical Publicity by Organizations and Individual Physicians.'

"At the October meeting in 1932, the question of Post-Graduate Education, with special reference to the Treatment of Fractures, was discussed particularly by Dr. Charles L. Scudder. His plan was approved by the Council, but no special method of financing this plan was sug-

gested or adopted.

"At this meeting there was a vote of protest; sent Dr. Edward H. Cary against government aid, to the soldiers of the World War for surgical or medical services for disabilities of non-service origin.

"In February of this year the topic was 'Medical Economics, with particular reference to the Cost of Medical Care.' The papers and discussions were good, but did not lead to anything more definite than such has in the past."

A HEALTH INSURANCE COMPANY IN MINNESOTA

The September issue of Minnesota Medicine has the following item on the rise and fall of a health insurance company in the State:

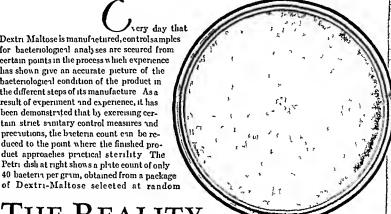
"Medical, surgical and dental service for $$1.5Q_{h}$, smonth. This amount per individual

A curious rather if and dentist, the overhead of perience in the private or insurance and provide ogy. An interesting clii.

presumably satisfactory service. What individual would not gladly pay this small amount each month if he thought he could thus satisfactorily care for his doctor's and dentist's fees. Satisfactory medical service cannot be supplied for what would be the doctor's share.

(Continued on page 1240-adv. xii)

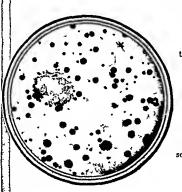
cry day that Dextri Maltose is manufactured, control samples for bacteriological analyses are secured from eertain points in the process which experience has shown give an accurate picture of the bacteriological condition of the product in the different steps of its manufacture As a result of experiment and experience, it has been demonstrated that by exercising certain strict sanitary control measures and precautions, the bacteria count can be reduced to the point where the finished produet approaches practical sterility The Petri dish at right shows a plate count of only 40 bacteria per gram, obtained from a package



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The things unseen determine the cleanliness, uniformity and safety of Dextri-Maltose. From years of study and experience, we know how to produce the bacteriologically clean product indicated above.



the Petri-dish at the left visualizes the potential danger that may accompany lack of experience At 37° C. this sample (bought in the open market) showed a bacteria count of 420,000 per gram (compared with 40 per gram in Dextri Maltose, as mentioned above) Every physician is deeply concerned about the pasteurization, certification, etc., of the cow's milk his babies are fed on, but even sterile milk would give the infant over seventeen million hacteria per daily feeding when "modified" with a earbohydrate such as is represented by the Petri-dish at the left

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RAHWAY, N. J.

(Continued from page 1238)

"But this was not the reason why the charter of the Pioneer Mutual Health and Benefit Insurance Company was declared forfeited by the District Court of Ramsey County. Here was another instance of a corporation proposing to practice medicine. A corporation is not an individual, but is a creation by the legislature and thus according to law is not a natural individual and cannot practice in the State of Minnesota. Physicians and dentists were to

have been hired at low salaries and one can readily imagine that the insured would have obtained just about the service paid for. The proposition is just another example of an attempt to take advantage of the times and commercialize the medical and dental professions on a ridiculously low financial basis. The outcome of the suit which was conducted by the Attorney General with the assistance of Mr. F. Manley Brist, will be to the benefit of the public, and the medical and dental professions.

HEALTH INSURANCE IN MINNESOTA

The September issue of Minnesota Medicine contains the following editorial on health insurance, and its prospects in St. Paul:—

"The one criticism to all insurance is the high overhead which seems to accompany most types of insurance. For instance, it costs most of the large life insurance companies about as much to furnish insurance as is paid out in benefits. In the case of life insurance there is little chance for quibbling. When a man is dead, he is dead. Life insurance companies have operated long enough to provide accurate statistics and rates can be accurately determined. Not so with accident and health insurance. A man may think he is sick or think

he is disabled from an accident and attempt to collect from his insurance, whereas he would be able to carry on if he had no insurance coverage. This uncertainty and difference of opinion which frequently leads to legal suits have made sickness and casualty insurance anything but profitable for companies which have entered this field.

"Hospital insurance is in its infancy. There is little experience upon which rates can be established. It has much of the uncertainty of health and accident insurance. The issuance of individual policies at random is too likely to include a high percentage of those suffering

(Continued on page 1242—adv. xiv)



Diffuse, continuous rings prove that the suture micelles are arranged nearly at rondom Results very poor strength, erratic and non-uniform digestion



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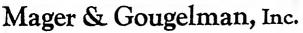
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(Continued from page 1240-adv. xii)

from chronic ailments. For these reasons the larger insurance companies have not entered the field. A recent questionaire was sent to some of the representative insurance companies requesting their attitude to hospital insurance. None of them was interested.

"A group hospital insurance plan which includes all the hospitals in a community is quite different from one instituted by a single hospital in the city. The medical profession has rightly opposed the adoption of the plan by the individual hospital, which is bound to affect the relation of the patient to his physician.

"The plan proposed by the hospitals in Saint Paul aroused some discussion in medical circles and received some mention in our columns The organization is in operation, but has shown a slow growth, doubtless due in large part to the fact that nobody has money for anything. It is thought that by keeping the overhead down to a minimum, avoiding the high overhead incident to most insurance, and limiting the policies to groups of wage earners, the rate of nine dollars a year will be sufficient.

"The profession will watch with considerable interest the progress of hospital insurance, which is more or less in the nature of an experiment. Any measure which will relieve the unequal distribution of the cost of illness should receive the support of the profession as

well as the public."

MEDICAL ECONOMICS IN OHIO

The annual report of the Committee on Economics of the Ohio State Medical Association is contained in the Ohio State Medical Journal of September, which says:—

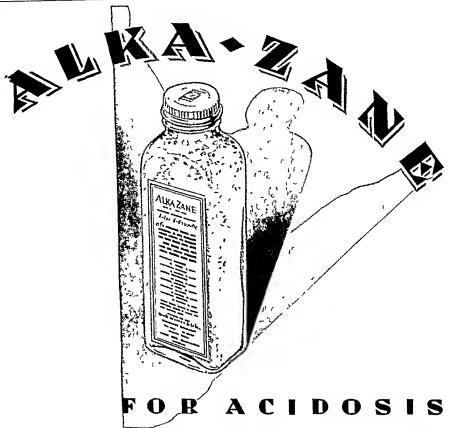
"During the past period of unrest and uncertainty, numerous efforts have been made to overthrow completely the existing system of medical practice. Unjust and unfair criticism has been leveled at the profession, arousing distrust on the part of some factions of the

public. "Unwisely, many persons have been led to believe that medical care can be measured solely in terms of dollars and cents. The economic and organization aspects of medical care have been greatly overemphasized. On the other hand, the fact that quality and individual application is the fundamental element in any system of efficient medical care has either been ignored or treated with indifference.

"During the past 12 months or so, we have been literally swamped with outside advice as to how to meet our problems and those of the public. We have been urged to organize ourselves into large groups for the purpose of furnishing the public with the benefits of cura-

(Continued on page 1244-adv. xvi)

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Not until you have used Alka-Zane will you know how effective alkaline treatment can be.

Alka-Zane contains the four bases, sodium, potassium, calcium and magnesium, of which the alkali reserve of the body is essentially composed. These are present in Alka-Zane in the form of carbonates, citrates and phosphates. No tartrates, lactates or sulphates, and no sodium chloride.

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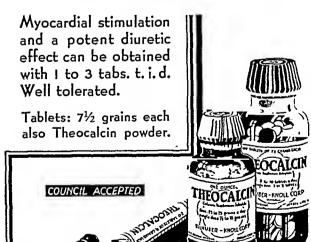
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(Continued from page 1242—adv. xiv) tive and preventive medicine, but have been furnished no assurance that such a program would actually lead to a wider distribution of medical benefits, to an improvement in medical service, or to the preservation of the personal relationship between physician and patient.

"Hospitals have been urged to convert themselves into gigantic medical centers and to inaugurate periodic payment plans to enable patients to meet the costs of hospitalization; but there has been no guarantee that such a plan would not place the hospital in direct competition with the physicians of the community or that the insurance plan thus set up would not ultimately be extended to include both the services of the hospital and of the physicians on the hospital staff, causing a breakdown in the relationship between physician and patient.

"No single, all-inclusive, inelastic 'plan' will meet all the situations and conditions arising from disabling sickness or injury. Most of the problems of medical care are essentially local and practical, not general and theoretical. No single artificial program can be made to fit the conditions in all communities. There are no safe cut-rate, shortcuts to efficient and effective medical service. Facilities needed to provide adequate medical care in one community may be unnecessary in others. Such facilities should be established on the basis of local conditions and needs.

"Your committee is of the opinion that it is the duty of every county medical society to see that its members are fully and accurately informed about the important medico-social questions confronting the profession. Every society should have a special committee whose duty is to assist the officers of the society in disseminating such information to the membership and in arranging programs for the discussion of economic questions.

"Moreover, it is important that every county society have an active committee on public relations, on economics, or civic affairs to contact and cooperate with official and non-official

(Continued on page 1245-adv. xvii)

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Doctor, Try It.

(Continued from page 1244-adv. xvi) groups and agencies in the community interested or engaged in medical, hospital and public health activities. Through such a committee the membership of every county medical society may obtain first-hand information concerning community activities in which the medical profession is vitally interested. At the same time through such a committee the society may impress upon governmental officials and lay groups the concerted and correct medical viewpoint on questions and activities of mutual interest."

DISCIPLINING PHYSICIANS IN MASSACHUSETTS

The July 6th issue of the New England Journal of Medicine contains the annual report of the Committee on Ethics and Discipline of the Massachusetts Medical Society; which is somewhat similar to the Grievance Committee of New York. The report reads:-

"Five meetings were held during the year, and numerous conferences and investigations were conducted by the Chairman and other members of the Committee relating to complaints received against 21 Fellows of the Society. Hearings before the full committee were accorded to seven Fellows, two of whom appeared twice. The accusations made ineluded:

Unethical advertising
Neglect of patients
Fraudulent practices 6
Instigating lawsuits 2
Illegal surgery
Miscellaneous 4

"The resignation of one Fellow was asked for and obtained because he had lent his professional name and influence to the exploitation of a fraudulent remedy; another Fellow was deprived of the privileges of Fellowship under Chapter I, Section 8, Clause (c) of the By-Laws, having been convicted in a court of law of a crime involving moral turpitude. A statement was made by the Chairman, of the circumstances attending these two eases, before the Council at its stated meeting on February 1, 1933, and need not be repeated (See Proceedings of the Council, Massachusetts Medical Society, February 1, 1933. New England Journal of Medicine, February 23. 1933, p. 420.) Another Fellow, after investigations and hearings over a series of years, has been asked to resign on account of conduct unworthy of an honorable physician; you have accepted his resignation today.

"It will be noted that the matters which have come before the Committee have not been so numerous, and perhaps not so serious (Continued on page 1246-ndv. xrni)

What uses do you make of MINERAL OIL?

BECAUSE the action of mineral oil is lubricant and not purgative, it is free from the harmful results which the constant use of laxatives often leaves.

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- CHRONIC GASTRITIS, CASTRIC ULCER, ETC. In any such cases where a bland diet is required, Puretest Mineral Oil is both soothing and effective.
- 4. IN SPASTIC COLITIS or where there is a tendency to spasm in the colon or in any painful form of constipation.
- 5. IN THE CONDITION CALLED "AUTO-INTOXICATION." Many authorities believe this depressing condition is caused by decomposition proteid products in the intestinal tract. Purctest Mineral Oil is highly absorbent of these



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(Continued from page 1245—adv. xvii) as in the preceding year. The Committee believes that it has been useful in serving as a clearing-house for complaints and criticisms, for the airing of grievances and the exchange of views, and feels that the frank and personal

discussions which it encourages are helpful in promoting understanding and agreement. As in former years, our investigations are quite as apt to clear Fellows of the Society of unjust charges and criticisms, as to disclose facts justifying remonstrance or discipline."

JOURNAL OF MINNESOTA

The annual report of the publishing committee of the Minnesota State Medical Association is contained in the September issue of Minnesota Medicine, the official publication of the Association, which gives the receipts and expenses of the Journal for the year 1932, as follows:

Receipts:	• • •
Advertising Other sources	\$7,344.88 821.22
Expenses:	\$8,166.10
Printing Commissions	\$10,743.86 965.30
Net cost	\$11,709.16 \$3,543.06

The deficit is covered with an allocation of two dollars per member, or \$4,204.00. No rents or salaries are charged to the Journal.

The House of Delegates discussed the policy of the Journal. President Pearce said:—

"There has been considerable difference of opinion as to how much of our State Medical Journal should be devoted to economic problems, how much space should be devoted to economics, and how much should be devoted to science. I am sure that the Editing and Publishing Committee will be very glad to have the House of Delegates act on the recommendation of the Reference Committee.

"As I understand, the Reference Committee are advocating that more space in *Minnesota Medicine* be devoted to publishing matters of economics. Is there any discussion on this

(Continued on page 1247—adv. xix)



The Calendar says Winter but it's SUMMER in TUCSON

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PATIENTS frequently find release from irritation in this warm, dry air and 2400-foot altitude. Their recovery is often aided by the constant, dependable sunshine (336 days a year). Rainfall is slight—fog unknown.

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(Continued from page 1246-adv. rviii)

report? If there isn't, the Chair declares that it is the sense of the House of Delegates that this recommendation of the Reference Committee be accepted."

Dr. W. F. Braasch said .-

"I am a member of the Reference Committee. I would like to know how some teeth can be put in that recommendation because a similar suggestion has been made year after year. I really think the scientific qualities of Minnesota Medicine are above reproach, nevertheless I think some member of the Editorial Committee should be here tonight to listen to this resolution because it certainly should be done.

"As I said before, I wish I knew some way whereby teeth could be put into the resolution so they would devote more space to economics. The members of the Association are interested in economics, and the more they can hear about it and the more they can read about it, the more good they will get out of it."

The only further comment was by a member of the Publication Committee who said:

"Without putting further teeth into the matter, I think I can promise that more attention will be paid to the matter of economics"

In pregnancy PROTECT THE TEETH

Obstetricians are familiar with the great amount of dental pathology occurring during pregnancy.

But of greater importance is the fact that with proper care the majority of these dental conditions can be as oided.

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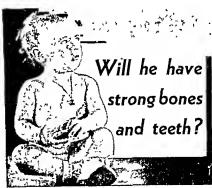
Frederick Weintraub, M D. Dental Cosmos, July, 1932

N Temasvary, Monats f Geburt u Gynak, 1931

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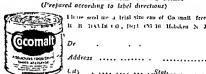
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APPARENT CURES OF PAPILLARY CARCINOMATA OF THE URINARY BLADDER

By JULIUS J VALENTINE, MD, AND JOHN W ROGERS, MD, NEW YORK, N Y

From the New York Polyclinic Medical School and Hospital Presented in connection with the Tifth Annual Graduite Fortnight of the New York Academy of Medicine October 20 1932

ESPITE the bulliant advances we have en joyed in the field of urology and the ever-increasing armamentarium for diagnosis with refinements in surgical technique and treat ment, unfortunately we must confess that comparatively little satisfactory progress has recently been made in the management of bladder malignancy

The difficulties one may encounter in the treatment of malignant bladder tumors whether by excision, fulguration, radiation, or deep 1-ray

therapy, are well known

While we can present nothing new at this con ference, we should like to discuss a series of cases that have been followed through to their termina tion or up to the present time, a small number of which have apparently been cured. In judging cures, or apparent cures, in carcinomata of the bladder, certainly the patient must be clinically free from symptoms or metastases and evsto scopically free from tumor for a long period of time The frequency with which recurrences of the growth or implants occur, even after the bladder has appeared clean for many months has often been observed. Therefore it is of the greatest importance to insist upon making occasional cystoscopie observations even after a cure has apparently been effected

Our discussion will be limited to a group of forty-three cases of papillary carcinomata collected from private and hospital practice during the past few years. We may classify them as

follows

4 Number of cases treated by cystoscopic full guration alone 9 Apparently cured 5 Improved 1 Died 3

B Number of cases treated by cystotomy with fulguration 8 Improved 3 Unimproved 1 Died 4

C Number of cases treated by cystotomy ful guration and radium 15 Cured 1 Improved 1 Unimproved 2 Died 9 Result unknown . 2

D Number of cases too advanced for any form of treatment 11 Died 11

We are therefore able to report only six ap-

parent cures out of the forty-three cases. In nearly every one of these, the tumor was seen comparatively early, was of small size and of low grade malignancy. The only small tumors which we have seen that were not at least arrested following thorough fulguration were evidently not primary in the bladder. These, we believe, were extensions from adjacent organs and were all highly malignant.

The following case is of interest because of the difficulties encountered in its management, the length of time in which the patient was under active treatment and particularly because our efforts were rewarded with an apparent cure

M L, white female, aged 57 years, was first seen on October 9, 1923, presenting symptoms of

hematuria and marked dysurin

The onset of the present illness occurred about three months previously with a sense of obstructed urmation, discomfort in the suprapuble region, urgent urmation and intermittent hematuria listing three or four days at a time. These symptoms had been increasing in intensity and she had lost nimeteen pounds in weight since their onset.

Cystoscopy at this time revealed a bleeding papillary tumor the size of a twenty-five cent piece above and lateral to the right uretral ortice, with several smaller papillary growths on the trigone Biopsy specimen papillary epithe

homa (Dr Douglas Symmer)

On November 22, 1923, a suprapubic cystotomy was performed and the tumors destroyed with actual cautery after which fourteen glass seeds containing a total of 630 millecuries of radium emanation were planted into and around the base of the larger tumor The bladder was drained by a suprapubic tube Specimens of tumor tissue obtained at operation were diagnose l by Dr J R Losee as papillary carcinoma On December 7, 1923, two applicators, each containing 508 millecuries of radium were applied through the suprapubic wound to the approximate location of the larger growth and left in situ for five hours The suprapuble wound healed and the patient left the hospital on January 12, 1924 The urmations were still fairly frequent, accompanied by some prin and discomfort

For the next six months the patient complained of considerable dysuria, but cystoscopy on several occasions failed to reveal evidences of further growth. However, there was a large amount of slough seen at each examination which was evidently causing her pain. There was no hematuria.

After passing one small phosphatic calculus spontaneously early in May, 1924, another one, impacted in the urethra, was removed through the urethroscope about two weeks later. At this time the bladder walls were beefy red and the entire sloughing area in the bladder was found to be covered with a heavy phosphatic deposit which repeated washings and cystoscopic instrumentation failed to remove.

Her suffering continued to intolerance and because of her failing health a second suprapubic cystotomy was advised. Operation on May 15, 1924: sloughing areas cleaned and coagulated using Wyeth's endotherm current. After a stormy convalescence the patient left the hospital on July 1, 1924. Cystoscopies on August 17th and November 21, 1924, showed no tumor, very small areas of slough and bladder mucosa returning to normal. General health improving and urinary disturbance becoming less marked.

Throughout 1925 and 1926 occasional cystoscopic observations showed no abnormality except the small areas of slough which gradually disappeared. Cystoscopic examinations in February

and June, 1927, were entirely negative.

After not reporting for two years, the patient returned in February, 1929. General health excellent. Gained thirty pounds. Only symptom occasional painless frequency of urination. Cystoscopy revealed a very small papillomatous tumor the size of a green pea on the vault of the bladder. A specimen was removed for examination and the tumor destroyed by fulguration. The biopsy report by Dr. Aaron Price was: epithelial papilloma, potentially malignant.

During the years 1929 and 1930 cystoscopic examinations every six months were entirely negative, although in November, 1930, a small wart-like growth about the size of a match head was seen and destroyed by fulguration.

Further observations for the past two years have been entirely negative and on October 19, 1932, the date of her last visit, she was found to be enjoying perfect health, had no urological symptoms and cystoscopic observation again failed to reveal any abnormality.

Inflammatory lesions of the bladder may sometimes be mistaken for true neoplasm even by experienced observers. Joelson and Lower reported three such cases in 1927 and mentioned a number of others previously recorded.

The pathological report often assumes much more importance later on in the management of the case than is realized when the chance to ob-

tain a good specimen first presents itself. A suitable biopsy specimen should be removed at the earliest opportunity. This tissue should ideally come from well within the substance of the growth. The pedicle or base is not always visible and superficial bits of tissue are often unsatisfactory for positive diagnosis. We have several cases which demonstrate the errors which may be made by sending unsatisfactory biopsy specimens to the laboratory for diagnosis.

Case L. W. C.: a biopsy specimen removed five days after one previously reported as benign,

proved to be malignant.

Case Number 4111: biopsy report in 1924: papillary carcinoma of the bladder. Tumor fulgurated and base implanted with radium. Seven years later the patient returned with what was clinically and cystoscopically an inoperable carcinoma involving the entire trigone and bladder neck. Despite these findings an unsatisfactory biopsy specimen was reported as benign papilloma.

We believe that the very evident error in the pathological findings of these cases was probably not the fault of the pathologist, but was due to the fact that no malignant tissue was included in the specimen. On the other hand we have three cases (A. C. L., S. S., 8362) in which, over a considerable period of time, a benign papilloma evidently changed to a malignant one. We base this statement upon the fact that when these cases were first studied, biopsy specimens were reported as benign and after several years the tumors proved definitely to be malignant.

In one case (S. S.), we noted a very marked change in the size of the tumor mass following the removal of the biopsy specimen, at which time only superficial coagulation was done to control bleeding. A tumor, which at first examination was about the size of a lime, apparently hard and with a thick short pedicle, in one month following the coagulation, proved to be a small finely fimbriated papillary tumor with a thin This change we feel was due to the difference in the vascular supply brought about by the passage of the current causing destruction of the blood clot within the growth and shrinking of the tumor mass. We believe this illustration important in that the shrinkage which may take place in the highly vascular type of tumor following coagulation, might make a difference in the mode of attack, whether cystoscopically or suprapubically, since we usually destroy these tumors by cystoscopic fulguration unless they are too large or inaccessible.

Regarding the management of carcinomata of the bladder, we believe that one should certainly have no "hard and fast" rule in the treatment

of choice.

Opening of the bladder suprapubically with wide excision of the tumor is our method of choice where the location of the tumor offers itself to such treatment and where it is thought that all of the cancer tissue may be removed. In our experience these cases are fairly rare.

Fulguration with coagulation through the eystoscope has given us the best results in the smaller tumors and where the patient is tolerant to cystoscopic treatment. The following is our only

example of an apparent cure in a Grade II papillary carcinoma:

E. C., white fcmale, agcd 80 years, first examined in November, 1929. Cystoscopy revealed a papillomatous tumor three-quarters of an inch in diameter, pedunculated, on floor behind sphineter. Biopsy report: carcinoma, Grade II (Dr. Aaron Price). A urethral caruncle was removed and the bladder tumor fulgurated one month later. Cystoscopy in March, 1930, showed no evidence of recurrence. Report by Dr. F. Y. in September, 1932, "arthritic condition, but urologically negative."

The following two cases represent, we believe, what is usually to be expected in the small bladder tumor of Grade I malignaucy when carefully and persistently treated by cystoscopic fulguration.

J. N., white female, aged 63 years, first seen February 10, 1931. Hematuria for one year. High blood sugar. Cystoscopy showed two small papillary growths near the right ureteral orifice. Biopsy: papillary carcinoma Grade I (Dr. Aaron Price). Fulgurated on February 25, 1931, and on March 18, 1931. Observation cystoscopies on April 29 and May 20, 1931, were essentially negative. On October 14th, 1931, several small buds were fulgurated in the area of the original tumors. Cystoscopy on September 7, 1932, showed no evidence of recurrence.

L. K., white female, agcd 38 years, first seen April 23, 1931, complaining of intermittent, painless hematuria for six months. A papillary cystic tumor the size of a grape was seen near the right ureteral orifice. Biopsy: papillary carcinoma Grade I (Dr. Aaron Price). Tumor fulgurated at this time and again on April 28 and June 10th. On June 30 cystoscopy showed the tumor mass to have completely disappeared, but a few cystic bodies were fulgurated. The area of the tumor base was found to be slightly elevated and to bleed casily, on July 15, 1931, and was again fulgurated. Examinations at monthly intervals thereafter showed the condition to be steadily improving and on January 22, 1932, cystoscopy

was entirely negative. Examinations since that time have also been negative, the last examination being on September 16, 1932.

Our experience with radium has not been en-We find that in small low grade malignancy, the results are not appreciably bettered and its possible usefulness is outweighed by the occasional distressing results such as pain, rapid metastasis or extension of the tumor. We have seen no cures or apparent cures, in large bladder tumors of high malignancy, whether radium was used or not. We still use radium occasionally in cases requiring suprapubic drainage because of hemorrlage, painful urination or bladder neck obstruction, but it is usually employed to satisfy the patient or others, or to give the patient "the benefit of the doubt." We are in accord with those who do not consider radium more efficient than coagulation alone to control bleeding tumors. Personally, we feel that the majority of bleeding tumors can be controlled by fulguration cystoscopically; and when not, certainly can when used in an open operation. Pain is often intense after the use of radium and the patient, or his family, may seriously and with some instification, question this mode of treat-The suffering that we have observed at times following the implantation of radium has certainly dampened our early enthusiasm for its

CONCLUSIONS

1. The diagnosis made by the pathologist is often inaccurate because of the unsatisfactory specimen submitted by the operator.

2. Despite the importance of biopsy specimens, experience will enable the cystoscopist to diagnose malignancy from the cystoscopic appearance of

the tumor in the majority of cases.

Apparent cures of small low grade carcinomata of the bladder may result from thorough

fulguration alone.

4. Cystoscopic fulguration in tolerant bladders rather than suprapubic approach with fulguration is preferable if the tumor is cystoscopically accessible and not too large.

Resection of the bladder with wide excision of the tumor area may be done in a limited num-

ber of cases with success.

The use of radium has not, in our experience, been of definite value.

NOISE DEAFNESS IN INDUSTRY AND ENVIRONMENT (Occupational Deafness)

By J. COLEMAN SCAL, M.D., NEW YORK, N. Y.

MPAJRMENT or loss of hearing is a catastrophe for any individual as it not only scparates him from contact with his fellow man by imparting the feeling of inferiority

and helplessness but evidently ends his capacity for earning a livelihood.

Deafness resulting from noisy machines has heretofore been given little attention. In a

report published by the New York State Department of Labor, September, 1930, on "The Effect of Noise on Hearing of Industrial Workers," tests made in groups of one thousand workers definitely indicated that temporary or permanent impairment of hearing are produced by constant exposure to certain noises and vibrations. These noises and vibrations can be measured accurately at any given place by a specially equipped audiometer. Beck established a standard measure of intensity of sound. He proves that very noisy occupations cause deafness and that the deafness advances in time and severity in direct proportion to the intensity of the noise.

There are three types of deafness. The first is catarrhal deafness which involves the middle ear and affects the air conducting apparatus. The second is nerve deafness and involves the inner ear and also affects the auditory nerve. The third, which is known as otosclerosis or progressive deafness, is a hopeless condition and cannot be prevented, arrested or alleviated.

According to Dr. Ritchie Rodger sound is analyzed in the cochlea. Occupational deafness is characterized by increased diminution in hearing accompanied by tinnitus due to excessive irritation of the cochlear branch of the eighth nerve.

The amount of impaired hearing present in a given case is dependent upon the intensity as well as the duration of the noise. Where a single loud noise occurs unexpectedly and deafness follows, the condition may be due not only to a ruptured drum, but also to the damage inflicted on the endings of the auditory nerve in the cochlea. The loss of hearing is more marked in that part of the cochlea corresponding in pitch to the sound to which the individual has been exposed. Where deafness results from steady, moderate occupational noise or environment, it is usually of such insidious onset that it is practically unrecognizable except by an otological examination. In fact it is well known that boilermakers or riveters hear well during the noise of their work, due to a stimulation of the auditory nerve, yet on examination their bone conduction may be reduced to one-third.

In these cases audiometer examinations show the high tones are the first to be impaired. If the noise is continued the process finally affects the auditory perception for lower tones.

Extreme noises such as looms, machinery, riveting, tool sharpening machines, trunk and boiler making, etc. are not the only cause for deafness. Low grade noises like the continuous noise of traffic such as autos, busses, engines, telephone and typewriters are likewise capable

of producing deafness. Such cases are readily discovered by examining middle aged people residing and working in large cities. They are usually found to be partially deaf. A newer form of progressive noise deafness is now appearing in aviators, due to the constant roar of their high powered motors. Rapid descents may rupture the drum due to sudden unequal pressure exerted against both sides of the drum. Testers, mechanics, and aeroplane observers exposed for short daily periods over a long time to extreme noises of their motors or exhaust may become temporarily deaf.

Locomotive engineers and stokers eventually become deaf although the noise of the locomotive is below the harmful tone. This is due to the continuous shaking and straining of ears and sudden changes in air currents as well as the constant presence of nasopharyngeal irritation in such individuals. Only those with normal ears should be employed in such positions, since the presence of a slight impairment of hearing soon becomes aggravated.

The mechanism of auditory injury by steady noise is due to the fatigue of the numerous fine nerve endings in the cochlea which receive the vibrations of sound. Continued fatigue ends in their being irritated and damaged by a degenerative process with resulting loss of hearing acuity. The accompanying head noises, according to McCoy, are due to the swelling of these numerous nerve cells so that they produce the same sensation as it there were a continuous sound vibration against them. Another explanation of noise deafness is that the symptoms can be accounted for by a disturbance in the circulation of the middle and internal ear, which causes a transudation or extravasation of blood into the tympanum or labyrinth which sooner or later results in tympanic deafness.

Telephone Noise Deafness

The proper and ordinary use of the telephone has no effect on the auditory apparatus whatso-ever. The only danger is to telephone operators whose auditory apparatus may become fatigued through the constant and continuous transmission of sound. This, if continued, finally results in noise deafness with its accompanying vertigo, tinnitus, and other nervous manifestations.

Where sudden or excessive vibrations occur in the telephone receivers, acoustic or sound shock may result. This, however, could occur only when using the telephone in a thunderstorm or where highly charged wires had short circuited the telephone. Even this is now impossible as the fuses used by the Telephone Company eliminate this danger.

To avoid noise deafness in telephone operators, only persons with normal ears should be

employed by the Telephone Company. Symptoms of noise deafness in such employees are always found in those who have had a previous ear condition, especially those who are neurologically inclined.

Where a switchboard is in constant use, the intense crackling sound in changing the keys is thought responsible for disturbance of hearing as well as nervous symptoms often experienced by

such operators.

Another occupational deafness frequently met is due to the toxic effects of individuals coming in contact with poisonous materials daily. The hearing is affected by the intoxication of the entire system, involving the auditory mechanism as well. Occupations that necessitate the constant use of lead, arsenic, sulphur, phosphorus, or other noxious gases and vapors are occupations that can be considered accountable for toxic occupational deafness.

Examinations and Tests

The human ear has a normal hearing range of about fifty to seventy-five feet in ordinary conversation and about thirty-six to forty-eight inches for the ordinary watch. Tuning fork vibrations are heard throughout the range from sixteen to twenty-two thousand vibratious in each second.

When testing hearing we should immediately ascertain whether the receiving or transmitting apparatus is involved. The receiving apparatus consists of the internal ear, the labyrinth and the cochlea, which, after receiving vibrations, conducts the sensation to the brain. The transmitting apparatus consists of the ear lobe, the external canal, the drum, and the ossicles which are so arranged as to catch and transmit the vibrations of the air to the receiving apparatus.

Diminished bonc conduction is a sign of nerve deafness. In conductive deafness, bone conduction is increased. The Schwabach's test is of diagnostic value here, since if we find the duration of the bone conduction lengthened, we conclude that there is obstruction to sound perception. While if we find the perception period shortened, we know that there is involvement of the auditory nerve.

Rinne's test depends on the fact that a normal individual hears better by air than by bone conduction. If the sound conduction apparatus is involved the vibration of a tuning fork is heard longer over bone conduction. This is called a negative Rinne.

The best test for nerve deafness in affections of the ear attributed to trades is the finding of diminished bone conduction, Rinne's test being positive. A normal functioning ear gives bone conduction half as long as air conduction, while in conductive deafness bone conduction may be increased.

Prognosis

The prognosis in noise deafness depends upon whether the labyrinth has been involved or not. Noises have a definite physiological effect upon the auditory apparatus, especially in the production of fatigue. Those who work on presses or looms are found mostly to have nerve deafness, since such work is subjected to the greatest amount of noise. The progressive deafness increases proportionally with age. In aged individuals the loss of acuity for higher tones should be considered with advancing age, especially those affected with arteriosclerosis, hypertension or cardiac disease.

Where the dram has been ruptured after an explosion, it usually heals spontaneously. If suppuration follows, the mallcous may be bound down to the internal wall of the middle ear by adhesions. In many cases, the concussion passes off with only slight damage to hearing, although timultus and vertigo may persist for a long time. In such cases, nerve deafness frequently follows.

Treatment and Prevention

Eliminations of floor vibrations could be accomplished by providing rubber soles for workers in noisy occupations. Silencers should be put on all exhausts. Welding should be substituted for riveting. Noisy machines should never be congregated but separated in large airy rooms. There should be Otological examination of all applicants for work at noisy occupations and elimination of those found with impaired hearing, as well as of those having a familial history of deafness. Where cotton plugs are used to stop up the ears they should be considered worthless unless the plugs are first smeared with vaseline or wax. In cases where deafness is progressive the person should be transferred to another department where less noise exists.

Once progressive deafuess has set in treatment is usually hopeless. The disturbed hearing will change into progressive deafuess and will continue so in spite of treatment or changing of occupation or environment.

Conclusions

Hearing once damaged can seldom be improved or restored. Unless proper action is taken noises will continue extracting their toll of deafness, despite the present trend to eliminate them. This is seen today in the advertising of noiseless typewriters, the substitution of riveting for electric welding and the installation of silencers and mufflers for automobiles, gas engines and guns.

Oncoming deafness due to occupational noise gives no warming whatsoever, except when the condition is accompanied by head noises. Examination and treatment must be given when the hearing first begins to drop since only then can

we prevent a permanent loss of hearing. Industries that make people deaf should employ deaf

people from the start.

In arriving at the amount of loss of hearing in an individual case we should keep in mind that where large groups of normal cases were functionally tested hearing defects were found in the majority of cases. This was attributed to the common affections of the nose and throat so prevalent in city dwellers.

Railroad companies, to protect the safety of the traveling public, should have each applicant examined otologically before employing him. They should continue to examine him periodically at fixed intervals, since many disturbances of hearing occur during time of service.

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MIGRAINE.—A SYMPTOM OF FOCAL BRAIN EDEMA

By FOSTER KENNEDY, M.D., NEW YORK, N. Y.

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hoT has been customary to group together certain acute paroxysmal disorders, asthma. urticaria, migraine, epilepsy, which often occur as a frequent event in certain neuropathic stocks.

Clearly enough the events which each of these names would cover are of the general nature of symptoms rather than of discreet and clearly defined diseases: they represent "reactions to stimuli" and are secondary complexes

rather than primary disorders.

Of 261 families with migraine, Ball found 60 subject to asthma, and 10 with epilepsy. I have been able to report epilepsy and urticaria appearing together as a result of milk poisoning, and together disappearing with the removal of the noxious stimulus; in like manner dermographia often synchronizes with migraine attacks of undetermined cause. It would be entirely misleading; however, to postulate a single constant precipitating factor in migraine. I believe that some of these cases arise from an anaphylactic basis, and my thought quite definitely tends to the notion that this basis will broaden with increased knowledge of the biochemical variants of Three aspects of migraine call for attention and in the first two, knowledge is still speculative in that no anatomical data are obtainable during a paroxysm.

First—the nature of the provoking agent, materies morbi; second—the nature of the response in pathologic-anatomical morbid terms; third the nature of the signs and

symptoms produced.

The last is known well to us all and to the many thousands who suffer from the disease. It would be idle to expatiate on the phenomena of this condition, but it would be well to remember that they are not confined simply to localized periodic severe headache lasting several hours terminating in nausea. The most characteristic attacks are associated with events typical of focal cerebro-meningeal irritation or transient injury. The scintillations are on all fours with the phenomena produced by an occipital lobe irritant and in my experience these crude visual discharges are appreciated in the visual field away from the headache. At times such events are followed by hemianopic defect in the affected field, and may be associated at the time with alexia, or a severe reduction in the educated ability to understand written symbols. Numbness and tingling of the contra-lateral hand and face, rarely of the leg, may be experienced and in such cases a transient motor aphasia is not un-Of course, ophthalmoplegic migraine will come to mind in this regard. Here, the paralysis of the extrinsic eye muscles or of the levator muscle of the eyelid may appear in an hour or two, and may persist for only a few hours. On the other hand this local paralysis may pass off so slowly as to be still apparent several weeks, or occasionally two or three months, later. In our Neurological Wards at Bellevue Hospital today is a woman subject to severe irregularly recurrent right temporal headache, associated with partial or, rarely, complete, 3rd, 4th, and 6th nerve palsy on the right side, together with proptosis of the right eye. Now, such events are clearly of the nature of organic palsies, they are in no sense acutely temporary deteriorations on some vaguely functional character, they have the appearance of coming from a rapid attack on or rapid compression of nerve tissuc with more or less slow recovery of the function impaired thereby.

These considerations of the symptomalogy of the disease lead us to some notions regarding the morbid process at work. At this point we must pass somewhat to theory, for as long as we are ignorant of the abnormal tissue changes produced, speculative pathology must stand in the place of knowledge. Hughlings Jackson has said truly that "the use of hypotheses is the method of science. To suppose that we can make discoveries by the Baconian method is a delusion. A hypothesis or a supposition is not a conclusion, it is only a starting point for methodical observation and experiment, the endeavor being not only to prove it, but to disprove it." The analogy of urticaria and migraine gives one to think in terms of an analogous pathological process in the two diseases. Such a skin process translated to the intracranial cavity would make us visualize localized areas of edema involving chiefly the meninges and especially their foldings and angulated reflexions and less severely, the brain tissue itself. Such localized swellings could form rapidly; their implication of the meninges would cause headache in that these membranes are agonizingly sensitive to stretching. This is especially true of the meningeal areas around the blood vessels which would naturally be the source of the out poured fluid. This discrete fluid mass might irritate contiguous brain areas, the calcarine lobes producing crude visual discharges and by greater incidence field defects, aphasias, and disturbance of visual memory for words. Such fluid swellings in the meningeal folds at the sphenoidal fissure would impinge upon and maybe dysfunctionate the neighboring cranial nerves, and in a space so narrowly enclosed this incidence might be such as to prevent recovery of function in these nerves for weeks after all fluid had been absorbed or drained away. Indeed as far as a morbid process is concerned this theory would seem to fit the known clinical facts, and is the more engaging if the analogy be pursued into associated symptom complexes: that edema of the skin may appear as urticaria; edema of the brain, as in alcoholic or uramic poisoning, as fits; and that edema of the cerebral meninges with especial pressure in the meningeal crevices may produce the localized headache and the local cerebral symptoms of migraine.

The problem grows more obscure when we proceed to the consideration of our first aspect of this disease: the nature of the noxious agent.

Gowers long ago recorded the fact that certain migrainous persons could produce an attack by eating foods by which they would be poisoned—and this was appreciated long before we were aware of even so little as we now know of allergic happenings.

We begin to realize that inate sensitiveness may account for more medical phenomena than we have dreamed of in our philosophies, and Cook has shown that many novious products absorbed from the intestinal tract fail to give rise to skin reactions.

It would therefore seem valuable to practise observation and pursue experiment in migraine along allergic lines; already we have found in the ease of migraine described above with a sphenoidal fissure syndrome that recovery from symptoms and maintenance of health result from an "elimination" diet, and immediate return of pain and local palsies was effected by resumption of the offending protein.

Riley has of late reported most interesting results in his research in migraine. He found a deficiency in Theelin, the ovarian follicular hormone in his patients and further that Prolan A could be recovered from the urine of migrainous and non-pregnant women.

Riley was able to produce a migrainous seizure by the hypodermic injection of 2 c.c.s. of Prolan A and B, but Brock, working in our Clinic in Bellevue Hospital, was unable to secure any result by the use of half that amount.

Undoubtedly, persons afflicted with migraine often suffer gonadal abnormality, hyperthyroidism and endocrine disturbance by thymic persistence, all related possibly to disordered pituitary function. However, such disordered function does not necessarily emanate from primary hypophysical or other endocrine pathology, but might, I submit, emerge as a secondary or neighborhood pituitary sign, even resulting thereby in the abnormal hormonal urinary findings: it is not impossible that a localized edema of the basal meninges might give rise to such endocrine errors as appear in this (disease) symptom But this drum must not be too much beaten upon-hormone error may well often be basic, but certainty in this matter must be for the future.

A word in conclusion regarding the results of certain drugs in the experimental examination of migraine as carried out by Dr. Brock in our Department at Bellevue Hospital. Here it was found that ergotamine tartrate an antisympathetic in action and known best by its trade name of "gynergen" in pills of gr. 1/100 each would cut short a migrainous paroxysm but with the unfortunate complication of occasional induction of vomiting. It has been found that daily or alternate daily injections of theelin prolonged the intervals between attacks, and no paroxysm could be produced by over dosage with insulin nor by hyperventilation nor the use of 95% oxygen and 5% carbon dioxide inhalations.

However, when we've considered the small sum of our knowledge of the treatment of the acute seizures we retreat on the fact that morphine and its derivatives give aid when all else fails, and in severe cases must be employed with due regard to the personality of the patient. In fine, the solutions of epilepsy, migraine and other paroxysmal disorders, including, I believe, many of the psychoses, are behind doors the locks of which we pick at, but which some day will be opened by the key of biochemistry when it has reached a larger stature than it has at present attained.

DISCUSSION

Dr. Henry Alsop Riley, New York City: Dr. Kennedy brings before our attention the essential problem connected with the causation of the migrainous seizure. This question has absorbed a great deal of my attention for the last two or three years.

I quite agree with Dr. Kennedy when he states that migraine is a symptom-complex and that many causative factors seem to be able to evoke the essential response, the migrainous seizure, from the bodily organization. It is a matter of common knowledge that a large group of patients presents a type of migraine which may be considered to be the symptomatic form. These patients often show definite deviations from the normal in connection with refractive errors of the eyes, disease of the accessory sinuses of the nose, dietetic idiosyncrasies and other manifestations of a constitution susceptible to allergic influences. It is also well known that patients suffering from brain tumors, pituitary neoplasms, chronic hydrocephalus and other disorders of miscellaneous character may present what appear to be typical migrainous attacks. There must, therefore, be a number of etiological factors active in the excitation or activation of the migrainous seizure. Whether there is one final unitary channel through which act the essential processes which result in the actual attack is uncertain at the present time but it is the object of earnest and conscientious investigation in many neurological and general medical centers.

I agree with Dr. Kennedy that the vasomotor theory is one of the most attractive of the hypotheses proposed for the explanation of this syndrome. On the basis of vascular cramp almost all of the symptoms of migraine may be very satisfactorily explained, but except for some restricted collateral evidence we have no direct proof that angiospasm is the cause for migraine. As Dr. Kennedy has quoted, Hughlings Jackson has given respectability to "supposition" as a creditable basis for scientific investigation and it often serves as a very useful point of departure. What is behind and at the root of the vascular spasm still remains uncertain. Not long ago a physician from the South wrote to me enclosing a sketch made of his own fundus during a migrainous seizure. Comparison with the vessels of the fundus during the attack and in the interval between attacks showed a very definite diminution in the calibre of the arteries and a general blanching of the retina in the eye on the side of the head in which the headache occurred.

Not long ago a child came into the Vanderbilt Clinic with the statement that she had suffered three days previously from a migrainous seizure and without our being informed, four or five of us looked at the fundus and all of us without mistake picked the side of the head in which the headache occurred by the appearance of the fundus. The nerve head was quite obscured and the radial markings over the edge of the disc were much more prominent than on the other side.

I agree with Dr. Kennedy in separating the ophthalmoplegic type of migraine from the simple and ophthalmic types. I quite agree with him in his statement that symptoms of ophthalmoplegic migraine represent what would appear to be the effects of definite pressure neuritis. In almost every characteristic, ophthalmoplegic migraine differs from the other types. There is a much less definite hereditary element, it makes its appearance in an earlier age epoch, it is much more stereotyped and unvarying in its manifestations, it is less regular in the time of recurrence and the sequelae are much more enduring and more inclined to become permanent. In addition, what pathological evidence there is uniformly presents the presence of organic alterations in the form of neoplasms, inflammations, meningeal thickenings, vascular dilatations and other deviations from the normal in the oculomotor nerves themselves or in their immediate vicinity. All of the autopsy reports which I could find in the literature showed the presence of actual pathological changes in patients who had suffered from ophthalmoplegic migraine.

Dr. Kennedy has been kind enough to refer to the work which Dr. Brickner, Dr. Kurzrock and I have been carrying on at the College of Physicians and Surgeons and at the New York Neurological Institute on the relation between the migrainous seizure and the endocrine glands, particularly the gonad and the hypophysis. The connection has been emphasized for many years and we therefore

decided to investigate the excretion of the sex hormones in the urine of patients suffering from migrainous attacks. The relationship of the ovary has, of course, been emphasized for centuries, principally because of the relation between the migrainons seizure and menstruation and the fact that migraine is usually limited to the menstrual life in females, failing to appear during the ecssation of ovarian functions such as that occasioned by pregnancy, lactation and the spontaneous or operative menopause. The hypophysis has been implicated principally on account of its position in relation with many of the structures whose involvement would explain many of the symptoms of migraine. The relation of the hypophysis to the migrainous seizure has also been emphasized on clinical grounds. The hormones which we have investigated are prolan secreted by the hypophysis and theclin produced by the ovary. Prolan from the hypophysis consists of two prolans, A and B, the former being active in the production of the ovarian follicle and the latter bringing about the luteinization of the folliele after it has ruptured and the ovum has been extruded. Theelin is active principally in the production of the phenomena of menstruation. The group of patients studied consisted almost entirely of women within the menstruating age. There were three who were past the menopause, either spontaneously or artificially. were all sufferers from simple migraine. There were two males in the group. In studying them we examined the urine for the presence of hormones over a period of about three weeks during which time all of the patients had one or more headaches and all of those who were menstruating passed through one of their periods. From the study of the excretion of the hormones and the occurrence of the migrainous attacks we conclude:

 While theelin was almost consistently absent from the patients forming the preliminary group in whom only single specimens were examined, the study of the daily urine excretion recorded the occasional presence of the hormone in all but one of the menstruating individuals and in this woman the menopanse was imminent. In one woman who had passed a natural menopause, theelin was absent, as was the case also in another woman in whom the menopause had been induced by operation. In all of those in whom theelin was demonstrated the hormone was absent sporadically and when present the amount of theelin rarely exceeded five rat units per liter. Only exceptionally did the quantity of hormone reach the ten to twenty rat units which is considered the normal amount for women within the menstrual age.

 No demonstrable relationship could be determined between variations in the excretion of theelin and the occurrence of headache.

3. In all of the cases, prolan was excreted. In the two women past the menopause and the one approaching it prolan was present almost daily in large quantities; in the remaining Il cases the hormone was demonstrated intermittently and in varying amounts.

4. In the entire group of patients investigated, twenty-nine individual headaches occurred. Headaches which continued over consecutive days were considered, for purposes of tabulation, as constituting a single attack. In two patients (H. J. and S. M.), the headaches were so continuous as to constitute a status unigrainicus, not being separable into single headaches, and therefore could not be included

in the number (29) given above.

In 20 out of the 29 instances the headache was preceded or accompanied by the appearance of prolan in the urine. In calculating the number of days by which the appearance of prolan antedated the headache the interval was determined by counting from the first day of the appearance of the hormone to the beginning of the headache. In one patient (A. S.) in whom the initial appearance of prolan antedated the headache by an internal of three days-prolan appeared on each of the three consecutive days and disappeared with the oceurrence of the headache. In the patient B. H., on one occasion prolan was demonstrated four days before the headache, but continued to appear in the urine for three of the four days. In another instance in which the headache was preceded by an interval of six days, the prolan continued to occure on each of the six days, failing to appear only on the day of the headache. In four instances the eontinuous exerction of prolan extended through at least a part of the period of the headache. In one patient (C. R.), the prolan appeared for two days, was absent for one day and recurred coincidentally with the occurrence of the headache. The incidence of headache and prolan excretion limited to a single day coincided in only two instances. The interval by which the one antedated the other was, in 7 instances, one day; in 4, two days; in 5, three days; in 1, four days, and in 1, six

In the two patients presenting a status migrainicus, the excretion of prolan was practically uninterrupted. There was, therefore, a continuous relationship between the appearance of prolan and the occurrence of headache. In one patient, a practically continuous prolan excretion occurred over the period of observation, but during this time only three headaches took place. In this patient it was therefore

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impossible to relate the headaches to any par-

ticular day of prolan excretion.

5. In nine of the twenty-nine headaches, no prolan-headache relationship was demonstrated. In seven of the nine headaches, however, the determination of an exact relationship between the appearance of prolan and the occurrence of headache was rendered impossible by the absence of urine specimens. In the remaining two of the nine, the requisite number of specimens was obtained but the headache occurred without the antecedent appearance of prolan.

6. Occasionally, prolan appeared without the subsequent development of headache. Of the three cases showing almost daily prolan excretion, one individual failed to develop a headache on only one day, another was free from headache on only an occasional day, but the third, as stated above, was free from headache the major part of the time of observation. In the remaining eight patients, in whom prolan appeared intermittently, a headache failed to follow the excretion of the hormone only five times.

7. Of the eight menstruating women, seven had attacks with menstruation. No definite difference could be determined in the relationship between menstruation, headache, and the excretion of prolan, from the headache-prolan relationship occurring at other times.

8. Prolan was excreted in association with all menstrual periods, except in the case of E. S., in which the requisite specimens were

not obtained.

9. Nine female patients were injected with 2 cc. of follutein and seven developed an attack of migraine within four to twelve hours. The attack was either mild or severe was always presented the migrainous charac-

teristics which were typical for the individual.

10. Only two men were studied during the period covered by this preliminary investigation. One man had six, and the other had nine headaches. In the patient with six attacks (S. O.), specimens preceding one headache were lost, but all of the other attacks were associated with the excretion of prolan within a period not exceeding three days. In the other male patient (C. W.), with nine headaches, specimens were lost preceding one attack. Of the remaining eight attacks, headache was associated with the excretion of prolan in only four instances; he, therefore, had four headaches without the associated excretion of prolan.

Follutein was administered to patient S. O. twice, the injections being separated by an interval of six days. A typical two-day headache developed following the injection after three days. After the second injection no

headache developed.

The experiments have not yet been controlled by the study of a non-migrainous group over a comparable length of time. This will be one of the next steps in our investigation. I believe that this is the first tangible evidence presented that the migrainous seizure can be definitely related to some perhaps perverted activity of the gonad or the hypophysis. We do not believe that this solves the problem of migraine by any means but we do believe that it presents a very useful point of departure for further investigation and for the treatment of the disorder. Without doubt further reports of this investigation will follow.

The support upon which this investigation has been carried out has been supplied by the Josiah Macy, Jr., Foundation and the Chemi-

cal Foundation.

A STUDY OF FAINTNESS AND SYNCOPE IN ASSOCIATION WITH CARDIOVASCULAR DISEASE*

By LOUIS FAUGERES BISHOP, M.D. AND LOUIS FAUGERES BISHOP, JR., M.D., NEW YORK, N. Y.

NY clinical study of a symptom occurring in cardiovascular disease often becomes a tific investion of one's own personal experience. useful point or in mind that we undertook this and at the root cand syncope are considered here mains uncertain. as being allied symptoms, both from the South wroto cerebral anemia. It is obmade of his own funer of underlying causes of seizure. Comparison of the American Therapeutic 17, 1932.

such frequent symptoms encountered may be

legion.

As our observations in this paper are essentially on ambulatory patients, examples of syncope which might, for example, be due to abundant cerebral hemorrhage are naturally excluded. Also, in recording the history we must, in most cases, rely on the individual description and replies to questions. The great majority of these people were referred or came directly to our office

because they felt that their symptoms were in the main due to disturbances in their circulation. We were particularly interested when these attacks could be traced to these facts. A similar study would be of interest from the standpoint of any branch of internal medicine.

As a basis for this study we reviewed five thousand private historics of cardiac disease. These people had been rather carefully studied and observed. Faintness or syncope was a primary complaint in two hundred seventy-four. It became immediately evident that faintness or syncope, due to cerebral anemia, might be tolerated differently by different individuals from whatever cause. We first decided to determine the incidence of these symptoms with regard to blood pressure.

Arbitrarily, any patient who had a fixed diastolic pressure of 100 or over was considered to be a hypertensive individual, and any adult patient with a systolic pressure of 110 or less was considered to be a hypotensive individual. The occurrence of faintness or syncope in hypotension and hypertension showed that about one-half of those with these symptoms had hypertension and less than ten per cent had hypotension. This was irrespective of other accompanying factors that might be present. Although it is well known that faintness or syncope is frequently associated with either hypotension or hypertension we did not expect so frequent occurrence in hypertension and we rather felt that it would be more frequent in a constitutional state such as hypotension. (Table 1.)

A second common clinical observation is what is usually called the ordinary attack of fainting generally considered to be of vagus origin. Attacks of syncope due to fainting have long interested clinicians. In fact before the introduction of anaesthetics, it was the frequent custom to perform operations in a state of syncope which was induced by laying the patient flat on the ground for a short time and then raising him very suddenly to the upright position.

The opportunity, however, to study the physiology of faintness and syncope is not frequent. We had an opportunity recently to observe a man during an attack of syncope, while he was seated for an electrocardiographic examination. The electrocardiogram revealed that his attack was accompanied by an unusual arrhythmia. This

has been reported by us in a recent publication.²
Starr and Collins who have done work on the physiology of fainting feel that it is due to cerebral anemia.² We were interested to note in their findings that electrocardiograms taken in two of their fainting cases revealed nothing except minor variations in the T wave.

It is apparent that there may or may not be present a disturbance of the cardiac mechanism in a simple fainting attack. Disturbances in cardiac mechanism that may result in faintness or syncope as a symptom can be classified as follows: (This is a modification of a similar classification given by Lewis.*)

Accelerated Heart Action—Simple Tachycardia. Repeated Extrasystoles. Paroxysmal Tachycardia. Auricular Fibrillation. Auricular Flutter. Ventricular Fibrillation.

Retarded Heart Action—Simple Bradycardia. Sino-Auricular Block. Partial Heart Block. Complete Heart Block. Bundle Branch Block.

Thus, either an accelerated or retarded heart action may compromise the blood supply to the brain and cause faintness or syncope.

Electrocardiographic Study:

Of the two hundred seventy-four histories which we reviewed we had taken one or more electrocardiograms on two hundred eighteen. In this analysis it was noted that there was present a wide variety of disturbances of cardiac mechanism, as is shown in Table 2.

As early as 1908 Walter James called attention to an example where recurrent extrasystoles gave an arterial pulse of 36 with heart beats of 72, of the true bigeminal type. None of these extrasystoles reached the wrist and with the slow pulse there was a sensation of sinking and at times an incomplete loss of consciousness. In our study we found numerous examples where extrasystoles were accompanied by these symptoms and it can be considered one of the most important of the Stokes-Adams equivalents.

Faintness and syncope are particularly common in paroxysmal auricular fibrillation and flutter, especially during onset. Many authors have called attention to the difficulty involved, particularly in children, in differentiating attacks of petit mal, with accompanying faintness and syncope from paroxysmal tachycardia. It is almost need-

TABLE 1.

The occurrence of fointness or syncope in hypertension and hypotension. About one-holf of our coses had hypertension and less than ten per cent had hypotension.

		tensi	on and t	ess thon	ten per c	cent hod	hypotens	ion.	•		
AGE	0	1-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	Totals
MALE HYPERTENSION	1		1	8	22 35	34	55 25	32	11	1	165
HYPOTENSION			1	1	6	5	3	12 3	/		89 19
FEMALE HYPERTENSION	1	1	I	11	17	20	23 13	33	2		109
HYPOTENSION				4	5	4	13	21 1	1		46 15

TABLE 2

An analysis of electrocardiograms of patients with a primary complaint of faintness or syncope.

Auricular Fibrillation, Uncomplicated—6. Auricular Fibrillation, with other Abnormality—5. Auricular Flutter—1. Bigeminal Rhythm—4. Convex R (or S)—T interval—6. Deep Q-I—1. Deep Q-III—1. Deep Q-III—1. Ectopic Contractions, Auricular-9. Ectopic Contractions, Nodal-4. Ectopic Contractions, Ventricular, Right—2. Ectopic Contractions, Ventricular, Left—9. Heart Block, Incomplete (A-V)—6. Heart Block, Complete—1. Intraventricular Block-6. Intraventricular Block, Right Bundle Branch—5. Left Axis Deviation, Uncomplicated—62. Left Axis Deviation, with other Abnormality—39. Mitral Pathology, Suggestive Evidence of-4. Nodal Rhythm-1. Normal Mechanism—59. Paroxysmal Tachycardia, Ventricular—1. Right Axis Deviation-2. Sinus Bradycardia-7 Sinus Tachycardia—18. T-Wave, High Voltage—1.
T-Wave Negativity, Lead I—19.
T-Wave Negativity, Leads I and II—6.
T-Wave Negativity, Leads II and III—5. T-Wave Negativity, Leads I, II and III—3. T-Wave Depression, Leads I and II—5.

less to say that an examination of the heart during attacks of unconsciousness should always be made. Willius has called attention to the attacks of cerebral anemia prone to occur in paroxysmal tachycardia, particularly in those examples where the path and origin of the impulse to contraction are distant from its normal site.⁶, ⁷ We should not feel, however, that paroxysmal tachycardia or fibrillation is invariably attended by cerebral anemia.

That ventricular fibrillation is not always the cause of fatal syncope has been recently emphasized by Schwartz⁸ who, in a remarkable case, observed a patient who suffered from sixty-seven seizures of unconsciousness during a period of seven months. Each one of these was associated with periods of ventricular fibrillation. In addition, this patient had a complete heart block. He feels that periods of unconsciousness in patients with complete heart block are associated with transient seizures of ventricular fibrillation far more commonly than has been suspected; also, that a clinical diagnosis of ventricular fibrillation might be suspected if preceding a period of unconsciousness the heart rate had been noted to increase above that of the usual basic rate.

A few years ago at Bellevue Hospital the junior author of this paper observed an example of transient ventricular fibrillation with syncope. The patient died a few days after the electrocardiographic observation of the attack.

Although variations in rhythm such as have

been described above may frequently be the underlying cause of attacks of faintness or syncope, and are relatively common, they are not very often recognized. This is due not only to the labon and expense of frequent examinations as there is also a natural improbability of the expected change of rhythm appearing at the particular time during which the patient's heart is being recorded. It is, therefore, relatively rare to be able to prove that attacks of faintness or syncope are due to a fugitive abnormal rhythm.

The second large groups of disturbances of cardiac mechanism which can result in attacks of faintness or syncope are those grouped under retarded heart action. First, sino-auricular standstill alone, or standstill of the whole heart, usually of vagal origin, may cause these symptoms. Alfred E. Wedd⁹ has recently reported two examples of cardiac syncope with this mechanism.

The term Stokes-Adams syndrome is usually connected with varying degrees of heart block, either the onset of complete heart block or the increase of a pre-existing block. It is quite possible that many of the original cases described by Stokes were attacks of faintness or syncope of an entirely different cardiac mechanism from what we now consider heart block. It is well known, too, that after the onset of a complete heart block attacks of faintness or syncope usually disappear, unless there is present some other influence on the ventricular pacemaker. This influence may be either an increase or a decrease in the ventricular rate, the end result being the same.

Gallavardin¹⁰ has recently called attention to the fact that cardiac pain may be frequently accompanied by vertigenous and syncopal attacks of, sometimes, a very impressive nature.

In a recent analysis of one hundred examples of cardiac pain seen in private practice we found that faintness and syncope complicated cardiac pain from all causes in eight examples.¹¹ These symptoms were more frequent where marked arteriosclerosis was present. In conjunction with this syncope can occur in attacks of coronary thrombosis either with or without pain, usually the result of an extreme state of collapse. We have observed recently an example of this in a physician who had several attacks of syncope, preceded by slight pain, later proving to be coronary thrombosis.

SUMMARY

1. Faintness or syncope is seen by the cardiologist relatively often as a chief complaint.

2. Its frequent occurrence in hypertension is again emphasized. It was not so often found to be associated with hypotension.

3. Disturbances in cardiac mechanism may often be the underlying cause of faintness or syncope.

4. Faintness or syncope may be a symptom of

coronary disease.

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ROUTINE MANAGEMENT OF THE GASTROSTOMY PATIENT

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TE have employed with satisfactory results the following routine preoperative and post-operative measures in a series of seventcen (17) gastrostomies. Patients for whom a gastrostomy is indicated require careful detailed management if postoperative results are to justify the procedure. Careful attention to detail in the pre-operative preparation of the dehydrated and emaciated patient will reduce to a minimum the element of danger connected with the opera-Possibly no standard operative procedure requires more constant intelligent post-operative care than does a gastrostomy. The purpose of this paper is to outline briefly a satisfactory routine for the care of the patient before and after gastrostomy.

Pre-operative Care

A gastrostomy is usually performed as a palliative measure in patients suffering from cancer of the esophagus. Most of these patients, unless they are edentulous, show an advanced degree of intraoral sepsis. The bacteria responsible for this condition are carried downward by fluids and saliva and maintain a chronic state of inflammation and suppuration in the ulcerated esophageal lesion. This inflammation causes edema and narrowing of the esophageal lumen with a resulting increase in the trauma due to food and peris-This suppuration has the systemic effect of lowering the patient's vitality and the local effect of increasing the growth activity of the carcinoma. When time permits, it is best to clean up the dental condition before operation thus improving the patient's general condition and lessening the danger of post - operative wound infection. washes are used frequently and apparently lessen the "bad taste in the month" complained of by the patients.

Solid foods as a rule will not pass through the obstructed area and, for this reason, the diet is restricted to liquids and semi-solid Small feedings are given frequently and the fluid and caloric intake is carefully checked each day. The main article of diet is milk and this should always be boiled, Coddled eggs, soups, apple sauce, fruit juices, and cooked cereal with eream and sugar make up the bulk of the diet. Lactose, which in general is well tolerated, is added whenever possible.

Due to the patient's age, the low residue diet, and the diminished fluid intake, constipation is usually troublesome. Care must be taken to avoid fecal impaction which may oceur in severe cases. One such complication occurred in this series. We have given a combination of two drains each of milk of magnesia and mineral oil three times a day with satisfactory results. Colonic irrigations may be necessary.

Dehydration and emaciation are always present to some degree. When dehydration is severe fluids are forced by all routes. Hypodermoclyses of normal saline, intravenous saline, and rectal taps are given in an effort to restore the water balance. large amounts of fluid these dehydrated patients absorb is quite remarkable. patient is given two hypodermoelyses of normal saline the day before operation and a third hypodermoclysis on the morning of the operation.

Most of these patients show a diminished hemoglobin due partly to chronic low grade sepsis, partly to the constant oozing of blood from the esophageal lesion, and partly to an unbalanced diet. Transfusions of whole blood greatly improve the patient's preoperative

*I am indebted to Miss Mabel Supplee and Miss Frances Heakle of the Detary Department of Lith Avenue Hospital for their avastance in preparing the dietary data for this paper. Market & rate

condition. Sunlight and ultra violet rays are of some value.

The night before operation the patient is carefully shaved from the nipple line to the

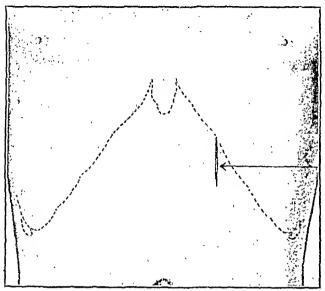


Fig. I.

Modified Janeway Gastrostomy showing the location of the incision. It is situated along the outer third of the upper left rectus muscle and extends downward from the costal margin a distance of six centimeters.

pubes. The skin is cleansed with ether followed by 3½% iodine and 70% alcohol and a sterile dressing is then applied and remains on until removed in the operating room. Nothing is allowed by mouth for twelve hours before operation. Morphine sulphate grains ¼ and atropine sulphate grains 1/150 is given hypodermically one-half hour before operation.

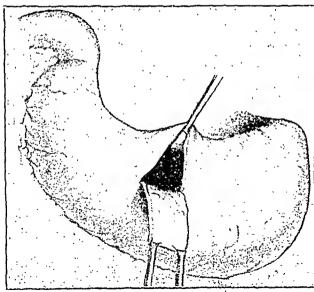


Fig. II.

Showing the stomach after the flap has been incised.

The above photographs were used in the illustration of an article entitled "The Original Janeway Gastrostomy."

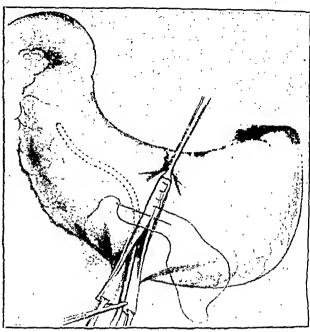


Fig. III.

A number twelve French eatheter has been inserted into the stomach and closure of the nucessa by a running interlocked suture of No. 00 plain eatgut has been started. The serosa is closed by a running interlocked Lembert suture of the same material.

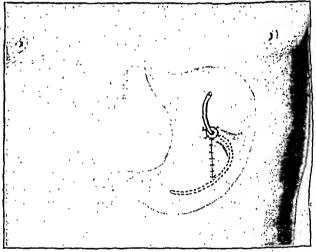


Fig. IV.

Showing the relation of the structures at the completion of the operation.

Operative Technique

The operative procedure carried out in the seventeen cases forming the basis for this report has been previously reported in detail. The method is essentially the same as that described by H. H. Janeway in the Journal of the American Medical Association in 1913. There are, however, several minor modifications as shown in the illustrations.

Combined infiltration and intercostal nerve block anaesthesia with 1% novocaine is used in all cases. General anaesthesia is not neces-

sary and the poor general condition of the patient makes it undesirable. The various steps in the operative procedure appear in figures 1-2-3-4 Care is taken to guard the structures of the abdominal wound against contamination with the stomach contents, as this material is teeming with saproplutes and pus forming organisms from the ulcerated esophageal lesion.

The operative procedure usually takes about forty-five minutes following which the patient is returned to the ward and the head of the bed elevated so that he sits practically upright I feeding of three ounces of water is administered through the gastrostomy tube immediately to clear the tube of blood clots.

Post-Operative Care

Chart No I outlines the daily treatment in the uncomplicated gastrostomy cases for the first twelve days post-operative. At the end of this time the patient is taught to insert his own feeding tube, make up his own feed-

Day of Operation

Hypodermoclysis of normal saline Water, ounces 3, through gastrostomy tube when patient returns to the ward

3 Peptonized milk, ounces 3, q 3 h starting three hours after the patient returns from the operating room 4 Rectal taps ounces 16, q 4 h Discontinue or reduce

if expelled 5 Chart calories and fluid intake and output dails

First day post-operative

1 Peotonized milk, ounces 4, q 3 h
2 Reetal tap, ounces 8, q 4 h
3 Drain to be removed from the lower angle of the wound

Second day post-operation

Peptonized milk, ounces 5, q 3 h

Colonie irrigation

Discontinue rectal taps

Allow patient out of hed in chair if temperature is

Third day post-operati e

Peptonized milk, ounces 6, q 3 li

Fourth doy post-operative

Peptonized milk, ounces 7, q 3 h Omit all subsequent 3 A M feedings

Fifth day post-operative

Peptonized milk, ounces 8, q 3 h

Sirth day post-operative

Peptonized milk, ounces 9, q 3 h Add one tablespoon of lactose to each feeding

patient seems able to understand and follow

In this series of seventeen cases there was one post-operative death, a mortality of 5.9% The patient who died after operation had carcinoma of the esophagus and pneumonia with a fever of 103 4 degrees Fahrenheit when seen prior to hospitalization He was unable to take any fluids by mouth due to a complete esophageal obstruction His pneumonia was due, no doubt, to aspiration of fluid which had spilled over from the pyriform sumses into his larynx. Glucose administered intravenously, saline hypodermoclyses, and rectal taps brought about a marked improvement and his On x-ray temperature returned to normal the pulmonary condition seemed less menacing, and, as the patient was most anxious to live as long as possible, we performed a gastrostomy to simplify the feeding problem. His immediate post-operative reaction was satisfactory and the wound healed by primary The sutures were removed on the

Seventh day post-operative

Peptonized milk, ounces 10, q 3 h plus the lactose and add one egg three times a day

Remove sutures

Eighth day post-operative

1 Peptonized milk, ounces 11, q 3 h plus the lactose and eggs and add one teaspoon of butter to each feeding

Ninth day post-operative

I Peptonized milk, ounces 12, q 3 h plus the lactose, eggs, and butter.

Patient to have two ounces tomato juice added to 9 AM feeding

Remove gistrostomy tube and replace only for feedings. Instruct patient how to insert tube

Tenth day post operative

Peptonized milk, ounces 13 q 3 h plus the lactose, eggs, and butter Add four ounces tomato juice to each 9 AM

feeding

Eleventh day post-operative

Peptonized milk, ounces 13, q 3 h, plus lactose, eggs, butter, tomato juice, and a teaspoonful of finely powdered cracker dust to each feeding

Twelfth day post operative

Peptonized milk, ounces 16, q 5 h, plus lactose, eggs, tomato juice, and cracker dust
 Regular hours of feeding 10 be 600 AM, 1000 AM; 200 PM, 600 PM, 1000 PM

Chart No. 1—Post-operative Routine

ings, and feed himself When he is ready for discharge he is given a mimeographed diet and instruction sheet (chart No II) which provides him with a balanced daily diet of 3259 calories The chart is made up as simply as possible and even the unintelligent clinic

seventh day and he was up and about the room when, on the ninth day, his temperature suddenly rose to 103 degrees Fahrenheit and he developed chemical and radiographic signs of pneumonia The patient died on the eleventh post-operative day. His abdomen remained soft throughout, and fluids were given through the gastrostomy tube until the Permission for an autopsy was not obtained.

All of the other cases showed marked temporary improvement. The dysphagia decreased in all the carcinoma cases and disappeared entirely in several. One patient found he could eat normally and refused to return to the hospital for observation. One evening four and one-half months after operation while eating a heavy meal of corned beef and cabbage he developed an acute obstruction and died rapidly of aspiration pneumonia and septicemia.

Three patients in this series were in the early stages of their disease as evidenced by their good general condition. Exploratory mediastinotomies were performed on these patients; two of these died post-operatively and one died shortly after leaving the hospital. These were apparently the three most favorable cases in this series and following gastrostomy under average conditions they would have lived for a longer period of time than any of the others. Life expectancy in these cases was shortened by the second operation. One patient had a gastrostomy performed because of mediastinitis caused by a foreign body perforating the upper esophagus posteriorly. Her

Hour of Feeding	Milk	Milk Sugar	Butter (Melted)	Eggs (Raw)
6 A.M	2½ cups or 17 ounces	3 scant tablespoonfuls	1 teaspoonful	1
8 A.M	(8 ounces	tomato juice)		
10 A.M	17 ounces	3 scant tablespoonfuls	1½ teaspoonfuls	2
2 P.M	17 ounces	3 scant tablespoonfuls	1½ teaspoonfuls	1
6 P.M	17 ounces	3 scant tablespoonfuls	1½ teaspoonfuls	1
10 P.M	17 ounces	3 scant tablespoonfuls	1½ teaspoonfuls	2

At 10 A.M. 1 dram (1 teaspoonful) iron and ammonium citrate.

- Insert tube only for feedings.
- 2. Make up each feeding fresh. Heat slightly before
- 3. Take feeding slowly—allow at least 15 minutes for each feeding.
- Rest 15 minutes after each feeding. Clean feeding tube with water after each feeding do not boil.
- 6. Obtain from the Drug Store:
 - 1. One #12 French catheter.
 - 2. Asepto syringe with tip to fit catheter.
 - 3. Large can of lactose (milk sugar).

CHART No. II: Discharge diet and instructions given the patient when he leaves the hospital.

Several patients were relieved of symptoms and returned to their normal occupations. Sixteen wounds healed by primary union and only one became infected and had to be opened down to the anterior layer of fascia. did not, however, delay convalescence appreciably. Occasionally, in the late stages, when the carcinoma patient is coughing constantly and regurgitates frequently and his musculature lacks tone, we encounter some slight leakage about the stoma. The surrounding skin may be protected from the action of gastric juices by the frequent application of a dusting powder of copper as recommended by Cunningham (4). If the goose neck tube is of the diameter recommended and a No. 12 French catheter has been used then leakage even in the late stages is very unusual.

4. Iron and Ammonium Citrate, ounces 8, and take 1 teaspoonful in 10 A.M. feeding.

5. One 8-ounce measuring cup.

7. If constipated, take one ounce of castor oil in the last feeding at night.

Take nothing by mouth except water. This may be taken in small amounts if it does not cause vomiting.

- 9. If stomach distress and nausea follow the feedings, the milk content should be reduced to 12 ounces for 2 or 3 feedings.
- 10. Any unusual symptoms or difficulties should be reported to the hospital.

mediastinum was later incised and drained and except for a small traction diverticulum she is now well and apparently cured. She is taking a regular diet by mouth and her gastrostomy stoma Another patient has been allowed to close. had a gastrostomy performed because of esophageal obstruction resulting from radia-He has tion for carcinoma of the larynx. gained 45 pounds in weight since operation and is apparently free of disease, twelve Two carcinoma of months after operation. the esophagus patients are still living; one seven months and the other five months postoperative. For the above reasons it is impossible to draw any conclusions from the present series of cases as to the length of life to be expected in carcinoma of the esophagus following gastrostomy.

In the carcinoma of the esophagus cases which have died, excluding the one post-operative death, the three cases in which the thoracic esophagectomy was attempted, and the two cases which are living, the average length of life post-operative was 455 months. In a large series of cases (3) the average length of life of a patient with carcinoma of the esophagus after he presents himself at the hospital is about 483 months.

again become necessary, the bridge of skin, which has been allowed to grow across the opening, may be incised and the gastrostoms stoma dilated to admit a feeding tube

Summary

1. Pre-operative and post-operative gastrostomy routines are outlined.

2 The steps in the modified Janeway gastrostomy are sketched

				١,,,		İ	Vitamins		
	Measure	Grams	Carb Grams	Prot Grams	Fat Grams	Cal	A	В	С
Milk	85 ozs	2550	127 5	76 5	102 0	1734 0	+++	++	+ Variable
Lactose	15 tb p	150	150 0		[600 0			
Butter (melted)	7 tsp	35			35 0	315 0	+++		
Eggs	7	350		49 0	42 0	574 0	+++	+to++	+ ?
Tomato juice	8 ozs	240	7 2	7		28 8	++	++	+++
Total grams		3325	284 7	125 5	179 0				
Total calories			1138 8	502	1611	3251 8			
Daily requirements in % of total calories			60%	15%	25%				
Daily amount supplied in this diet in % of total calories		`	35%	15%	49%				

	Calcium Grams	Phosphorous Grams	Iron Grams
Milk .	3 01716	2 32356	0060690
Eggs .	25830	70028	0117670
Butter	00630	00630	0000945
Tomato juice	01440	03600	
Iron and Ammonium Citrate			0510000
Total	3 29616	3 06614	0689305
Dai y requirements	68	1 32	015

CHART No III Analysis of the food intake supplied by the discharge diet shown in Chart No II

Patients are allowed out of bed on the third or fourth post-operative day and are usually discharged from the hospital with their printed sheets of instructions on the fourteenth post-operative day.

If for any reason the gastrostomy opening becomes unnecessary it may close spontaneously, thus climinating the necessity of a second operation. If at any time in the future feedings by means of the gastrostomy tube

3. The mortality is 5.9%. The post-operative course is short, there is always temporary improvement of the dysphagia, and the patient's morale is improved

4 Gain in weight is usual One patient

gained 45 pounds

5 If the gastrostomy is no longer needed for feeding purposes, it may close spontaneously or may be closed by a very simple operation

	Case	Age	Guin in Weight	Return to Work	Length of Life	Out of Bed (days)	Days in Hospital	Pathology	Remarks
1	I.B.	62	No	No	11 days	4th		Squamous Carcinoma, grado 2	Died 11th post-operative day
2	M.G.	71	$2\frac{3}{4}$ + lbs.	No	4½ months	17th	30	Squamous Carcinoma, grado 2	Acute post-operative parotitis
3	R.F.	70		Retired	3½ months	4th	15	Epidermoid Carcinoma, grado 3	• • • • • • • • • • • • • • • • • • • •
4	M.S	49	Loss 4 lbs.		2 months	6th	20	Squamous Carcinoma, grado 2	
5	E.C.	50	Loss	No	$5\frac{1}{2}$ months	4th	23	Adenocarcinoma	Superficial wound infection
6	J.M.	57	10 lhs.	Yes	10 months	3rd	14	Epidermoid Carcinoma	•
7	J.B.	59	$3\frac{3}{4} + lbs.$	Yes	5 months	4th	15	Squamous Carcinoma	
8	A.L.	53	Gain	Retired	$3\frac{3}{4}$ months	12th	21	Squamous Carcinoma	Exploratory Mediastinotomy
9	C.W.	48	Gain	No	1½ months	8th	37	Squamous Carcinoma	Exploratory Mediastinotomy
10	W.C.	53	3+ lhs.	No	$1\frac{1}{2}$ months	4th	15	No Biopsy	Exploratory Mediastinotomy
11	N.B.	61	45 lhs.	Yes	12 months	3rd	16	Squamous Carcinoma	,
12	A.K.	58	8 + lhs.	Yes	12 months	17th	78	•	SECOND OPERATION:
									Incision and Drainago of Abscess
13	S.P.	61	10 lhs.	Retired	5 months	4th	20	No Biopsy	
14	S.G.	46	17 lhs.	No	4 months	3rd	11	Epidermoid Carcinoma, grade 2	
15	C.M.	58	25 + lhs.	No	7 months	4th	14	Adenocarcinoma	
16	H.K	61	4 lbs.	No	1 + months	8th	15	Squamous Carcinoma	
17	J.G.	58	10 lhs.	No	5 months	$5 ext{th}$	12	Epidermoid Carcinoma, grado 3	
		\ <u>'</u>				<u> </u>	l	. , , , , ,	<u> </u>

CHART No. IV.—Summary of the post-operative course of the seventeen (17) gastrostomies used in this series. The diagnosis was carcinoma of the esophagus in fifteen cases; case #11 was carcinoma of the larynx, and case #12 was retropharyngeal and mediastinal abscess. Local anaesthesia was used in all the cases except one in which gas oxygen and ether anaesthesia was used. Primary healing occurred in all the incisions except that of case #4. No leakage of gastric contents occurred in any of the cases.

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UNFILTERED X-RAYS AND THE TEN MILLIGRAM FLAT RADIUM ELEMENT APPLICATOR IN DERMATOLOGY. A RESUME OF PERSONAL EXPERIENCE AND OPINION

By GEORGE M. MACKEE, M.D., NEW YORK, N. Y.

Read by invitation before the Section on Dermatology and Syphilology, at the Annual Meeting of the Medical Society of the State of New York, at New York City, April 4, 1933.

S a rule, in most vocations and avocations, knowledge and accomplishment advance with each generation. Certainly, this is true of the science and art of medicine of which dermatology is a part. As a result of increased knowledge, together with improved undergraduate and graduate medical instruction, greater facilities and stricter requirements, the modern dermatologist knows more about etiology and therapy than did his predecessors. He is more efficient; his ability and knowledge are much more comprehensive. Formerly he was essentially an "externist"; now he is both "externist" and "internist." He is thoroughly acquainted with the external causes of skin diseases; also with the external management of such affections; and he knows more about the constitutional causes of the dermatoses than do physicians in any other field of medicine. As Highman once said, it is the dermatologist who knows when to be an "externist" and when to be an "internist."

The foregoing paragraph is a preface for the statement that x-rays are now employed somewhat less frequently in dermatology; and it is possible that they will be used still less frequently in the future. Dermatologists whose training has not been comprehensive, are likely to use x-rays indiscriminately. On the whole, however, there is an increasing disposition on the part of dermatologists to employ x-rays only when necessary or when definitely indicated; in other words, with discriminating judgment. This trend is most noticeable among the older dermatologists and is the result of accumulated experience; also among adequately trained young dermatologists who are capable of guidance.

Twenty years ago certain dermatoses were treated with x-rays because there was no other equally efficacious remedy. Since then other methods of treatment have proved equal or superior to x-rays in these particular affections. For instance, warts of various kinds will often

respond more favorably to injections of bismuth or arsenic, or to some other agent than to x-rays. At one time, x-rays constituted the therapeutic method of election for the troublesome plantar wart. Now we know that with amounts that are safe to administer, only about seventy percent can be cured in this manner, while it is possible to cure over ninety percent with properly applied electrosurgery. X-rays are of great value for selected cases of warts and keratoses, but they are by no means always the best or the most certain method.

Radium is still considered the best therapeutic agent for cavernous angiomas of infants. However, in safe doses, it is not always successful. It is not efficacious and it is even contraindicated when the lesion has endured for a number of years. Also, because of the danger of serious injury to the eye, it may be inadvisable to apply radium to the more stubborn lesions when situated on the eyelid. For these and other reasons, excellent judgement is necessary for the selection of the best method of procedure for the particular case. Other methods are scalpel excision, plastic surgery, electrosurgery and injections. In this connection, it should be borne in mind that a cavernous angionia may spontaneously improve or disappear.

It used to be customary to treat a carbuncle with one intensive dose of filtered x-rays followed later by a free incision. In recent years bacteriophage, with and without incision, has given better results.

There was a time when nearly every patient who consulted a dermatologist in this country for the treatment eczema, received x-ray treatment regardless of the clinical characteristics of the eruption. In those days, eczema was diagnosed as such with adjectives to designate cither the location, the stage, or other restricted elinical characteristics. The eczema of that period has been divided into what, for convenience, may be called clinical or etiologic entities. Thus we have eczema seborrheicum, eczema venenatum, eczema hemostaticum, dermatitis infectiosa eczematoides. dermatophytosis, dermatophytide, neurodermatitis, etc. Very often it is possible to recognize the variety and such identification provides a clue not only to the cause, but to the most efficacious treat-There are, of course, many eruptions which possess the characteristics of eczema but which do not fit into any of the types mentioned above. In many instances the cause cannot be ascertained. In some cases the eruption may be due partly or wholly to a bacterial or fungus focus, diabetes, the ingestion of a drug, or other internal and external factors.

The point to be emphasized here is that the modern experienced dermatologist, instead of depending solely upon x-ray treatment attempts to ascertain and remove the cause, and endeavors to

allay distressing subjective symptoms and hasten resolution by means of judicious topical applications combined with general medical measures. This is done not only because it is more scientific, but because often indeed recovery is more rapid. Assume, for example, a case of eczema venenatum due to primrose. X-ray treatment will be of little if any benefit if the cause is not detected and removed. When the cause is removed, the eruption will usually disappear as rapidly without as with x-ray treatment. Another simple example is eczema hemostaticum caused by varicose veins. In most instances, proper support for the circulation and proper topical remedies will do more than ean be accomplished with x-rays alone. Much more interesting and instructive examples could be cited, but they would be too time consuming for this short paper.

At one time many of us thought that x-rays hastened involution of eczematous eruptions regardless of etiology or clinical type. Experience has caused such opinions to be modified. In general, it may be said that three or four weeks are required for a patch of eczema to disappear as a result of x-ray treatment that is safe. If it disappears in a week or two, it is probable that xrays had little if anything to do with the improvement. The same statement holds for the relief of symptoms such as itching, burning and stinging. Quicker results can often be obtained with topical remedies, general medical measures, hospitalization, controlled environment, various injections and other measures according to indications. Furthermore, eczema of various kinds is likely to continue indefinitely or recur repeatedly in spite of x-ray treatment, as long as the cause is operating, or the patient remains sufficiently

In spite of the foregoing statements, Howard Fox's remark, made about twenty years ago, that x-rays constitute the best single remedy for eczema in general, still holds. Not infrequently, it is the only therapeutic method that will afford relief in a few weeks. However, when a permanent cure is affected in about a month, it is probable that the cause has disappeared or the allergic state of the patient has become modified. Theoretically, it is conceivable that x-ray treatment alone may accomplish this in some cases, but in most instances it is probable that the allergin and the allergy have been modified spontaneously or by other methods.

A very long period of time is necessary for the accurate evaluation of a therapcutic method. It often happens that one will obtain a certain result with one series of patients and a different result with another series. Many years ago, in my own work, over a period of about seven years, every case of lichen planus was clinically cured in from three to six weeks with a-rays and so far as I know there were few if any recurrences.

Naturally, I regarded x-rays as almost a specific for this disease. During the past twelve or fifteen years, however, I have seen numerous recurrences and in a number of instances the development of new lesions has been continuous in spite of x-rays and other remedies. It is, nevertheless, a very useful remedy for this disease. Thus far, I have obtained better results by irradiating the eruption than by irradiating the spinal region. Others have obtained better results with the spinal method.

At one time, the majority of basal cell epitheliomas were treated with either x-rays or radium and the results were excellent. The results are even better today, partly because of improved technic and partly because of a changed attitude on the part of those who treat this affection. Previously, most physicians who were considered qualified to diagnose and treat basal cell epithelioma were expert with only one method. When the lesion proved stubborn, the same method was used over and over again until the disease was almost if not completely beyond control. Today, many of these physicians are equally expert with several recognized methods. Such comprehensiveness plus judgment based on experience, permits the selection of the most suitable method or combination of methods for the particular case. This has resulted in better statistics. The recognized methods are x-rays, radium, scalpel excision, electrosurgery and plastic surgery. cause of frequent diagnostic errors, even by experts, it is advisable, whenever there is the slightest doubt as to the nature of the lesion, to examine a piece of the tumor under the microscope. When dealing with squamous cell epithelioma, basal-squamous cell tumors and mealnoma, I prefer not to depend on x-rays or radium alone, except in selected cases.

The status of x-ray therapy in psoriasis remains unchanged. It is useful only for eruptions that disappear as a result of three or four fractional treatments (approximately 90 "r") administered once weekly, and in which the remission is complete and of very long duration.

My opinion relative to the management of acne vulgaris has not changed over a period of many years. It is important that every patient receive adequate general medical attention. My statistics show that x-rays will permanently cure eighty-seven percent of unselected cases in four months or less without injury to the skin. Without x-rays, the percentage of cures drops below sixty.

Time does not permit further discussion of individual diseases. It is necessary to generalize. About twenty-five years ago Pusey, one of the pioneers of cutaneous roentgentherapy remarked: "It is hardly too much to say that roentgentherapy is the most widely useful addition to the treatment of skin diseases that has been made." Pusey's statement may be repeated today. In

spite of new, successful treatments for some dermatoses and the more discriminating use of xrays, and excluding syphilis from the discussion, the agent is still the most valuable single remedy in dermatology. Over eighty skin diseases are more or less amenable to such treatment. In many of these affections the radiation is used as an adjuvant, or to obtain remissions when other methods have failed. The remissions may be temporary, of long duration or even permanent. Many of the inflammatory dermatoses fall within this category—eczema, psoriasis, lichen planus, etc. It is the best remedy for diseases such as ringworm and favus of the scalp, mycosis fungoides, granuloma annulare, localized hyperidrosis, synovial cyst, keloid, localized essential pruritus, acne vulgaris and a few other conditions. X-rays will cure many diseases and conditions such as basal cell epithelioma, granuloma pyogenicum, warts, keratoses, etc., in which they are indicated only in selected cases because there are other methods that may give as good or even better results. Radium is especially valuable for cavernous angioma and the so-called strawberry mark. In my opinion, it is contraindicated in cases of portwine mark, lymphangioma and other

Over the years there has been a constant improvement in x-ray technic. Apparatus, tubes and electrical instruments of precision have been made more efficient, durable and accurate. However, the most important technical contributions of the past decade are the establishment of an international intensity standard known as the roentgen unit ("r") and ionization instruments calibrated in roentgens suitable for practical use. The number of roentgens with the effective wave length constitute the dose. It is necessary, of course, to record other factors, particularly the distance. The arbitrary unit used by American dermatologists and known as the skin unit, erythema dose and epilating dose, has not yet been translated into a definite number of roentgens. We have been experimenting for several years with intensities ranging from 250 to 500 roent-The number of roentgens for the unfiltered skin unit will most likely be in the neighborhood of 350 with 100 kilovolts (Victorian dosimeter; measured in air).

With the exception of increased accuracy, there has been very little change in the technic used by American dermatologists, a technic that has stood the test of time. Well trained dermatologists who have been guided by the rules of this technic until they have acquired experience sufficient for sound judgment, have had no bad results. These rules have been published and are available, therefore they need not be enumerated here. X-ray injuries of various kinds are still too common. Their frequency is out of proportion to the accuracy of modern technic. Com-

paratively few such injuries are caused by ethical dermatologists, and when they do occur they are caused much more often by poor judgment than by inaccurate teclmic.

The Chairman has requested that I discuss the half strength glazed flat radium element applicator. This applicator is about the size of a postage stamp and contains approximately 10 mg. radium element. Years ago it was considered an indispensable part of the dermatological equipment. It is less popular today. The reasons for this lessened popularity are numerous. In the first place, it can not be used for the treatment of the large number of extensive eruptions and large lesions that are handled so successfully with x-rays. Another reason is that many dermatologists failed to follow the evolution of radium therapy, especially in its relation to cancer. Some of them did and a few still do attempt the treatment of frank cutaneous cancer with this entirely inadequate amount of radium. The modern use of radium or radon in cutaneous cancer therapy requires an intense source of heavily filtered radiation placed at a distance of from one to several centimeters from the surface. The applicator must be constructed and applied in a manner that will provide approximately equal intensity over a surface of known size regardless of whether or not such surface is flat, irregular, convex or concave. The dose will range from a few hundred to many thousand milligram or millicurie hours, depending on the clinical and histologic characteristics of the lesion, the amount of filtration, the distance, etc. In many instances, it is advisable to implant radon seeds or transfix the lesion with radium needles instead of applying the radiation from a distance.

To a considerable extent, the requirements for the radium treatment of cancer pertain to the treatment of certain benign cutaneous conditions such as keloids, cavernous angiomas, etc. If time would permit, I would discuss in detail the comparative value of x-ray and radium therapy in dermatology and elaborate on the indications and contraindications. It will have to suffice to say that the dermatologist should be experienced or trained in the modern use of radium and radon as applied to his speciality. He may then purchase applicators of various kinds—plaques, tubes and needles; or he may rent the more flexible radon.

The particular applicator under discussion has a definite value in dermatology but because of its small radium content and its fixed size and shape, its field of usefulness is exceedingly restricted. Screened with 0.1 mm. aluminum it gives excellent results in small very superficial lesions that are amenable to beta ray therapy—selected keratoses, very superficial basal cell epitheliomas, small superficial keloids, strawberry marks and selected cavernous angiomas. In contact with the skin the time for the crythenia dose is about twenty minutes. Applications vary in time from ten or fifteen minutes to one or two hours, depending upon requirements and conditions too numerous to be even mentioned here.

The applicator may be used for gamma ray treatment by screening with 1/2 or 1 mm. brass and 1 mm, aluminum. When so screened, the time factor for an effective therapcutic dose is burdensome. Even when placed in contact with the skin, the time element will range from an hour or two to fifteen or more hours. When placed at a distance of a centimeter or more from the surface, as is necessary for good results in the case of thick or deep-seated lesions, the time required for a fully effective dose is practically prohibitive. However, in spite of these handicaps, it is possible to obtain satisfactory results in a number of selected cutaneous conditionswarts, corns, keratoses, leucoplakia, keloids, strawberry marks, cavernous angioma, granuloma annulare, basal cell epithelioma, and a few other lesions.

PERSONAL EXPERIENCES IN THE PROPHYLAXIS AND TREATMENT OF RING-WORM OF THE HANDS AND FEET

By EARL D. OSBORNE, M.D., EDWIN D. PUTMAN, M.D., AND RAYMOND J. RICKLOFF, M.D., BUFFALO, N. Y.

Read before the Section on Dermatology and Syphilology at the Annual Meeting of the Medical Society of the State of New York, New York City, April 4, 1933.

N August, 1931, Osborne and Hitchcock¹ reported on the use of sodium hypochlorite in the prophylaxis of ringworm of the feet. It was shown by fungicidal tests that .5% sodium hypochlorite was effective in killing five of the commoner strains of ringworm organisms with an exposure of fifteen seconds This experimental in a watery suspension. work has since been confirmed by Legge, Bonar and Templeton.2 We recommended the use of a 1% solution of sodium hypochlorite to allow for dilution and that the individuals walk through rubber pans filled with this solution or through wells built in the floors for this purpose. In the Buffalo High Schools, pupils were required to walk through the rubber pans or wells on the way to the shower bath after removing the clothing and again just prior to dressing. We are aware that this direction is well adapted to public school pupils with strict supervision but difficult of application to golf clubs and industry.

Reasons for Failure of Prophylaxis

We realize that any method of prophylaxis of ringworm of the feet is doomed to failure, or at least partial success, without the whole-hearted support of the public health authorities, school authorities, school children, and adults engaged in athletics or in industry. We might summarize the reasons for failure as follows:

1. Lack of interest on the part of public health authorities in the prophylaxis of this increasingly wide spread disease. In these days of curtailed budgets, health authorities are loath to assume any new procedures entailing any expenditure of money. In our opinion, no public bath or gymnasium entailing the common use of runways, shower baths, or dressing rooms should be allowed to operate without adequate provision for prophylaxis of ringworm of the feet.

2. Lack of interest and supervision by those in charge of the prophylactic methods as outlined. This especially is true in golf clubs where refilling and cleaning of the pans is delegated to some locker boy who takes the thing as a joke and frequently allows the pans to go untouched for weeks at a time.

3. Improper placement of the pans. Frequently individuals will take care to walk

through the pans and then after drying the feet thoroughly will walk considerable dis-

tances in their bare feet on the locker room floors. A few well worded and well placed signs should eliminate this factor.

We have received many inquiries as to the cost of this method of prophylaxis. In our experience, it should cost approximately seventeen cents per refill of the pans. In using a 1% solution of sodium hypochlorite the pans should be refilled every two days. Certainly this expense is no bar to the extended use of this method of prophylaxis.

Prophylaxis of ringworm of the feet has now been in use in the Buffalo High Schools for a period of almost three years with very gratifying results. Where complaints were common from parents prior to the use of prophylaxis, these have practically disappeared during the past three years. Another surprising result has been a marked falling off of recurrences among known cases of ringworm of the feet. In private practice and in our clinics we have not seen a single new case of ringworm of the feet in high school students of the city of Buffalo and very few recurrences although there have been some. The director of physical education has reported that the incidence of ringworm among Buffalo High School students has dropped over 50% during the past three years. Certainly the experience in the Buffalo High Schools warrants the widespread adoption of this method of prophylaxis of ringworm of the feet.

We have been interested in checking up on the incidence of ringworm of the feet in the male freshman students at the University of Chart I shows that, in the fall of Buffalo. 1931, after prophylaxis had been used but one year in the Buffalo High Schools, that 55.7% of the students entering from Buffalo High Schools showed ringworm of the feet, whereas 65% of those from outside schools showed ringworm of the feet. In October, 1932, these percentages had fallen to 46.4% and 50% respectively. Most of the students entering the University of Buffalo from outside the city came from small towns and cities from the western part of New York State. It was impossible for us to determine how many of these schools had adopted the method of prophylaxis of ringworm of the feet during the past two years. At any rate, there was a drop of almost 12% in the incidence of ringworm of the feet in the two groups combined. This is certainly in the right direction but it will

CHART I.

Incidence of Ringworm of the Feet in Male Freshmen Students at the University of Buffalo

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be necessary to follow this study for at least three or four more years in order to determine definitely the value of prophylaxis of ringworm of the feet. The incidence cannot be reduced beyond a certain point because many of the students engage in extra-curricular athletics in institutions where prophylaxis is not used and a number of individuals acquire the infection at home. In view of the alarming increase in the incidence of ringworm of the feet and, the now well known tendency to produce systemic effects, a serious attempt in the prophylaxis of ringworm of the feet is justified by all health authorities, public school officials, and laymen interested in the development of various types of athletics.

Objectives in the Practical Treatment of Ringwarm of the Hands and Feet

Before considering the various methods and means of treating ringworm of the hands and feet, let us consider some of the important facts brought out during the past few years in regard to this type of infection. It is our impression that a more careful attention to these facts would reduce the number of poor results and, in fact, prevent some of the disastrous effects resulting from the improper treatment of mycotic infection. Some of the factors of

importance are the following:

1. The vast majority of mycotic infections begin on the feet, usually between and under the fourth and fifth toes. If the soil and environment are right the infection continues to spread to the other toes, soles, and sides of the feet. In the course of ten to twenty days, fungi and their toxins are absorbed into the lymphatics and then into the general system sufficient to produce an altered tissue reaction, called allergy, in the skin and mucous membranes of the body as shown by the positive trichophytin test and by the clinical observation of localized or generalized bilateral, symmetrical, dermatophytids. We subscribe firmly to the belief that a very high percentage of the bilateral and symmetrical vesicular erruptions of the hands occuring in the course of a chronic or acute ringworm of the feet are dermatophytids. On the other hand, we do believe that many cases of ringworm are primary on the hands, probably constituting 20% of the total. These eases are usually manifested by a uni-lateral, asymmetrical, peripherally ex-

tending, vesiculo-pustular eruption which may later produce all of the systemic effects noted in ringworm of the feet. We cannot ascribe to the opinion of Wise and Sulzberger*, that all feet harbor mycotic organisms from infancy which become pathogenic under right conditions of soil and environment.

2. In many instances it is absolutely impossible to differentiate between an actual derdermatophytid matomyeosis or hands and dermatitis venenata from almost A cutaneous test with cause. very limited value eliophytin is of in these eases although we do it routinely. In the presence of either a chronic or an active focus of the toes, a positive trichophytin test in an industrial worker does not prove that the eruption on the hands is myeotic in nature. Careful observation and patch tests are necessary in these eases and, from the standpoint of treatment, active treatment for ringworm infeetion frequently does more harm than good and confuses the issue.

3. From the standpoint of the practical handling of these cases, either in private practice or in a large clinic, we place clinical experience and observation ahead of laboratory procedure. We believe it is a mistake to overemphasize the value of smears and cultures to the general practitioner or the general hospital laboratories since all dermatologists and mycologists admit that mycology is far from an exact science. More experience than the average practitioner or laboratory worker possesses, is necessary for mycologic work and its proper interpretation.

4. In considering the practical treatment of a case of ringworm of the feet and hands, the following questions should be considered by

the physician:

A. What areas of the eruption are due to the actual invasion of the fungus organisms and what areas are due to allergic manifestations?

B. In the areas of active fungus infection, what are the local conditions of heat and moisture?

C. Does the patient have a general systemic condition favoring increased perspiration?

D. Is there anything in the patient's general condition increasing the excretion of sugar or protein metabolic products through the sweat?

E. Does the patient wear wool hose?
F. Does the patient subject his feet to prolonged maceration from sweat without adequate hygienic treatment?

G. What precautions does the patient take

to prevent recurrence or re-infection?

H. What previous treatment has been used both in the way of local applications and radiation therapy?

Careful considerations of these questions is necessary to successful treatment of any case of ringworm of the feet and hands. In the case of a widespread dermatophytid, soothing remedies only should be used on the dermatophytid and the focal areas on the feet or hands subjected to parasiticidal therapy. In our experience, prolonged heat and moisture from any cause are the two most potent factors producing flare-ups and intractable ringworm of the feet and hands. Hyperidrosis, from any cause, favors the growth of fungi. It is well to remember that the hydrogen ion concentration of normal sweat is very close to the optimum for the growth of mycotic organisms. Draper showed, several years ago, that a shifting of the hydrogen ion concentration slightly towards the alkaline side with an increase in the phosphates and a lowering of the oxygen tension favors the development of mycelial organisms as compared to the yeast-like forms. This is a very rational explanation of why we find the mycelial forms more frequently between the toes and in the groin whereas the yeast-like organisms are much more frequently found on the glaberous skin and seldom the mycelial forms. The increased excretion of sugar or protein metabolic products in disease certainly favors the growth of mycotic or-This question should always be borne in mind and a careful examination of resistant cases should be made for evidences of diabetes or kidney disease. The question of wool hose is important. It has recently been shown that mycotic organisms grow readily in wool, very slightly in silk, and not at all in cotton. Furthermore, wool hose encourages excessive perspiration. A history of previous treatment is always important. Often we find patients who have been subjected to strenuous parasiticidal therapy with the production of a secondary dermatitis from irritation. Many times these patients will clear up with the continued application of a soothing ointment and dusting powder. Excessive irritation of a chronic or acute focus may precipitate an extensive generalized dermatophytid requiring weeks to subside. With the widespread use of x-ray therapy in these cases, especially in the form of prolonged fractional dosage, there is always a danger of over-treatment in addition to producing an x-ray resistant infection.

5. What do we hope to accomplish by treatment? We believe the opinion first expressed by Saboraud, and since by many dermatologists, is correct namely; that very few cases of ringworm of the toes are ever actually cured. The studies of Jamieson and McCrea⁵ bear out the widespread impression that fungus organisms remain dormant in the epidermis only to spring into activity under the proper con-

ditions of heat, moisture and soil. The vast number of remedies recommended and the many so-called cures claimed for non-fungicidal drugs, such as Absorbine Jr., indicates quite clearly that ringworm infection of the feet and hands tends to get well of its own accord if given half a chance and local conditions of heat and moisture and soil are made unfavorable for the growth of fungi. We have seen many chronic over-treated cases of ringworm clear up following careful hygiene of the feet and the application of a bland ointment and dusting powder. In other words, any remedy works in a large percentage of cases if the parts are cleaned and dried thoroughly twice a day and the environment is made unfavorable for the rapid growth of the fungi.

Local Treatment

Acute Vesiculo-Pustular Stage: In this stage we favor the use of wet dressings for twelve to fourteen hours during the day, of either metaphen, 1-2500 to 1-5000 dilution, or liquor aluminum subacetate, 1-16 dilution. For the remaining eight to ten hours we prefer a plain boric acid ointment, a 2% sulphur precipitate ointment, or a soothing astringent dusting powder containing 1% menthol, 5% chloratone, 5-10% tannic acid and 30% boric acid. Rest in bed with elevation of the parts is usually of material assistance. In some stubborn relapsing cases we have used crude coal tar ointment with marked benefit.

It is in the acute, vesiculo-pustular cases that we believe x-ray is of the greatest value. For the past three years, we have discarded the repeated fractional dose method in favor of one sub-erythema treatment of the parts involved with active mycotic infection. The results are immediate and nearly always satisfactory within two weeks. We have not seen as many generalized dermatophytids as we did following the fractional dose method which is a point of great importance in private practice.

Following the cessation of the acute vesiculo-pustular stage we usually prescribe gradually increasing percentages of salicylic acid and sulphur precipitate to be applied two or three times a week combined with the use, during the day, of a dusting powder containing 30% tannic acid and 30% boric acid. The feet, of course, should be carefully washed and dried each day.

Sub-Acute and Chronic Cases: We believe that Whitfield's ointment is still the standby in these cases and we decry its popularization by pharmaceutical houses under various trade names. We usually combine Whitfield's ointment with sulphur precipitate, from 3-10%,

and direct the use of the ointment two or three nights a week with the use of tannie acidboric acid dusting powder during the day. We realize that there are countless other methods of treating chronic, relapsing cases of ringworm of the hands and feet and we have tried most of them at one time or another. principle methods of local treatment which have been of value in addition to those mentioned are: wet dressings of metaphen and liquor aluminum subacetate, crude coal tar with the addition of 3-5% sulphur precipitate, chrysarobin ointment, from 3-20%; iodine, either in the form of iocamfen or with salicylic acid and thymol in alcohol, Castellani's carbolfuclisin paint, and finally, plain 5-10% ammoniated mercury. X-ray therapy in sub-acute or chronic cases is frequently of marked assistance but should not be relied on for cure. Many times it is over done because of the temporary benefits which the patients experience. Too often the condition is no better after three or four months of x-ray therapy than before it was instituted. In our opinion, if the disease does not respond to four or five fractional doses of x-ray properly spaced, it might better be discontinued. To place sole reliance for cure on x-ray is a gross error.

Use af Trichophytin as a Curative Agent: Since 1928, we have been using trichophytin, both the commercial preparation and that which we have produced ourselves in our own laboratories. During the first three years we very carefully selected patients with proved cases of ringworm infection of the hands and feet, secured positive cultures and produced autogenous trichophytins and monilia extracts after the method of Scholtz. We were ready to publish a preliminary report in 1931, when there appeared the first report by Van Dykes and others on their experiences with trichophyton extract in mycotic infections of the skin. They were enthusiastic regarding the use of trichophytin in the treatment of ringworm infections. Because our results did not agree with theirs we resolved to continue our work, choose our cases carefully, and try to evaluate our results as carcfully as possible. To date we have thoroughly investigated and treated over one hundred chronic relapsing cases of ringworm of the hands and feet with trichophytin. Our impressions are:

1. Theoretically we might expect improvement in dermatophytids from desensitization as Sulzberger and Wise have pointed out. Our results have been sporadic and we helieve no

better than could have been expected without trichophytin.

2. In chronic relapsing mycoses of the hands and feet our results have been very disappointing. Apparently good results, in most instances, proved later to be temporary. We should never forget the natural tendency to improve and relapse, depending upon the environment, and especially under mild antiseptic applications. We can find no theoretical reason for expecting that desensitization would effect cure of a primary focus.

3. Local flare-ups of foci and widespread dermatophytids, asthma, and urticaria have been observed following trichophytin and in one instance a severe vesiculo-pustular ex-

foliative dermatitis.

4. We have treated four patients with asthma associated with mycotic dermatitis in whom positive smears and cultures were secured. There were no permanent results.

Summary

1. We believe that 1% sodium hypochlorite, properly used, is a cheap, harmless, and effective prophylactic against ringworm of the feet and deserves wide application. Three years' use in the Buffalo High Schools has effected a marked drop in the incidence of ringworm in the schools.

Effective treatment of ringworm of the hands and feet necessitates an understanding,

on the part of the doctor, of:

(a) allergy and the development of dermatophytids.

(b) clinical differentiation from dermatitis

venenata.

(c) value of laboratory procedures.

(d) local conditions of soil, heat, and moisture of the parts involved and an appreciation of any systemic disturbance influencing the sweat secretion.

(e) previous treatment.

3. Since we cannot permanently cure most cases of ringworm of the hands and feet with our present methods, our objective should be to render the environment unfavorable for the

growth of the organisms.

4. Methods of local treatment that have given us our best results are discussed. We favor one suberythema dose of x-ray in acute cases of ringworm of the feet and hands rather than the repeated fractional dose method. If four or five fractional doses of x-ray do not produce a result in chronic cases it should be discontinued.

5. Our results from the use of trichophytin

have been disappointing.

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OBSERVATIONS ON THE EFFECT OF IODINE ADMINISTRATION IN CASES OF HYPERTHYROIDISM

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N 1923 H. S. Plummer¹ drew attention to the effect of compound solution of iodine (Lugol's solution) on the symptoms of exophthalmic goiter and advocated its use in the preparation of cases for operation. Since then the use of iodine has become popular in the treatment of cases of thyroid toxemia, not only in the preparation for operation, but also in cases in which operation is not intended. The usefulness of iodine in the preparation of cases for operation as illustrated by the reduction of operative mortality has been thoroughly proved. Many workers experienced in thyroid disease agree that while iodine is useful in the preparation of cases for operation, its prolonged use in the medical treatment of the toxic case accomplishes no permanent benefit and is objectionable because it delays the institution of surgical treatment which seems at present to offer the best expectation of restitution of health. Some however, qualify their agreement with this attitude. Thompson² and others at the Massachusetts General Hospital administered iodine for long periods to 24 cases of exophthalmic goiter. They classified 14 of these cases as mild, and 10 as severe. In the ten severe cases the result was satisfactory in only one, there was no permanent benefit in four, and five of the ten cases became worse. In the fourteen cases the results were satisfactory in 9, "fairly satisfactory" in 3, and unsatisfactory in 2. They concluded that-1, patients with moderately severe or severe exophthalmic goiter rarely show more than temporary improvement during prolonged iodine administration and frequently become worse than before iodine was started-2, if the disease is mild, patients often respond satisfactorily and in some cases the disease terminates—3, the proportion of unsatisfactory results in Boston appears to be so small that prolonged iodine administration is not contraindicated if strictly confined to mild cases kept constantly under observation, and-4, the response of patients with exophthalmic goiter to prolonged

iodine medication appears to be determined more by what is happening to the disease spontaneously than by the iodine itself and in cases showing satisfactory results iodine may have merely held the disease in check while

pursuing its natural course.

There is undoubtedly a wide variation in the intensity and duration of thyroid toxemias in different individuals. As far as we know there is no way to prophesy in the individual case whether the patient will or will not run a mild course. Cases admitted to our own thyroid clinic are usually of the severe or moderately severe type and many of them tell the same story of having taken iodine for varying periods until admission with improvement at first and then a return of the symptoms to their original intensity. At this time these patients are found to be in an iodine fast or refractory phase and no further remission occurs with its continued administration. It is naturally a source of irritation to the thyroidsurgeon that many cases are brought to him after prolonged medical treatment with iodine. He recognizes that the patient, if operated upon at this time, faces a much greater hazzard than in the stage of iodine remission. In these patients who are iodine refractory it is necessary, as pointed out by Coller's to interrupt the iodine administration for a period when it is usually possible to again obtain a remission. This delay in bringing him to a safe state for operation is often annoying and sometimes critical as far as the patient is concerned. delay prolongs his illness and he is exposed to the danger of a thyroid crisis when the most effective agent for its control has been rendered unavailable.

There seems to be a good deal of misconception as to the use of iodine in thyrotoxic cases. At one time it was considered that it was indicated in the exophthalmic or hyperplastic but not in the toxic adenomatous or nodular goiter. In this geographical area both types seem to show the same temporary

amelioration of symptoms in response to its administration. It has often been stated that only one remission could be obtained in the given ease with iodine. That this is not true is illustrated by the cases reported below in which two remissions were obtained in quick succession. Cases are admitted to every thyroid clinic who have been kept continously on iodine by their physicians despite progressive increase in symptoms. It does not seem to be generally recognized that while the patients are temporarily benefited by the iodine, they soon pass into the refractory phase when no further improvement occurs unless the iodine administration is interrupted, after which time it is possible to again obtain an iodine response. This point is illustrated in the second group of cases here described.

In the first group are three cases of toxic goiter. Cases 1 and 2 were classified after operation as of the hyperplastic type, and Case 3 as of the adenomatous type on microscopic examination of the excised glands. None of these cases had received iodine previous to their admission. The object of this investigation was to determine how long a remission induced by iodine would continue if the iodine was withdrawn after a definite remission had been obtained, using the metabolic rate as an

index of the progress of each case.

The second consideration was to learn whether after the first iodine remission had occurred a second remission could be obtained by again administering iodine as soon as the patients symptoms had regained approximately their original intensity.

The patients were kept in bediat rest for periods varying from four to twenty-four days without iodine to determine the influence of rest alone, and to obtain a resting basal metabolism level. Compound solution of iodine (Lugol's solution) was then administered in ten drop doses three times a day. In each case the metabolic rate nad been reduced to a

normal level in from nine to fifteen days. Upon the withdrawal of iodine in each case there occurred almost immediately an elevation of the metabolic rate, which at the end of sixteen to nineteen days had returned to its original level. Upon readministration of iodine at this point in the same dosage a second remission occurred quite similar to that obtained in the first instance. These facts are recorded in Table I.

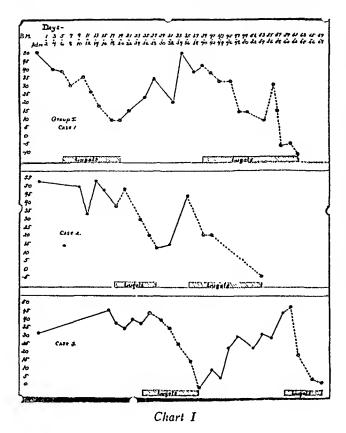
The question which naturally presents itself here is as to how many such remissions could be obtained in a given ease from the interrupted administration of iodine as occurred in these three cases. So far we have had no opportunity to find the answer to this question. Each of these cases came to surgery at the time of their second remission and reacted well to operation.

In the second group are four eases, all of the exophthalmic type each of which has received iodine continuously for months before admission. They all told the same story of improvement upon first taking iodine; and then usually after a period of three weeks, a return of their symptoms and no further improvement. In each case, on their admission to the hospital iodine was continued in doses of gtt.x. t.i.d. to determine whether a remission might be obtained. In none of these cases was improvement in symptoms obtained, nor was there a notable reduction in metabolic rate. In fact in two cases elevation of the rate occurred. At the end of this period the patients were advised to return to their homes for one month. to take no iodine, and then return to us. The period at which they returned varied for reasons beyond our control. After iodine free periods varying from 30 to 52 days the patients received iodine again in the usual dose and then an iodine remission was obtained in each instance. These facts are illustrated by Table II. Unfortunately, for purposes of exactitude, the day of the recorded metabolic test does not

TABLE I

CHANGES IN THE BASAL METABOLIC RATE IN THREE PATIENTS TO WHOM IOONE WAS GIVEN FOR THE FIRST TIME IN TWO SERIES OF ADMINISTRATIONS

	First Period Iodine Administration			Iodine Free Period			Second Period Iodine Administration		
Group 1		-В.	м-	Duration	—в.М.—			—B.M.—	
	Duration	First	Last		First	Last	Duration	First	Last
Case 1	14 days	+34	+-	i6 đays	+11	+45	9 days	+48	+ 4
Case 2	9 days	+48	+14	7 days	+14	+45	7 days	+45	+23
Case 3	15 days	+40	+10	19 days	+10	+43	17 days	+43	+16



always coincide with the first day of iodine administration. The metabolic rate was obtained on admission and again after a period of iodine therapy. In cases 1 and 4 a second metabolic estimation was not obtained after a period of

rest and before the iodine was given. It is sufficiently evident however that there was a response to iodine in the second period while the cases were refractory on the first admission.

While operation might have been undertaken in these cases on their first admission a consideration of the patient's safety would probably have necessitated stage operations. Under the circumstances it was considered better to allow them to escape from their so-called iodine fast condition and to operate upon them later when an iodine remission could be obtained. In following this course they were subjected to annoying delay and in Case 2 there was definite progression of the already existing exophthalmos during the period of delay. Eventually they all came to surgery and had uneventful post-operative courses.

The response to iodine of the individuals of these two groups are illustrated in the accompanying chart. (See Chart 1.)

The graph has been made from the metabolic rates contained in Table I.

The results of iodine administration in these cases show in the first group that the effect of its administration was quickly lost after its withdrawal but that a second remission was obtained promptly upon its readministration. In the second group the results show the cases which were in an iodine refractory phase as the result of its prolonged administration again showed response when the iodine was withdrawn for thirty days or more.

TABLE II

Changes in the Basal Metabolic Rate in Four Patients Who Had Already Been Taking Iodine.
The Table Also Shows the Favorable Response to a Second Series of Administrations
Following A Rest From Iodine

Group II	Iodine Administration	on First A	to Iodine Admission M.—	Period Without	Response to Iodine on Second Admission —B.M.—	
	Before Admission	First	Last	Iodine `	First	Last
Case 1	Four months	+47	+42	45 days	+63	+20
Case 2	Five weeks	+41	+53	52 days	+75	+33
Case 3	One month	+60	+75	34 days	+104	+33
Case 4	Five months	+74	+68	30 days	+59	+34

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FREE MEDICAL SERVICE

The practice of medicine imposes an obligation upon both the doctor and the patient: on the doctor that his service shall be of the highest quality according to the standards of scientific medicine; and on the patient to reward the doctor for his service according to the recognized standards of economics of the community.

The maintenance of a high standard of scientific medicine requires that an individual doctor shall deliver the service to an individual patient. This personal relation must be preserved whether the system be that of private practice, or the public clinic, or State medicine. The method of delivery of medical service is not that of the drug store clerk who

hands out what the patient asks for. An essential part of the scientific service which a doctor delivers is a diagnosis, and in accordance with it he delivers the service which he judges the patient to require. An accurate diagnosis is as necessary as treatment, and is usually the more difficult of the two forms of service. There is only one professional standard of medical practice, and the doctor is under obligation to deliver it, regardless of the compliance of the patient with his obligations.

Although the doctor observes a single standard of scientific practice, he unconsciously divides his patients into three classes in regard to their discharge of their economic duties:

- 1. Those who pay him in full 2. Those who pay him in part
- 3. Those who do not pay him at all.

The population of a community consists of these three groups in various proportions; but always each group exists in considerable size. When a community is prosperous and business is active, the doctor is not greatly worried over the economies of his patients, for his practice is adjusted to the three groups and his income is stable. But during the three years of business depression through which the whole world is now passing, great numbers of patients who normally are in classes one and two have fallen into the next lower group; so that now group one of the patients is abnormaly small, and group three is abnormally large, and the doctor has difficulty in making a living.

It has long been the custom of a community to provide the needy with the necessities of life, which have been interpreted to be food, clothing, and shelter. Medical relief in severe sickness was also recognized as a necessity, but the people have expected the doctors to give it to the poor free of charge, largely because of the attitude of the doctors themselves in giving the free treatments because of the advertising value of a long list of patients regardless of their economic status. The young doctor seeks patients of any kind in order to acquire a reputation; and older physicians treat the sick poor in free hospitals and clinics and profit by the prestige which comes from their positions on the staff. General hospitals can always maintain full staffs of physicians who give medical service to the poor without salary or fee. The honor of an appointment on a hospital staff has been accepted as the equivalent of money payment for their services. The system is of long duration and is difficult to change.

The inordinate growth of the free system of medical treatment has led naturally to a general recognition of its injustice. The doctor

contributes taxes and free will contributions to the hospital and dispensary just as any other citizen does; and then in addition he is expected to donate his professional service which has a value equal to that rendered by the architect of the hospital, the lawyer, and the business manager. As a citizen he must bear his own proper share of the burden of expense of providing food, shelter, and clothing to the needy poor in their homes, but in addition the burden of providing them with medical service falls on him alone.

A reformation of the system of giving medical service free has been attempted along two

lines:

1. The home treatment of the needy 2. Hospital and dispensary service.

New York State has progressed so far that its law requires welfare officials to provide medical relief on the same basis that they provide food, shelter, and clothing; but the officials are only imperfectly educated in the interpretation of that duty. The county medical society is the natural agent through which physicians can approach the welfare officers and enter in agreements with them regarding the economics of the service.

At the present time those welfare officers who are willing to pay the doctors cannot obtain funds until the people are educated to make the appropriations. The success of a few county societies in entering into satisfactory agreements is an encouraging example to

others to do likewise.

Less progress has been made in providing pay for medical service in hospitals and dispensaries. The doctors can begin with educating their own number regarding the fallacy of profit from any phase of free treatments. When the physicians of a community request a modest fee for treating the sick poor, the reply which they sometimes receive is a threat to import a doctor who is willing to do the work for little or no pay. The boards could not carry out the threat if doctors understood the economic principles underlying their ac-

The welfare law of New York State points the way to a solution of the problem of free medical service in rural communities; but the problem in the larger cities remains unsolved. One obstacle is the laws governing the actions of the hospitals in the municipal and general To change those laws and the customs of the cities will be a greater task than the reformation of the system in rural sections.

When one considers the great progress in medical economics during the last few years. the outlook is bright for the full development of a more equitable system in the near future under the leadership of the medical societies.



MEDICAL PROGRESS



The Reduction of Fracture of the Neck of the Femur with Carl P. Jones Traction Splint. -Meyer J. Kutisker and John N. Mulholland, writing in the Annals of Surgery, September, 1933, xeviii, 3, refer to the difficulties encountered in the treatment of fracture of the neck of the femur because of the age group in which it occurs. In February, 1932, Carl P. Jones published a report describing a special traction splint designed to secure accurate reduction, sufficient immobilization, and freedom from the confinement so injurious to these old people. The splint utilizes the principle of traction against the well leg. The splint is attached to plaster-of-Paris bandages encasing both legs from below the knee. It consists of a traction barrel with two side arms for attachment to the bandages. The arm which is attached to he injured leg is movable on a screw and exerts the traction. arm which is attached to the sound lcg is fixed and exerts the counter-traction. The bandages are applied with extreme care to avoid pressure. The leg is covered with a single layer of cotton wadding; four strips of one-quarter inch thickness felt are cut in strips to cover the lateral and medial surfaces of the leg, the instep and the heel, and are bound to the leg with gauze bandages. Four plaster-of-Paris bandages, six inches in width, are used to encase the leg from below the knee to the toes. Internal rotation of the thigh is then obtained to a sufficient degree to turn the great troclianter to its normal level. The splint is now applied with both legs in internal rotation, thus preventing flexion of the After the plaster has hardened traction is exerted until reduction has been effected. This is determined by the x-rays. The only anesthetic required is one-quarter of a grain of morphine. The advantages of this splint are: (1) Exact reduction is obtained with regularity and ease, and with little discomfort to the patient. (2) Patients are comfortable immediately. They may sit up or use a wheel chair a short time after reduction. Nursing care is simpler and easier, and the danger of pressure sores and pulmonary complications is reduced to a minimum. All parts of the body except the lower legs and feet are exposed and accessible for physiotherapy. (4) Expense to the patient is greatly reduced by the elimination of operating room, anesthesia, and prolonged hospitalization. The authors have treated ten cases by this method with satisfactory reduction in every instance.

Sport as a Therapeutic Measure.—In the use of sport for therapeutic purposes, says Wolfgang Kohlransch, in the Deutsche medicinische Woch-

enschrift of August 11, 1933, two distinct types of exercise are called for: (1) increase the tonus, in morbid conditions which have arisen through lack of stimulation, such as functional retardation of growth, general relaxation, etc.; and (2) those which diminish the tonus, in conditions of overexcitability, for example asthma, essential hypertonia, neuroses, and the like. For the patients in the first group, exercises with apparatus are suitable, also boxing, wrestling, and all kinds of exercise calling for muscular effort. For those in the second group, on the other hand, gymnastics that relieve tension are called for: preferably exercises with rhythm. continuous courses of therapeutic gymnastics with shaking and stretching exercises and the like. In atrophic and hypotonic infants after the ravages of wasting diseases, rickets, and other like conditions, a course of infant gymnastics skilfully carried out often restores within a few weeks the normal turgor and tonus, and causes a considerable taking on of weight. Infant gymnastics is a resistance gymnastics, exerted statically; for example, pushing the legs against the hand of the gynmast, lifting them high on his fingers, etc. Particularly satisfactory are the effects upon the os sacrum of walking with a ball between the knees, with the feet close together, or of jumping frog-fashion with feet together and knees spread wide apart, and other children's games. A relaxed position of the spine, stooping shoulders, and flat cliest are overcome by practice with the medicine ball, wrestling, rowing, swimming, gymnastics, short distance running, ball playing, etc. Contracted chest muscles must be brought to relaxation by stretching exercises. Functional circulatory weakness is advantageously treated by speeding-up gymnastics, that is, by the doing of more work in a given unit of time. The exercise is limited to 20 minutes and is preceded and followed by a complete rest of 10-20 minutes. Constitutional vascular weakness can be overcome by forceful movements of feet and legs. In the catarrh of city dwellers, the tendency to take cold frequently disappears when the patient adopts a hardier mode of life. The best type of exercise for these persons consists of activities carried out upon the turf, such as golf and the like.

Epilepsy of Childhood.—Julius Zappert states that he considers luminal as relatively the best dring for treatment of epilepsy of childhood. According to the age of the child, he begins with 0.05 to 0.075 gm. administered as a single evening dose (using somewhat less in children under 2 years of age), and gradually increasing this to

0.5 and 0.175 gm. which he divides between a morning and an evening dose. Even larger amounts are well tolerated, but the maximal dose is not always the optimal one. Such treatment may be safely continued for years, with a reduction or omission on one or more days per week during periods free from attacks, but with no complete discontinuance. Signs of overdosage vomiting, drowsiness, dizziness, exanthems. If luminal should prove entirely ineffectual it may be combined with bromides (1-2 gm. sodium bromide every 2-3 days). Too long use of bromide-luminal treatment sometimes causes such toxic symptoms as fatigue, difficulty of speech, and tremor. Zappert uses bromides without first having tried luminal only in cases where the convulsions are very frequent, beginning with relatively large doses (3-4 gm. per day of sodium bromide or Erlenmeyer's mixture), then decreasing these until the amount that seems effective is reached, after which smaller amounts of bromide can again be given with luminal. Among the newer remedies, he has not had any striking success from sodium biborate, or thyroid gland therapy. Nor can he report favorably on those few cases in which he has used the new surgical procedure of intracerebral perflation. Dietetic therapy has long played a part in the treatment of epilepsy. Hunger cures, and salt-free and ketogenous diets have all been tried, with more or less favorable results. prefers a salt-poor diet to one that is wholly saltfree, since the children exhibit less repugnance toward it. The number of epileptic children in whom an energetic treatment may be expected to produce good results is greater than the number of hopeless cases. It is to be regretted that such cases are often handicapped by the high price of medication, the need of continual oversight and the difficulty involved in securing school attendance. A large field lies open to social efforts in this direction, which should include not only the erection of homes for curable epileptics but also the establishment of special dispensaries with low-priced medicines, in which the necessary mental encouragement can also be offered to these unfortunate persons. — Münchener medizinische Wochenschrift, August 4, 1933.

Tango Treatment in Hospital and in Gentreal Practice.—According to E. Frauchiger, and pranism of the action of fango is a purely their pose, unaccompanied by any chemical or can alwayfactors such as some writers have who give nt. Experiments in the University salary or feebles have been as some writers have who give nt. Experiments in the University salary or feebles have been as some writers have writers have been as some writers have been as some writers have been as some writers have writers have been as some writers have a some writer on a hospital cks have been applied in the last equivalent of melly disproved the existence of The system is ofors. A fango pack is simply to change. to change. The inordinate of its and medical medical and a second sec

specific heat of the moist pack is composed of the heat of the dry powder and that of the water it contains. The dry fango powder consists of silicates with a greater or less content of calcium The fact that the specific heat of these minerals is much less than that of water makes them exceedingly well adapted to bind in the fango pores a maximum amount of water with high specific heat, in such a way that it can be practically utilized in the form of a poultice. It is a complete waste of effort and material to spread merely half a kilo or a kilo of fango over a large body surface, for the quantitative bulk of the mass is one of the main considerations. Even for small local packs large amounts must be used in order to maintain an even temperature. Thus, for a knee, elbow, or wrist one should employ 10 kg., and for both hips or shoulders at least 20 kg. is necessary. The technique of the application is so simple that it can easily be carried out in private homes. The essential considerations are to use a large amount of the substance at a temperature of 42°-50° C. if possible, but not such as to burn, and to cover it well on the outside with thick woolen packing. To heat a fresh mass of fango, it is necessary only to add to the mass one-half its weight of hot water, mix thoroughly in a tin pail and place the latter in a larger vessel of hot water over the fire, stirring until the fango has a temperature of about 60° C., and the consistency of potato soup. It is then spread in several layers, each of the thickness of a finger, on a piece of old woolen cloth with a backing of watertight material. The whole is laid on the bed and after the temperature is reduced to about 45° C. the affected part, previously smeared with a thin layer of the fango, is slowly placed in it. The patient should lie wrapped in a wool blanket for ½-1 hour. In most cases the packs should be given every day or every two days for a period of several weeks. The indications for fango treatment are found chiefly in the various rheumatic, arthritic, and posttraumatic joint affections, as well as in neuritis, neuralgia, and myalgia. Contra-indications exist in severe cases of hypertonia and in affections of the myocardium.—Schweizerische medizinische Wochenschrift, August 5, 1933.

Two Rather Unusual Renal Affections.—In the Acta chirurgica Scandinavica of July 28, 1933, E. Edberg describes: (a) a case of hydronephrosis accompanying a chronic ulceration of the kidney pelvis, with repeated hemorrhages, and (b) a case of iliac kidney with confluent abscesses and perinephritis. The first case concerned a boy of 7 with an intermittent congenital hydronephrosis, in which, following a traumatism, a small rupture had occurred in the ch led to the first attack of hematuria. sture became transformed by degrees into

nic ulceration provided with a niche, and

at a still later period the slight shocks continually inflicted upon the dilated sae resulted in further hemorrhages, for which nephrectomy was at length done, one year after the rupture had oecurred. The author has found no case in the literature like this. There are cases enough of traumatie rupture of hydronephrotic sacs in children, but it has seemed to be the universal rule for the traumatism to result immediately in a peritonitis or in such formidable hemorrhage that operation had to be done immediately without delay. The uroselectan radiographic images were somewhat difficult to interpret. In chronic or acute occlusion of the ureter the opaque substance cannot for a certain length of time leave the kidney, on account of the pressure in the kidney pelvis. The result is that there is no shadon of either the calices or the pelvis, but instead there may be a greater condensation of the image of the kidney itself. The longer the flow is interrupted, the poorer will the image be This seems to account for the difficulty of interpretation in the case under discussion. In the second ease, the patient was a girl of 14, admitted with vomiting, diarrhea, chills, and high fever. Uroseleetan revealed on the right side an ectopic kidney with pelvis shaped like the bowl of a pipe, from which the ealices passed both inward and outward. There was a chronic colibacillus infection, which had previously given no serious trouble, but now within a period of ten days, there had arisen grave symptoms indicative of abseess formation in the right side. There was every indication that the suppuration, which involved the upper pole of the kidney, was on the point of producing a perirenal phlegmon had not nephreetomy been promptly performed. Intravenous pyelography furnished perfectly clear evidence from a diagnostic point of view. Transvesical exploration, done later, gave no important information that had not already been furnished by the other method, although the images were richer in details.

Experimental and Pathological Studies on the Nature and Rôle of Bacterial Allergy.-Arnold Rice Rich states that by "allergy" he means here only that state of specific hypersensitivity which develops as the result of the entry of foreign protein into the tissues, and which manifests itself locally by tissue damage and inflammation. When the protein enters the blood stream there ordinarily occur the constitutional symptoms of fever, malaise, and prostration. It is now well known that while the body is acquiring an active immunity to bacteria during infection, the tissues ordinarily become hypersensitive to the protein of the infeeting microorganism. In his investigation of the pathogenesis of tuberculosis Rich has encountered circumstances which cast serious doubt on the widely accepted view that allergy is necessary for the operation

of immunity. He has succeeded in separating immunity from allergy by three different methods and in a variety of infections. He describes experiments which demonstrate that it is possible to establish acquired immunity without the coneomitant development of allergy. He has also been able to separate immunity from allergy by injecting the serum of allergic, immune animals into normal ones. The immunity was transferred to the latter, but not the hypersensitiveness. Finally immunity was separated from allergy by means of desensitization. In each of these different types of experiment it was found that immunity operated in full force in the complete absence of allergic inflammation. These experiments on desensitization nere extended to tuberculous infection by Drs. Rothschild, Friedenwald, and Bernstein, who were able to show that immunized guinea-pigs can be kept for months in a state of complete desensitization without suffering any detectable loss of their immunity to virulent bacilli. On the other hand, it has been shown that a high degree of allergy can exist in the complete absence of immunity. The presence of bacterial hypersensitiveness is merely an evidence of infection. It means only that baeterial protein has been liberated into the tissues, iust as non-baeterial hypersensitiveness means only that the specific protein has found its way into the tissues. The degree of hypersensitiveness is not a measure of the degree of immunity. For example the tuberculous patient may have a low degree of resistance with a high degree of hypersensitiveness and vice versa. From the practical standpoint, Rice suggests that the studies presented in this paper open the way to an investigation of the results of freeing the infected body from the damaging effects of hypersensitiveness, with the knowledge that the abolition of allergy will not entail the loss of the protective power of acquired immunity.—The Lancet, September 2, 1933, cexxv, 5740.

Neurosyphilis: An Analysis of Vanderbilt University Hospital Material Over a Period of Seven Years.—W. M. Dedman and Hugh H. Morgan present an analysis of 335 patients with unquestionable neurosyphilis. This number of patients represents an incidence of neurosyphilis at the Vanderbilt Clinie of 6.8 per cent. Of the 335 eases, 43.8 per eent. belonged to the parenchymatous group; the remainder were classified as meningovascular. Lumbar puncture was not performed on every patient or the incidence would probably have been much higher. The figures indicate that the syphilitic white is 38 times as prone to develop neurosyphilis as the syphilitic negro. The colored female is relatively immune to syphilis of the nervous system. Neurosyphilis was manifested most frequently between the ages of 20 and 50 years. The greatest number of cases for any decade occurred

0.5 and 0.175 gm. which he divides between a morning and an evening dose. Even larger amounts are well tolerated, but the maximal dose is not always the optimal one. Such treatment may be safely continued for years, with a reduction or omission on one or more days per week during periods free from attacks, but with no complete discontinuance. Signs of overdosage vomiting, drowsiness, dizziness, If luminal should prove entirely exanthems. ineffectual it may be combined with bromides (1-2 gm. sodium bromide every 2-3 days). Too long use of bromide-luminal treatment sometimes causes such toxic symptoms as fatigue, difficulty of speech, and tremor. Zappert uses bromides without first having tried luminal only in cases where the convulsions are very frequent, beginning with relatively large doses (3-4 gm. per day of sodium bromide or Erlenmeyer's mixture). then decreasing these until the amount that seems effective is reached, after which smaller amounts of bromide can again be given with luminal. Among the newer remedies, he has not had any striking success from sodium biborate, or thyroid gland therapy. Nor can he report favorably on those few cases in which he has used the new surgical procedure of intracerebral perflation. Dietetic therapy has long played a part in the treatment of epilepsy. Hunger cures, and salt-free and ketogenous diets have all been tried, with more or less favorable results. Zappert prefers a salt-po liet to one that is wholly saltfree, since the en exhibit less repugnance er of epileptic children in toward it. ment may be expected to whom an ene reater than the number produce gor be regretted that such by the high price of tinual oversight and of hopeless cases are medicati' Sing school attendthe diff social efforts in de not only the eptics but also nsaries with encessary ance. this c erec' the lo. Gen-Giger, Giger, Giger, Giger, Giger, Giger, Giger, treat t and preanis 'Al or their pose, una can alwayfactors so who give nt. Experime salary or fee hysical Therapy ity }re on a hospitalcks have been appuıst equivalent of milly disproved the exact of The system is ofors. A fango pack is surely to change The size of the total mass The inordinate gle of its application to the medical treatment his chief importance. The

eral recognition of it.

specific heat of the moist pack is composed of the heat of the dry powder and that of the water it contains. The dry fango powder consists of silicates with a greater or less content of calcium The fact that the specific heat of these minerals is much less than that of water makes them exceedingly well adapted to bind in the fango pores a maximum amount of water with high specific heat, in such a way that it can be practically utilized in the form of a poultice. It is a complete waste of effort and material to spread merely half a kilo or a kilo of fango over a large body surface, for the quantitative bulk of the mass is one of the main considerations. Even for small local packs large amounts must be used in order to maintain an even temperature. Thus, for a knee, elbow, or wrist one should employ 10 kg., and for both hips or shoulders at least 20 kg. is necessary. The technique of the application is so simple that it can easily be carried out in private homes. The essential considerations are to use a large amount of the substance at a temperature of 42°-50° C. if possible, but not such as to burn, and to cover it well on the outside with thick woolen packing. To heat a fresh mass of fango, it is necessary only to add to the mass one-half its weight of hot water, mix thoroughly in a tin pail and place the latter in a larger vessel of hot water over the fire, stirring until the fango has a temperature of about 60° C., and the consistency of potato soup. It is then spread in several layers, each of the thickness of a finger, on a piece of old woolen cloth with a backing of watertight material. The whole is laid on the bed and after the temperature is reduced to about 45° C. the affected part, previously smeared with a thin layer of the fango, is slowly placed in it. The patient should lie wrapped in a wool blanket for 1/2-1 hour. In most cases the packs should be given every day or every two days for a period of several weeks. The indications for fango treatment are found chiefly in the various rheumatic, arthritic, and posttraumatic joint affections, as well as in neuritis, neuralgia, and myalgia. Contra-indications exist in severe cases of hypertonia and in affections of the myocardium.—Schweizerische medizinische Wochenschrift, August 5, 1933.

Two Rather Unusual Renal Affections.—In the Acta chirurgica Scandinavica of July 28, 1933, E. Edberg describes: (a) a case of hydronephrosis accompanying a chronic ulceration of the kidney pelvis, with repeated hemorrhages, and (b) a case of iliac kidney with confluent abscesses and perinephritis. The first case concerned a boy of 7 with an intermittent congenital hydronephrosis, in which, following a traumatism, a small rupture had occurred in the sac, which led to the first attack of hematuria. The rupture became transformed by degrees into a chronic ulceration provided with a niche, and



LEGAL



FEDERAL COURT RULING ON CHIROPRACTIC

By Lonenz J. Brosnan, Esq. Counsel, Medical Society of the State of New York.

The members of the medical profession have been for years witnesses to the attempt on the part of the chiropractors to obtain a status putting them on a par with regularly qualified medical practitioners. Year after year, bills have been submitted to the legislature of this State for the purpose of giving a legal status to the chiropractors by setting up a licensing machinery. Prosecutions charging unlawful medical practice have been bitterly fought in the courts by the chiropractors.

In our neighboring State, Pennsylvania, very recently a novel attempt was made by the chiropractors to gain their aims. In that State, much as in ours, the law defines the practice of medicine in properly comprehensive terms. The law provides in part:

"It shall not be lawful for any person in the State of Pennsylvania to engage in the practice of medicine and surgery, or to hold himself or herself forth as a practitioner in medicine and surgery, or to assume the title of doctor of medicine and surgery, or doctor of any specific disease, or to diagnose diseases, or to treat diseases by the use of medicines and surgery, or to sign any death certificate, or to hold himself or herself forth as able to do so, * * unless he or she has first fulfilled the requirements of this act and has received a certificate of licensure from the Bureau of Medical Education and Licensure created by this act."

Under that act, various proponents of the art of chiropractic had been indicted or threatened with indictment charging them with the alleged practice of medicine. A number of chiropractors joined themselves as co-plaintiffs in a suit against the members of the State Board of Medical Education and Licensure in one of the Federal District Courts. The suit sought a decree enjoining the members of the Board from enforcing against chiropractors the penal provisions of the act relating to physicians and surgeons, and futher enjoining the Board from interfering with their exercise of what they termed their professional rights in the absence of laws specially regulating and governing the practice of chiropractic.

The bill in equity filed in the suit made the claim that chiropractic is a skilled and honorable profession; that it is a healing profession based upon principles distinctly different from other healing professions, "having to do chiefly with the recognition of the brain and nervous system, the dependence of the nervous system upon the normal functioning of the organs of

digestion, assimilation, respiration and circulation, and the restoration of normal conditions by a scientific manifestation of the spinal vertebrae." The bill further charged that by reason of the fact that prosecutions were made and threatened upon their failure to obtain a license to practice medicine, when it was in fact impossible for them to obtain such a license, they were being deprived of their constitutional rights. Specifically, the constitutional question raised was, whether they as citizens were being denied the equal protection of the laws, and whether they were being deprived of their property in their right to engage in the practice of their profession, without due process of law, all in violation of the guarantees contained in the Fourteenth Amendment to the Constitution of the United States.

An application was made before a District Judge to test the validity of the plaintiffs' claim, with the result that the bill was dismissed. The chiropractors took an appeal to the Circuit Court of Appeals, but the said Appellate Court unanimously affirmed the ruling that had been made by the District Judge. The Circuit Court of Appeals in so ruling said in part:

"We shall, because of the able and earnest presentation of the case for the appellants, discuss and decide the question raised. In order to do so we must first inquire the character of the statute involved. It relates to the art of relieving and curing human ills, which is commonly referred to as the 'healing art', of which the plaintiffs admit themselves to be members. This is a generic expression and ordinarily embraces the whole art of healing and its many theories and practices. As it extends to all personal citizens of a state, it falls very clearly under its police powers. These a state may exercise by promulgating a system of regulation and control which, if not unreasonable and arbitrary, is lawful and is binding upon everyone in the state. To assure its citizens skilled treatment of their ills by qualified practilioners and particularly by guarding them against malractice by ignorant and unskilled practitioners the Commonwealth of Pennsylvania, acting within its police power, declared by the act in question a state policy in respect to the healing art and provided a general system for its complete regulation, referring to it as 'the practice of medicine and surgery'. That a state may thus regulate 'the practice of medicine, using this word in its most general sense', can no longer be questioned ***

most general sense, can no longer be questioned. * * * "So, also, defining the class to which its legislation is directed, though purposely comprehensive, it cannot be successfully asserted that the state was arbitrary or unreasonable in requiring that all, who, dealing in one way or another with the anatomy and system of the human bindy and diagnosing its ills, offer their services to the

WASHINGTON COUNTY

The annual meeting of the Medical Society of the County of Washington was held at Hudson Falls on Thursday, October 5th, at 4 p. m., with the president, Dr. D. F. Macarthur, in the chair, and twenty members present. There were also present thirteen guests, of whom eight were from Glens Falls.

The reports for the year were submitted; that of the Treasurer showing a balance on

hand of \$125.

1286

The following officers were elected:

President: Roy E. Borrowman, M.D., Fort Edward.

Vice President: C. H. Holmes, M.D., Cambridge.

Secretary: Silas J. Banker, M.D., Fort

Edward.

Treasurer: Charles A. Prescott, M.D., Hud-

son Falls.

Board of Censors: John H. Ring, M. D., Granville, Chairman; Hilton W. Gillett, M.D., Hartford; Leslie A. White, M.D., Whitehall.

Committee on Legislation: W. A. Leonard,

M.D.

Committee on Public Health: H. A. Rogers, M.D.

Delegate to State Society: D. M. Vickers,

The following resolution was presented by Dr. Bennett and adopted:

Resolved, That the present agreement of the County Medical Society and Commissioner of Public Welfare be terminated on January first, 1934; and that the doctors located in several communities be authorized to enter into such agreement with the local welfare units as they may deem necessary according to existing conditions of this community.

The president, Dr. Macarthur, read his address on "Coronary Thrombosis". The address stressed the fact that this disease was recently recognized as more frequent and of

more importance than before.

After an evening dinner, Dr. Francis A. Hulst presented an interesting talk on "The

Physician-on the Witness Stand."

Dr. Thomas H. Cunningham of Glens Falls spoke on "One Phase of Medical Public Relations." He told of the efforts of the Warren County Medical Society to abolish the free clinics in eye cases and venereal diseases, and to allow members of the society to receive fees for such work.

Dr. John M. Swan of Rochester, Chairman of the State Cancer Committee, gave a talk on

"The Early Diagnosis of Cancer."
Dr. James T. McKenna of Troy concluded the program with a talk on "The Mind, its Origin, Growth and Decay."

S. J. BANKER, Secretary.

SENECA COUNTY

The annual meeting of the Seneca County Medical Society was held at the Willard State Hospital, Willard, N. Y., on Thursday, October 19, 1933. The meeting opened at 10:45 A.M., with the President, Dr. C. B. Bacon, in the Chair, with a good attendance of the members of the Society and guests.

The following officers were elected for the

year 1934:

President: Dr. John F. Crosby, Seneca Falls. Vice President: Dr. E. M. Wellbery.

Secretary and Treasurer: Dr. F. W. Lester. Censors: Drs. C. B. Bacon, L. W. Bellows, and F. W. Lester.

Delegate to State Society: Dr. C. B. Bacon. Alternate: Dr. W. R. Holmes, Waterloo. Delegate to 7th District Branch: Dr. A. Letellier.

Alternate: Dr. R. F. Gibbs.

There was a general discussion of the Welfare Relief in Seneca County. It was resolved, on motion, that the Fee Bill adopted by the Society on January 5, 1933, be continued in force during the year 1934.

Scientific Program

The Scientific Session opened at 1:45 p.m. with the following program:

1. "Eye Fundus Changes in Systemic Disease" Dr. John A. Spengler, Geneva, N. Y. Dr. Spengler not only gave a very interesting and carefully prepared paper, but he exhibited numerous photographs of eye backgrounds enlarged showing changes due to disease. These photographs were made from actual plates taken by Dr. Spengler of cases occurring in his own practice.

2. "Encephalitis Lethargica Chronic," Dr. Ross Herold of the Willard State Hospital staff. Dr. Herold gave a short paper on the course and manifestations of the disease. Two patients were then shown, both males, and both exhibiting the characteristic symptoms of far advanced cerebral deterioration.

3. Dr. Herold also described Huntington's Chorea, and showed a case which exhibited the typical jerking of the muscles and the constant motion of the hands, arms and shoulders.

FREDERICK W. LESTER, Secretary.

ROCKLAND COUNTY

Social Meeting: On September 15th, sixtyone members and guests of the Medical Society of the County of Rockland met at the Recreation Hall of the Summit Park Sanatorium, the tuberculosis hospital of Rockland County, Pomona, for their annual clambake.

Dr. Thomas Parran, Jr., Commissioner of Health of New York State, in a brief address, congratulated the Society on the success of its

social activities.

Dr. Joseph S. Lawrence, Executive Officer of the State Medical Society, commended the local Society for its get-together spirit at such meetings. Dr. Lawrence spoke of the opportunity that is offered the physicians to take part in the welfare program of the State in order to help maintain the integrity of the home. Individual members of the medical profession can assure a large part in this work by cooperating with the medical society.

Brief remarks were made by Dr. Frost, Dean of Public Health of Johns Hopkins University, who was a guest of Dr. Parran, and Dr. Robert E. Plunkett, Director of the Division of Tuberculosis of the State Department of Health.

Dr. Thomas P. Farmer, Chairman of the Committee on Public Health and Medical Education of the State Society, commends the Rockland County Medical Society for its coperative and active spirit, and put the local Society as one of the first county societies in the State for its progressive activities and loyalty. He especially emphasized the great benefits which the Society is obtaining from the post-graduate courses which are being held annually. (The program of the Fall Course appears in the Journal of October 15, page 1233.—Editor's note.)

Among the other guests present were: Drs. Frank B. Berry, Oswald R. Jones, and Howard W. Potter of New York City; Dr. Frank Laidlew, District State Health Officer, of Middletown; and Drs. E. C. Rushmore and Harold Morrison of Tuxedo Park and Dr. Royal S.

Copeland, U. S. senator.

Regulor Fall Meeting: The Medical Society of the County of Rockland held its regular Fall Meeting at the New York State Reconstruction Home, West Haverstraw, on September 27th, 1933. About forty members were present.

Dr. F. K. Anderson of Letchworth Village, was elected to membership in the Society.

Dr. Charlton Wallace, Surgeon-in-Chief of the Reconstruction Home, conducted the scientific session, assisted by Drs. Smith and Nicola of the hospital staff. Dr. Smith presented cases of chronic osteomyelitis, and Dr. Nicola a generous variety of convalescent cases of anterior poliomyelitis. Dr. Wallace most ably discussed the interesting advances made in the treatment of chronic osteomyelitis by the use of the maggot treatment, also the use of toxoid of the staphylococcus. In discussion, Dr. Edward F. Roberts of the Lederle Laboratories elaborated upon toxoid. Ward rounds were then made.

A delightful luncheon was served. The afternoon was both profitable and enjoyable.

WILLIAM J. RYAN, Secretory.

SCHOHARIE COUNTY

The regular annual meeting of the Schoharie County Medical Society was held in the Hotel Augustan, Cobleskill, New York, on Tuesday, October 10, 1933. The Business Session was in the Hotel Augustan. The President, Dr. W. L. Oliver called the meeting to order.

The following officers for 1934 were elected: President, Dr. Roy G. S. Dougall, Cobleskill; Vice President, Dr. Duncan L. Best, Middleburg; Treasurer, Dr. Le Roy Becker, Cobleskill; Secretary, Dr. Herbert L. Odell, Sharon Springs; Censor, Dr. Willard T. Rivenburgh, Middleburg: Delegate to the State Society, Dr. David W. Beard, Cobleskill.

Adjournment was taken for Luncheon after which the Society reconvened in the William H. Golding Central School where Dr. William H. Hoffman, of the Cancer Research Department of the Memorial Hospital, New York City, gave a very learned and intensely interesting address on "The Early Diagnosis of Cancer" augmented by a large select number of lantern slides.

At the conclusion of the lecture, at the solicitation of the physicians present, Dr. Hoffman gave a very able talk on "Bone Tumors," illustrated by lantern slides,

H. L. ODELL, Secretory.



BOOKS RECEIVED



- Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.
- PROCEEDINGS OF SOUTHERN BRANCH AMERICAN PUBLIC HEALTH ASSOCIATION. Held at Birmingham, Alabama, November 14, 15, 16, 1932. Octavo of 100 pages. N'ew York, The American Public Health Association, [1933.] Paper, 50c.
- THE DISEASES OF INFANTS AND CHILDREN. By J. P. CROZER GRIFFITHS, M.D., and A. GRAEME MITCHELL, M.D. Octavo of 1155 pages, illustrated. Philadelphia, W. B. Saunders Company, 1933. Cloth, \$10.00.
- Allen's Commercial Organic Analysis. Edited by C. Ainsworth Mitchell, D.Sc. Volume X, Fifth Edition. Octavo of 817 pages, illustrated. Philadelphia, P. Blakiston's Son & Company, [c. 1933.]
- THE MEDICO-LEGAL AND CRIMINOLOGICAL REVIEW. Incorporating the Transactions of the Medico-Legal Society. Honorary Editors: Gerald Slot, M.D., and Everard Dickson. Volume 1, Part 1, January, 1933. Octavo of 88 pages. London, Baillière, Tindall and Cox, 1933.
- Colds and Hay Fever. By Frank Coke, F.R.C.S. 12mo. of 148 pages. Baltimore, William Wood & Company, 1933. Cloth, \$2.00.
- BLOOD PICTURES. An Introduction to Clinical Hæmatology. By Cecil Price-Jones. Third Edition. Octavo of 72 pages, illustrated. Baltimore, William Wood & Company, 1933. Cloth, \$2.40.
- THE JOY OF LIVING. An Autobiography. By Franklin H. Martin, M.D. Two volumes. Octavo of 1017 pages, illustrated. Garden City, N. Y., Doubleday, Doran & Company, 1933. Cloth, \$7.00.
- THE PRACTICE OF PODIATRY. By REUBEN H. GROSS, M.Cp., and E. K. BURNETT. Edited by MAURICE J. LEWI, M.D. Octavo of 451 pages, illustrated. New York, Harriman Printing Company, 1933.
- Nervous Breakdown: Its Cause and Cure. By W. Béran Wolfe, M.D. Octavo of 240 pages. New York, Farrar & Rinehart, [c. 1933.] Cloth, \$2.50.
- Textbook of Physical Therapy. By Heinrich F. Wolf, M.D. Octavo of 409 pages, illustrated. New York, D. Appleton-Century Company, [c. 1933.] Cloth, \$5.50.
- THE TECHNIC OF LOCAL ANESTHESIA. By ARTHUR E. HERTZLER, M.D. Fifth Edition. Octavo of 292 pages, illustrated. St. Louis, C. V. Mosby Company, 1933. Cloth, \$5.00.
- SURGERY OF THE STOMACH AND DUODENUM. By J. SHELTON HORSLEY, M.D. Octavo of 260 pages, illustrated. St. Louis, C. V. Mosby Company, 1933. Cloth, \$7.50.

- Bone Growth in Health and Disease. The Biological Principles Underlying the Clinical, Radiological, and Histological Diagnosis of Perversions of Growth and Disease in the Skeleton. By H. A. Harris, M.R.C.S. Octavo of 248 pages, illustrated. New York, Oxford University Press, 1933. (Oxford Medical Publications.)
- THE ENLARGED PROSTATE AND PROSTATIC OBSTRUCTION.
 By KENNETH M. WALKER, F.R.C.S. Second Edition.
 Octavo of 223 pages, illustrated. New York, Oxford University Press, 1933. (Oxford Medical Publications.)
- A PRACTICAL MEDICAL DICTIONARY. By THOMAS LATHROP STEDMAN, M.D. Twelfth Edition. Octavo of 1256 pages, illustrated. Baltimore, William Wood & Company, 1933. Fabrikoid, \$7.50.
- HISTOLOGY. By S. RAMÓN-CAJAL, M.D. Revised by J. F. Tello-Munoz, M.D., authorized translation from the tenth Spanish edition by M. Fernan-Nunez, M.D. Octavo of 738 pages, illustrated. Baltimore, William Wood & Company, 1933. Cloth, \$8.00.
- Manual of Urology. By R. M. LeConte, M.D. 12mo. of 317 pages, illustrated. Baltimore, William Wood & Company, 1933. Cloth, \$4.00.
- THE TREATMENT OF RHEUMATISM IN GENERAL PRACTICE. By W. S. C. COPEMAN. Octavo of 215 pages. Baltimore, William Wood & Company, 1933. Cloth, \$3.25.
- DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS. By GEORGE W. NORRIS, M.D. & HENRY R. M. LANDIS, M. D. Fifth edition. Octavo of 997 pages, illustrated. Philadelphia, W. B. Saunders Company, 1933. Cloth, \$10.00.
- OBSTETRICS AND GYNECOLOGY. Vol. 3. Edited by ARTHUR H. CURTIS, M.D. Octavo of 1201 pages, illustrated, and General Index, Volumes 1, 2 and 3. Octavo of 137 pages. Philadelphia, W. B. Saunders Company, 1933. Cloth. Complete set, including index, \$35.00.
- THE MEDICAL CLINICS OF NORTH AMERICA. Volume 17, No. 2, September, 1933. (Chicago Number). Published every other month by the W. B. Saunders Company. Philadelphia and London. Per Clinic Year (6 issues). Cloth, \$16.00 net; paper, \$12.00 net.
- LYMPHATICS, LYMPH AND TISSUE FLUID. By CECIL K. DRINKER, M.D. and MADELEINE E. FIELDS, Ph.D. Octavo of 254 pages. Baltimore, The Williams & Wilkins Company, 1933. Cloth, \$3.00.
- PHYSICAL CHEMISTRY OF LIVING TISSUES AND LIFE PROCESSES. As Studied by Artificial Imitation of Their Single Phases. By R. Beutner, M.D. Octavo of 337 pages, illustrated. Baltimore, The Williams & Wilkins Company, 1933. Cloth, \$5.00.



BOOK REVIEWS



FOOD IN HEALTH AND DISEASE. By KATHERINE M. THOMA, B.A. Octavo of 370 pages. Philadelphia, F. A. Davis Company, 1933. Cloth, \$2.75.

Miss Thoma, who is director of dietetics at the Michael Reces Hospital, Chicago, presents in this volume a textbook on dietetics for mirses. It represents a collection of her lectures to student dietitians. It contains elementary chapters on the physiology of metabolism, then continues with standard information on diets in discase and closes with a large section on cookery. It is well prepared and well written. WILLIAM S, COLLENS.

THE MEDICAL SECRETARY. By MINNIE GENEVIEVE MORSE. 16mo of 162 pages. New York, The Macmillan Company, 1933. Cloth, \$1.50.

The author of this book sets out to tell her reader concerning the numerous fastidious requirements for becoming a medical secretary. The reader who still feels confident of tackling this job after reading this scarching handbook should be given a trial. The physician who does not know what to expect from or how to train his secretary will find this book an invaluable guide. The physician who is obliged to do his own secretarial work may profit immeasurably from jointers here and there. Nothing is overlooked. In fact, the secretary familiar with half the requirements listed in this book may be considered quite capable.

EMANUEL KRIMSKY.

J. HAMILTON CRAWFORD.

CLINICAL ASPECTS OF THE ELECTROCARDIOGRAM, Including the Cardiac Arrhythmias, By HAROLD E, B. PARRER, M.D. Third Edition. Octavo of 295 pages, illustrated. New York, Paul B, Hoeber, Inc., 1933. Cloth, \$5.50.

Owing to recent advances in the study of the electrocardiogram much of the book has been rewritten in this edition. This applies particularly to the part of the book which deals with changes signifying myocardial damage. The recent work on the electrocardiographic diagnosis of coronary artery disease is admirably presented. The newer views regarding the localization of ventricular premature beats and lesions of the branches of the Bundle of His have been accepted and are described in detail. An excellent chapter is included which gives a brief account of the fundamentals of the theory of electrocardiography. The book is unquestionably of great value in that it fills a gap between the elementary and advanced books on the subject. This and the fact that it deals almost wholly with the clinical aspects of electrocardiography should make it appeal to the elinican. As before, the volume is beautifully printed and illustrated.

THE INTERNATIONAL MEDICAL ANNUAL. A Year Book of Treatment and Practitioner's Index. Edited by CAREY F. COOMES, M.D., and A. RENDLE STORT, M.D. Fifty-first Year, 1933. Octavo of .572 pages, illustrated. Baltimore, William Wood & Company, 1933. Cloth, 86.00.

This volume is a carefully compiled, thorough and accurate review of the year's advances in all lines concerned in the care of the sick. It is impossible for one to realize the vast amount of time and energy that must have been given by the various contributors in preparing this material. The subject matter is arranged alphabetically in dictionary form beginning with abdominal surgery and ending with yellow fever. Each article pre-

sents the latest information and advance in the subject under consideration. This book will prove a most useful, handy volume for reference. Typographically the work is excellent, the illustrations are good.

HENRY M. Moses.

BINOCULAR VISION AND THE MODERN TREATMENT OF SQUINT. By MARGARET DOBSON, M.D. Octavo of 107 pages, illustrated. New York, Oxford University Press, 1933. Cloth, \$2.75. (Oxford Medical Publications.)

To one interested in the tecluical application of the standard instruments for studying fusion and muscular anomalies, this little volume makes a very satisfactory reference source. It is well written, the explanations are clear and the illustrations are satisfactory. One could wish for an elucidation of the principles together with diagrams. It is looped that a companion work will soon be presented, giving data to support the conclusions which the author arrives at. Unfortunately there are very few controlled studies available which show by actual evidence the value and limitation of inuscle and fusion training. In fact, there is considerable evidence to show that fusion is entirely a psychic process and that the methods advocated by this work develop not the visual motor apparatus primarily, but rather, through education, the subject's psychic processes.

Jounn N. Evans.

SURGICAL OPERATIONS. A Text-book for Students and Nurses. By E. W. Hey Groves, M.D. Third Edition. Octavo of 263 pages, illustrated. New York, Oxford University Press, 1933. Cloth, \$4.50. (Oxford Medical Publications.)

This book has been written as a text for students and nurses, comprising 249 pages, with illustrations upon nearly every page. In this volume the author has attempted to deal fully with all common operations as well as with the technique of surgery, in a brief manner. In the case of the surgery of special regions, e.g., eye, nose and ear, a few typical operations are described, otherwise the book is limited to a description of the type of treatment which should be applied, without describing in detail the operative procedure.

For such a small volume, the subject of surgery has been surprisingly well covered, the illustrations being very specific. As a handbook it should prove a valuable addition to the student's or nurse's library.

R. F. H.

The Harvey Lectures. Delivered Under the Auspices of The Harvey Society of New York, 1931-1932. Series 27. Octavo of 226 pages, illustrated. Baltimore, Williams & Wilkins Company, 1932. Cloth, \$400.

Whenever one chooses to think of medicine as a science he may find ample proof in these Harvey Lectures.

In the chapter on the Adrenal Gland, the author describes a novel method of extracting a cortical hormone of increased efficacy. Adrenal-ectomized cats showed a much prolonged response to this refined substance and animals could be kept alive almost indefinitely with continued injections.

In the determination of the sensitivity of the sensory nerve fibres a small cutaneous nerve was dissected away except at its skin attachment and slung onto two electrodes leading respectively to an amplifying and record**BOOKS**

ing system. By careful observation it was found that 10-20 microvolts as recorded on the oscillograph would be required to produce an appreciable effect on the loud

speaker.

In studying the hearing mechanism in the cat a very ingenious experiment has been resorted to by exposing all parts of the middle ear on the one hand and on the opposite end by placing an electrode on the auditory nerve through a trephine opening over the lateral lobe of the cerebellum. Test words and tones of measured pitch and intensity which struck the exposed middle ear were therefore transmitted to the auditory nerve via this electrode and these nerve impulses were in turn conducted to a five-tube amplifier and recorded accordingly.

There is a chapter on the newer methods of histoehemistry which deals with microincineration and histospectrography. There are other topics of equal interest with which one may deal at length, such as, factors concerned in the evacuation of the gall-bladder, experimental epidemiology, and malacic diseases of the bones.

The exhaustive experiments which form the basis for each of these lectures are tinged with an idealism and romanticism which make them distinct from the average medical reading matter. EMANUEL KRIMSKY.

WHAT TO TELL THE PUBLIC ABOUT HEALTH. A collection of short articles aimed to present in simple terms the facts about the prevention of disease and the promotion of health. Octavo of 255 pages, illustrated. New York, The American Public Health Association, 1933. Cloth, \$2.00.

This book tells in prose and poetry in a simple and yet impressive way the story of public health. It is very interesting and is an excellent source for material to assist a physician in preparing a radio talk or a health talk before a lay audience.

The material is gathered from a great many contribu-

tors and eovers the subject admirably.

The appendix is made up of a collection of data which ean furnish material assistance to health educators. Newer books about health education are listed as well as organizations that supply health education material. SAMUEL ZWERLING.

Broadcasting Health. By J. Mace Andress, Ph.D., and I. H. Goldberger, M.D. 12mo of 401 pages, illustrated. Boston, Ginn & Company, [c. 1933]. Cloth, 80e.

We applied this book to a practical test which for this particular volume proved to be the best type for a review. We gave this book to a young boy and had him read it to us as he sat on our lap as we helped him over the hurdles of the long, new and strange words.

The book proved to indeed fulfill its purpose for it ereated in the mind of the boy an incentive for questions which were answered as he read further on. This

was especially true of the chapter on milk.

The "get-up" of the book is indeed original and cannot fail to leave an everlasting impression not only upon children and their teachers but also upon any grownup in any walk of life who may read this book.

The reading of this book in the class room will make

an excellent health project program.

The book is written in story form which is made even more interesting by assuming the rôle of a radio broad-

Chapters in this book ean be taken for radio broadeasts or health talks with very little or no changes on the part of the prospective lecturer.

SAMUEL ZWERLING.

DISEASES OF OLD AGE. By F. MARTIN LIPSCOMB, M.D. 12mo of 472 pages. Baltimore, William Wood & Company, 1933. Cloth, \$4.50.

This little book on the diseases of old age mentions

the more frequent and important diseases that occur in the period after 65, describes their variations, and includes their special treatment. The normal manifestations, social aspects and morbidity of old age are discussed.

While not very complete or in great detail, the book has the value of apparently being the result of personal experience.

M. A. Rabinowitz.

THE PRINCIPLES AND PRACTICE OF OTOLOGY. By F. W. WATKYN-THOMAS, M.D., and A. LOWNDES YATES, M.D. Octavo of 555 pages, illustrated. Baltimore, William Wood & Company, 1933. Cloth, \$8.25.

This is an English work written by two physicians connected with the London Ear, Nose and Throat Hospital and who are therefore conversant with the work

done in England.

Most authors seem to emphasize the inflammatory diseases, especially the operations. In this work these have not at all been neglected. The descriptions of symptoms, means of diagnosis and operative technique are all clear and ample. The writers however have devoted about 230 pages of the 536 to the other branches of Otology.

The chapter, The Ear and Balance, makes clear, with diagrams, the question of equilibrium and the tests of the inner ear and its brain connections. The one on Hearing takes up very fully the histology of the cochlea and the theories of hearing and the nature of deafness. The use of tuning forks in the making of graphs for air and bone conduction in conductive, periotic and per-

ceptive deafness is fully described.

In the chapter, Increasing the Use of Hearing, the authors emphasize the value of using and training what hearing is present, and discourage the use of electric hearing aids except in elderly patients. Lip-reading is mentioned only under deaf mutism and its use is rather discouraged, for the reason that one who can lip-read

will not use all the hearing ability he has.

The illustrations, many of them original, are good and are a great aid in understanding the text.

The bibliography is not complete, but gives references to works easily available and of use to English-reading students.

The index, an essential part of any text or reference book, is good.

In the preface the authors give as their aim the writing of a work that will help the general practitioner who wants to treat his own ear cases and one that will be of value to the intending specialist. This they have succeeded in doing.

J. W. Durkee. succeeded in doing.

A New Approach to Dietetic Therapy in Epilepsy, Eclampsia of Pregnancy and Infancy Migraine, Angina Pectoris, Bronchial Asthma, Allergie Diseases, Gout, Essential Hypertension, Pernicious Anemia, Polycythemia, Acne Vulgaris, Nervous and Psychie Disturbances, Constitutional Changes, Aging, etc. By Eugene Földers, M.D. Octavo of 434 pages. Boston, Richard G. Badger, The Gorham Press [c. 1933]. Cloth, \$5.00.

Eugene Földes has written a very stimulating book dealing with the metabolism of water and minerals. The various disturbances of water and mineral metabolism in epilepsy, eclampsia of pregnancy, migraine, angina pectoris, allergic states, asthma, gout, hypertension, pernicious anemia and other conditions are discussed. book does not lend itself to abstracting, as it is replete with such an abundance of data that it must be read in the original to be appreciated. The wealth of material will make it of value to every practitioner.

The author draws certain conclusions as to the therapy of the conditions mentioned. While dietetic control is especially stressed and discussed, adjuvant treatment,

medical and otherwise, is not neglected.

M. A. RABINOWITZ.

THE VITAMINS IN HEALTH AND DISEASE. By BARNETT Sure, Ph.D. Octavo of 206 pages. Baltimore, Williams & Wilkins Company, 1933. Cloth, \$2.00.

Questions of health and medical science figure prominently in the popular mind at the present time and the advertising agencies have been quick to take advantage of this interest. The dangers of vitamin deficiency and the importance of this, that, or the other special preparation in curing all the ills to which human flesh is heir, are advertised with great fervor. Only confusion is possible to the layman who attempts to study these exaggerated claims with their mixture of truth, half

truth and deliberate misrepresentation.

A valuable measure of reform has been introduced by the work of the Committee on Foods of the American Medical Association. There is also need for an accurate scientific discussion in popular language of current knowledge concerning the vitamins and their importance in health and disease. Dr. Sure is recognized as an authority in this field and his book goes far toward satisfying this need. If the conclusion that "If we consume daily one to two pints of milk, at least one egg, one-third to one-half glass of orange or tomato juice, a generous portion of vegetables, fresh or canned, whole cereals for breakfast two or three times weekly, meat at the noon or evening meal, introducing liver, kidney, heart, or sweetbreads at least one weekly, we need have little fear of vitamin deficiences" were generally appreciated, most of these advertisements would lose their force.

The volume is written from the research, rather than the medical, point of view. It is doubtful if a physician writing a book for a reader so uninformed that it is necessary to explain that cardiac disease means heart disease should include nine pages dealing with feeding formulas for infants or include such statements as "Goat's milk . . . has smaller protein and fat particles than cow's milk, is much more digestible, and should be used

whenever possible.'

In view of the number of people who are destitute and dependent upon private charity or public relief at the present time, it is probable that deficiency diseases are now on the increase. Unfortunately Dr. Sure does not discuss the minimal requirements for an adequate diet or the method of providing it at the lowest possible cost. CARL H. GREENE.

CLINICAL DIAGNOSIS. Physical and Differential. By Neuton S. Stern, M.D. Octavo of 364 pages. New York, The Macmillan Company, 1933. Cloth, \$3.50.

This volume was written by the author as the result of his experience as a teacher and for use in connection of his experience as a teacher and for use in connection with clinical, bed-side teaching. It is complete, detailed, accurate, carefully written in a style not difficult to study. Much of the subject matter is classified and tabulated. The volume is divided into four parts, as follows: Part I, which includes history taking, physical examination which emphasizes the clinical findings, the various instruments and mechanical devices together with the methods of using these aids in diagnosis, also in this the methods of using these aids in diagnosis, also in this section we have in detail the findings and methods used in the examination of the patient according to the dif-ferent systems. Part II presents in detail the symptoms and signs of tuberculosis and heart disease. This is a complete, accurate and carefully written section of the volume. Part III explains the principles and practice of differential diagnosis and presents twenty-one cas-tice of differential diagnosis and presents twenty-one cas-histories to illustrate the mental processes in making a diagnosis. Part IV gives in detail various symptoms and signs of discased conditions with their significance. These are presented alphabetically and categorically;

they are complete and informative. This volume is an excellent one for the manner, accuracy, inclusiveness and teaching method of instruction in clinical diagnosis. The more carefully one would study this volume, the more one would be repaid for the time spent upon it. The typographical work is excellent, the paper good, and the method of printing allows one easily to understand the divisions and subdivisions as presented by the author.

HENRY MONROE MOSES.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, etc. Vol. 2, 43rd Series, 1933. Edited by Louis Hamman, M.D. Octavo of 314 pages, illustrated. Philadelphia, J. B. Lippincott Company [c. 1933]. Cloth, \$3.00. A Quarterly of Illustrated

There is so much of interest in this issue that it will be impossible to deal with more than a few of the

In the article on the causes of hypertension the author is on safe ground when he deals in generalities. We cannot disagree with his contentions when he tells us that hypertension may be contributed by a filtering defect in the kidney, an altered viscosity of the blood, an overacting heart, heredity and age predisposition. But when he attempts to touch upon specific causes we come to the sad realization that we often depend on fits of enthusiasm to provide ourselves with causes which may be actual but which we cannot prove. He tells us that the "'pace of modern life' has not been proved a factor in etiology, nor has 'tobacco.'" If that be true, then the teachings to date have been false or were founded on feeble premises. At any rate it would be invaluable in furthering the solidarity of medical thought to prove things logically before arriving at decisive deductions. He also tells us that "alcohol may predispose through its production of obesity." How it causes obesity, or what type the produce it in certain types, or what type of obesity it causes we are not told. If we are to believe such contentions we have no scientific proof but must respect the dictates of authority,

Mosenthal has quite a valuable chapter on the treatment of essential hypertension. It is practical and comprehensive. As regards "foci of infection" he tells us—"it is doubtful whether their eradication has any effect whatsoever upon blood pressure." Such advice will probably be unnoticed for years to come especially when one must contend with the tremendous impetus with which the focal infection idea has hypnotized our schools and hospitals.

The article on Standards in Therapeutics is especially timely in view of the fact that endless varieties of medicines are constantly brought to the physician's attention with often little or no proof of their efficacy and not infrequently with the statement that "it is worthy of trial." "A small authoritative year book stating in the fewest words the standard treatment for a large number of conditions" is recommended.

That hyperinsulinism is a definite pathological entity, entirely distinct from the artificial condition due to ex-cessive insulin therapy, is discussed by Wilder who summarizes the scant literature on this rare condition. The treatment of this condition is as yet unsatisfactory

The literature is not wanting in medicines for epilepsy and in the chapter on Progress in Pediatries some of these numerous measures are discussed. The conclusion arrived at is "that in most cases of epilepsy treatment is still far from satisfactory." Such a sane confession is truly indicative of progress.

EMANUEL KRIMSKY.



OUR NEIGHBORS



HEALTH INSURANCE IN WASHINGTON STATE

The question of insurance for medical service came before the medical profession of the State of Washington in an acute way two or three years ago owing to contracts made by large lumber and other industrial corporations for the care of their sick workmen. Some of the county medical societies met the problem by organizing County Service Bureaus as described in this Journal of July 15, 1933, page These societies propose to extend the 900. same service into other fields of health insurance, so that agreements as to forms of medical service, the fees, and the methods of administering the service, shall be in the hands of the County Societies. Eventually the County Service Bureaus might extend the service into the field of voluntary health insurance. One object of the Bureaus is to enable the medical profession to direct and control the practice of medicine in its public health and public relations aspects.

The October issue of Northwest Medicine contains four papers which were read at the annual meeting of the Washington State Medical Association on August 28, 1933, on the general subject of health insurance and with special references to the County Service Bureaus. Dr. A. H. Peacock, in his presidential address said:

"The outstanding development of the year has been the growth of the county medical service bureau. This type of service was an economic reaction to the corralling of industrial and supplemental health contracts by small groups and clinics mostly operated and controlled by industrial surgeons. The average practitioner saw the complete breaking up of private practice. Forced by necessity, groups in county medical societies banded together, formed county service bureaus, bid for contracts, until the movement has become state wide with ten units and eight hundred members."

Dr. H. G. Wright, of Seattle, a leader in the Service Bureau, read a paper in which he urged that the State Society organize a State Service Bureau for the purpose of coordinating the work of the county bureaus. Dr. Wright said:

"Many large firms are state-wide in character and scope. Some employees are shifted from county to county or their duties may take them from one county to another. If such a firm had its contact with a state-wide organi-

zation, its employees' medical care would be assured anywhere they might be. The county bureau which is not now able to get any contracts, though many exist, would be able to take of and have for themselves those contracts which under the present scheme of things they never will have.

"Then, when that time comes, as it surely will, when harmful legislation is proposed, this state organization, which is economic in its nature, will have greater power in bringing about the desires of the organized medical profession than anything ever seen in this state before."

In a paper on the general subject of health insurance, Dr. H. J. Whitacre of Tacoma, approved the bureaus, and said:

"Developments in the workmen's compensation and industrial insurance movement in the state of Washington have done more to precipitate the health insurance question than any other single factor. They have, in fact, developed health insurance in our midst, and we must now tardily meet the medical care evils that have grown out of the industrial insurance movement Medical service bureaus in each county and a coordination of the policies and plans of these county units by a state medical service bureau, as has been discussed by Dr. Wright, is the logical next move of the profession in the state of Washington.

"County medical society bureaus, organized primarily for the purpose of handling the industrial worker, are the logical way to begin our attack upon the health insurance problem. When we have gained experience with this phase of health insurance, we will be ready to talk about any extension of the insurance principle that may be necessary. In the meantime, we will be organized for group bargaining and for united opposition to private insurance companies that wish to enter this field for profit at the expense of the patient and the physician."

The House of Delegates voted to approve the establishment of a State Service Bureau and the approval of the work of the county bureaus. Commenting on this approval of contract practice, the Journal says editorially:

"The profession of this state has adopted contract practice in spite of former strenuous condemnation of it, believing that it leads the way to the solution of a great abuse. At the

(Continued on page 1294-adv. xii)

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(Continued from page 1292)

same time it is well known that this form of practice is not looked upon with favor by leaders of the profession in more conservative sections of our country. At the recent annual Conference of Secretaries and Editors under auspices of American Medical Association, disapproval was emphatically expressed against the medical profession participating in any such fields of practice which have hitherto been viewed with universal condemnation. Now that Washington State Medical Association has formally ventured upon a course which has not hitherto been adopted by the organized profession, the ensuing results of such an undertaking will doubtless be observed with interest and possibly anxiety on the part of the profession in other localities. The experiences during the coming year ought to establish whether or not this new venture has been a wise one and will become productive of results of sufficient satisfaction to establish it as a permanent form of medical practice"

PUBLIC HEALTH EDUCATION IN MINNESOTA

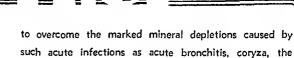
The annual report of the Committee on Public Health Education of the Minnesota State Medical Association is contained in the September number of *Minnesota Medicine* which says:

"Among the events of the last part of last year was the second annual physical examination of 4-H Club candidates for healthiest boy and girl of the state. The examination was held at State Society headquarters, 11 West Summit Avenue, Saint Paul, September 8, with the aid and cooperation of the Minnesota Public Health Association. Credit attaches to the examiners who selected the winner from the hundred well-groomed specimens who presented themselves for judging at the State Society headquarters. These examiners earned for medicine and for the medical profession of the State the good will of the 4-H Club groups as well as each of the 100 farm boys and girls who competed.

"Cooperation with the Minnesota Public Health Association in the publication and distribution of the First Aid Manual to all of the schools of Minnesota early in October was a departure of the year. This manual was published in response to the need for an authentic guide to the teacher both in time of emergency and in the regular teaching of hygiene. Its text was carefully prepared to give only such instructions as should properly be carried out in anticipation of the doctor's arrival. Its con-

(Continued on page 1296-adv. xiv)

| Comineralize



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THE ABDOMINAL SUPPORTER CO. 47 West 47th Street New York City (Continued from page 1294-adv. xii)

stantly repeated instruction was 'Call the Doctor First'! The Manual was also offered to every physician in the state for distribution in any institution in which he might have an interest.

"In this way we hope to counteract the propaganda of commercial agencies who constantly distribute literature urging the use of proprietary antiseptics in every emergency.

"The newspaper service is sent weekly to 340 newspapers in the state. The editorial Sub-committee of which Dr. H. F. Helmholz of Rochester is chairman censors and revises each bulletin bearing our endorsement. These bulletins continue to be prepared and sent out from the state office, with the aid of facilities made available by our alliance with the Minnesota Public Health Association.

"A few years ago an urgent demand was made upon your state association to counteract in some way the great amount of undesirable health publicity that was published in the papers of our state, especially the smaller rural weeklies. In compliance with this demand, a news service was instituted, which at first served less than 100 papers, and now serves about 340 papers out of a total of 494 in the

"Most of the papers in the state, including those in the Twin Cities, are using these stories.

"The remaining number of papers obtain their health news from the MacFadden news service, cultists and similar sources.

"A concrete problem that is likely to present itself to us soon is involved in the possibility of mass x-raying in lay hands or in the hands of persons not directly under the supervision of scientific medicine. A machine that will take mass x-ray pictures at nominal costs is now thought to be close to perfection. Such a machine in commercial and cultist hands, might well cause much harm, whereas, under control of scientific medicine, it could be used legitimately to assist in a high type of diagnostic procedure at proper times and places.

"The principle involved in foreseeing such situations and in forestalling them by prompt action is the same as has prompted us in the past to take a stand against lay use of sun lamps for indiscriminate treatment. It may also be seen in the retention in our own hands of the work of the Heart Association which would otherwise have passed into lay hands, ill-equipped for such work. This committee urges study and alert action to prevent irresponsible and indiscriminate promotion by untrained persons of useful apparatus such as the new x-ray

(Continued on page 1298-adv. xvi)

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(Continued from page 1296-adv. xiv) Radio 487.23 Miscellaneous Postage and Printed machine and of strictly medical programs such as organized propaganda for the lowering of Matter 99.67 deaths from heart disease." 431.20 Sundries, Petty Cash, Telephone and Telegrams The cost of the service is given in the fol-17.20 lowing table:-4-H Club Examination 85.70

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SALES TAX AND MISSISSIPPI DOCTORS

The Mississippi section of the August issue of the New Orleans Medical and Surgical Journal discusses the sales tax imposed by the State on the gross incomes of doctors, and suggests that each county society approve the following resolution which was adopted by the House of Delegates of the State Association:

"WHEREAS, the sales tax levied on the gross income of physicians of Mississippi by the State Legislature at its last regular session

works an injustice on and imposes a discriminating burden upon the physicians of the State who are already paying privilege tax, income tax, and the regular sales tax imposed on all articles purchased just as other citizens, and

First Aid Manuals

Posters sent out at 11/2c each

"WHEREAS, it should be borne in mind that the physicians take care of the indigent sick, the cost of which would devolve upon the (Continued on page 1300—adv. xviii)

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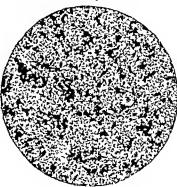
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(Continued from page 1298-adv. xvi)

State if the medical profession did not take

care of such charity work, and

"WHEREAS, the physicians of the State feel that the general sales tax is fair and equitable, but they know that a double imposition of such tax is not fair and is not in accord with the spirit of justice; and physicians feel that the Legislature would not have imposed such a tax a year ago but for the fact that the Legislature was being fought, with its back against the wall, by a certain well-organized group or groups of taxpayers in the State, and apparently the Legislature feared the effect of exempting the professional group on sales tax on gross income, in addition to regular income tax. Now since practically all of the men composing the special group or groups which were organized against the passage of the sales tax are now in favor of it, it is felt that the Legislature could well afford to correct the injustice of levying two sales taxes—one on income from services rendered and another on expenditures of physicians;

THEREFORE, be it resolved, that the Mississippi Legislature is hereby respectfully petitioned to exempt the medical profession from the operation of that part of the sales tax which levies a tax on the gross income of physicians. The medical profession has nothing to sell except its services, regardless of whether the purchaser is able to pay for such

services. And be it further

"Resolved that in view of the fact that cities and towns in the State impose a privilege tax on physicians, that the State and county privilege tax be reduced fifty per cent. If this action is taken by the Legislature, the medical profession of the State will cheerfully pay the privilege tax and the general sales tax imposed on other classes of citizens of the State."

CANCER COMMITTEE IN COLORADO

The August issue of Colorado Medicine has the following editorial comment on the Cancer Committee of the Colorado State Medical So-

ciety:

"The Colorado State Medical Society has had Cancer Committees off and on for the past six or eight years. These have been appointed at the request of the American Society for the Control of Cancer. Up to date no particular advantage seems to have been gained, probably for the reason that a definite program of work has never been adhered to, and for the additional reason that such undertakings as there were are seen to have been mapped out along ineffective paths."

"The American Society for the Control of Cancer is now embarking upon a new line of

(Continued on page 1302-adv. xx)



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AGAROL-for constipation

(Continued from page 1300-adv. xviii)

endeavor, whose broad purpose is education of the profession, especially with regard to the early recognition of cancer and the proper methods of treatment of cancer in its various situations in the body. As we understand it, they wish to continue also the education of the public.

"It is their desire that the Committee of this Society be organized promptly and that after it shall have received instructions and literature from the American Society, it will outline a campaign plan during the summer months which will be brought before the House of Delegates at the September meeting for approval. We see in this

perhaps an admission that past plans of the American Society have been subject to criticism by the profession at large because the initiative in many cases arose with the individual doctors and did not have the stamp of approval of the State Society. The new plans should be such that no personal aggrandizement can be derived by any member of the Committee.

"Among other things, it is known that County Societies will be asked to have cancer programs at their meetings, and perhaps there will be speakers provided by the Committee to introduce the subject to each County Society at a meeting

some time during the year.

COUNTY SOCIETY LEADERSHIP IN WISCONSIN

The efficiency of the County Medical Societies of New York State in assuming the leadership in local health matters is recognized in the following abstract from the annual report of the president of the State Medical Society of Wisconsin to the House of Delegates on June 12, 1933:

"Unless county societies adopt a continuing program of gradually assuming, through education and demonstration, their ability and right to become the recognized controlling and guiding-influence of all activities relating to the sick within a given country, the future will be a repetition of the past with a continuing loss, through the steady encroachment of semi-medical social and public welfare activities, not only of prestige but of prerogatives and function which inherently belong to the general practitioner.

"I have the highest admiration for the work of some of these semi-public agencies, but in all counties in this state where they are not active, I should like to see the county medical

(Continued on page 1303-adv. xxi)

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(Continued from page 1302-adt xx) societies give demonstration of doing this work in a completely satisfactory way This thought embraces the idea that when a county society once accomplishes such a project, it will continue with other activities, such as goiter prevention campaigns, prevention of cardiac lesions and complications, prevention and control of cancer, etc. It will be alert to all advances in public health work and will sympathetically cooperate with the officials of the central bureau by putting on campaigns and doing the actual administration of preventive or curative measures The too frequent. somewhat slurring remark that the general practitioner is not capable of doing this work and that it requires a specialist, has done incalculable harm Possibly in the past, with the rapid advances in technic and methods practi tioners who had graduated twenty years earlier honestly felt that the newer knowledge was beyond their ken Today medical colleges surely turn out graduates sufficiently prepared to take up, develop, and administer practically all local activities in this field under central control and guidance as has been so well demonstrated in New York State where no city under 50,000 population has a full time public health physician

"If practical, I would suggest that in order to stimulate the interest of future county society officials and facilitate their work along these lines, a clearing house of county society problems and possible solutions gathered from experience, be established in the Secretary's Department to the end that eventually a suggestive directional guide may be published by the Council embracing many problems not satisfactorily covered by the Constitution and By-Laws Thus, as regards the problem of contract practice, whether it is ethical or not apparently depends upon local conditions"

STUDIES BY COUNTY SOCIETIES IN CALIFORNIA

The October issue of California and West orn Medicine has the following editorial appeal to County Societies to tal e an active interest in public health problems

This fall it is hoped that the officers and program committee will arrange to have in addition to the usual scientific papers and dis-

(Continued on page 1304-adr 1111)

(Continued from page 1303-adv. xxi)

cussions, two or more meetings given over to a study of some of the medio-economic problems to which so much space has been given

in the official journal.

"In every county of California the care of the indigent sick brings into action certain social, economic and medical factors worthy of the interest and understanding of every member of a county medical society. It cannot be too often repeated that constructive efforts aiming at improvement of methods in the care of the indigent sick (and of elimination from the group of charity patients of citizens who have no right to receive aid from public funds or through the gratuitous services of physicians) necessarily must be based on accurate knowledge of facts and figures. To indulge in verbal criticism of conditions without knowing about the existing institutions of each county for the care of the indigent sick, or understanding their relation to the population and economic resources, as well as to the industrial and social conditions of the community, will not make for much improvement in those places where deficiencies and malfunctions exist.

"In some of the counties of the State the component county societies (notably Alameda, San Diego, Fresno, and San Joaquin) have made fairly comprehensive studies of these problems, presenting in their committee reports important information concerning their respective communities and suggesting or putting into operation plans for betterment, of value not only to themselves, but to all other county societies.

"The California Medical Association, acting through its House of Delegates and Council, in the last several years has spent many thousands of dollars in an effort to aid its component county societies to find a satisfactory solution of some of these problems. However, something more than the expenditure of moneys, and even the active interest of a few members. What is needed in order to get is necessary the results desired by all physicians is the real interest and active support of practically every member of every county society. To hope for so universal a cooperation is, however, little less than utopian. Nevertheless, if cooperative aid from every member is out of the question, it is not too much to expect it from the officers of every county society."

ANATOMICAL STUDIES

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Anterior view in five months' pregnancy showing relation of fetus to bones and superficial muscles of abdomen. Figure at right illustrates influence of supporting garment on structures.

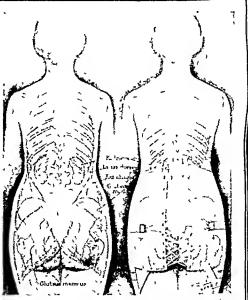
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MIDWIFERY IN ALABAMA

An editorial in the October issue of the Journal of the Medical Association of Alabama discusses the midwifery problem in the State. Roughly two-thirds of the population of two and a half millions are rural; two-thirds are white; and nearly two-thirds of the new born children are white. One third of the mothers are attended by midwives, concerning whom the editorial says:

"In 1931 there were 3,568 midwives in Alabama under the supervision of county health departments in 54 of the 67 counties. During 1932 this number was reduced, by nearly 1,000 to 2,684. This reduction was accomplished by withholding permits from those whose records showed a preponderance of untoward results such as still-births, neonatal and maternal deaths. Yet, in spite of this reduction the activities of these unskilled attendants increased from 15,325 to 17,913; approximately 2,500.

"For some years the local health departments in this State, working in close harmony with the medical profession and the county boards of health, have attempted to weed out the more grossly unfit among the midwives through a system of a limited amount of coaching and the issuage of area in "For some property of the second

the issuance of permits."

CONTRACT PRACTICE IN IOWA

The September number of the Journal of the Journal State Medical Society contains the following standards regarding contract practice adopted by the Polk County Medical Society:

"Contract practice per se is not unethical. However, certain leatures or conditions if present make a contract unethical, among which are: (1) When there is a solicitation of patients, directly or indirectly. (2) When there is underbidding to secure contracts. (3) When the com-

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pensation is inadequate to assure good medical service, (4) When there is interference with reasonable conpetition in a community. (5) When free choice of a physician is prevented. (6) When the conditions of his employment make it impossible to render adequate service to his patients. (7) When the contract because of any of its provisions or practical results is contrary to sound public policy.

"Each contract should be considered on its own merits and in the light of surrounding conditions. Judgment should not be obscured by immediate, temporary of local results. The decision as to its ethical or unethical nature must be based on the ultimate effect, for good or ill, on the people as a whole."

ATTENDING COUNTY SO-CIETY MEETINGS IN TENNESSEE

The January issue of the Journal of the Tennessee State Medical Association contains the following note of a record-breaking attendance on county society meetings which probably would be hard to duplicate elsewhere.

"We have received the personal record of 132 members attending the Knox County Medical Society for a seven-year period. The society has met 50 times in 1932, 339 times in seven years. Dr. Jesse C. Hill has missed only two meetings during the long perioda record probably not duplicated anywhere in the United States. Dr. R. B. Wood has been present at 316 meetings. Eighteen memhers belong to the 200 class, 24 members have been present at more than half the meetings, and 47 members have been present at more than 25 meetings in 1932. Eleven members did not attend a single meeting in 1932 and 3 mentbers have been absent from all meetings for seven years. think of the good things these three members have missed! Their interest in the society seems to be limited to paying their dues."

WHY EAT CRANBERRIES?

Who doesn't relish rich red, tangyflavored cranberry sauce? To the American people since the time of tne Pilgrims, the tasty fruit has had a peculiar intangible appeal. Frosty September days usher in bright autumn colors and — cranberries. These latest of the season's berries lend color to the table and interest in the meal. They seem to prod jaded appetites into activity.

Since Colonial times the cranberry has been regarded as possessing certain health virtues, especially as a febrifuge (fever reducer) because of its cooling effect. However, it is only recently that this fruit has been proved to possess real nutritive value. Investigations extending over a period of three years at the Massachusetts State College demonstrate conclusively that cranberries are richly endowed with vitamin C. This is the which promotes growth, vitamin strengthens the blood vessels, and makes strong bones and teeth. As little as three cranberries a day, that is, about one-eighth ounce, sufficed to promote maximum growth and full protection from symptoms of scurvy in young guinea pigs over a 90 day feeding period. In this test all the vitamin C which the animals had was in the cranberries. Without the cranberries, the guinea pigs lived only 25 to 33 days.

Vitamin C is unstable and is often destroyed by cooking, stirring or straining. Would cranberries lose this Will o' the Wisp vitamin if made into sauce? Exhaustive feeding tests on whole-fruit cranberry sauces made from several recipes showed a retention of 80 to 90 per cent of the vitamin content of the fresh berries.

Other experiments carried on with white rats showed that the cranberry contained small but significant amounts of Vitamin A, the antiinfective vitamin. The latter is thus called because of its function in aiding the body to resist infections of all kinds. This vitamin is found in healthy, inspected cattle in greatest abundance in cod liver oil. dairy regions of America.

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Thus we see that we may not only enjoy the attractiveness and flavor of cranberry sauce, but at the same time we are helping ourselves to vitamins -and health.-Adv.

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Borden's Evaporated Milk, which is now enjoying such a great vogue in infant feeding, is manufactured only from pure, full cream milk from healthy, inspected cattle in the richest

"This product," says a scientific pamphlet, which is accepted by the Committee on Foods of the American Medical Association, "precisely fulfills the exacting requirements of safety, digestibility and assimilability, uni-formity, stability, and nutrient quality demanded by the physician for the infant feeding formula."

That this is so has been demonstrated by many clinical tests on large groups of babies, as well as by the experience of physicians with innumerable in-dividual cases. Of particular interest is a recent study by Jeans and Stearns (Am. Jour. Dis. Childr. 46:69, July, 1933) showing that the retentions of nitrogen, calcium, and phosphorus by infants on evaporated milk are approximately the same as those of infants fed on undiluted acidified fresh milk,-Adv.

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NEW YORK STATE JOURNAL of MEDICINE

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November 15, 1933

OBSERVATIONS UPON THE DEPOSITION OF LIVER FAT IN NORMAL AND DIABETIC ANIMALS

By CHARLES H BEST, MD, TORONTO, CANADA

Abstract of a paper presented in a Symposium on Some Disorders of Liver Function at the Annual Meeting of the Medical Society of the State of New York at New York City, April 5, 1933

T I is remarkable that fatty changes in the liver are associated with so many clinical conditions as well as with numerous abnor mal states in experimental animals have been very few clinical investigations of abnormal fat metabolism in which the histo logical findings have been carefully correlated with the results of comprehensive chemical studies. At the moment it appears to me as if progress could be accelerated by utilizing more generally the results of chemical analysis of normal and diseased liver instead of relying merely on pathological histology the results of which are unusually difficult to inter-pret in this field. It is very hard to adopt the fat stains so that a reasonably accurate idea of the character and amount of the fatty substauces is obtained. The chemical methods available are, of course, by no means completely satisfactory and at present the results give us even less information as to mechanism and production of the fatty changes than do the histological studies When histological and chemical methods can both be applied the situation is sometimes clarified

As you will see from the title of my paper, I have no intention of discussing the various fatty changes in liver in an exhaustive inamier. If I take one minute, however to rino over certain phases of the subject, my subsequent remarks may be of more interest. In experimental animals we may see an increase in liver fat during the first stage of starvation. We can produce fatty livers in several species of animals by adding large amounts of fat to the diet. In some species very little fat is required to produce this change. Evidence is accumulated that certain fats are more pronut to produce increased deposition of liver fat than others. The glicoside philorlizin produces an increase in the fat content of liver and this may also be observed, of course after the administration of chloroform alcohol,

benzol, phosphorus, carbon tetrachloride, hydrazine, and other substances Bacterial toxins may produce an unmasking, and in some cases an increase, in liver fat. An increase in liver fat is said to occur during the late stages of pregnancy in rabbits, but Mac-Lean, working with us in Toronto, has not been able to confirm this conclusion Administration of pituitrin has been reported to be followed by a definite increase in liver fat and the available figures support this interpretation The addition of cholesterol to a diet low in fat does cause a definite increase in the fat content of hver (Yuasa 1928) in several species of laboratory animals Dinimished atmospheric pressure is said by other workers to have produced similar results. We know that before the use of liver preparations, cases of pernicious anæmia often showed at autopsy extensive fatty changes in the liver There are, of course, other clinical conditions such as vellow fever, acute yellow atrophy, etc., characterized by increase in liver fat In clinical and experimental diabetes the fat content of the liver may be extremely high if the dose of msulm is madequate or if the diet is rich in In diabetic dogs which are receiving a reasonable dose of insulin and a diet very low in fat, extensive fatty infiltration and degeneration of the liver may appear (Allan, Bowie, Macleod and Robinson 1924) It is abundantly clear, therefore, that the liver reacts to many forms of injuly by an accumulation of fat in its tissues While it is fascinating to speculate on a mechanism which may be the underlying factor in this effect, I must not digress to discuss this matter at present

Now let us see what weapons are at present available to counteract this tendency toward deposition of hier fat. I am only competent to consider this aspect of the question from the experimental point of view, and fen of my remarks can be directly applied to clinical

problems. In the normal animal the amount of fat in the liver can be reduced by providing a diet high in carbohydrate. This has been reemphasized by Rosenfeld (1929, 1932) quite recently. The carbohydrate may exert these effects by one or more of several ways. There is no longer any ground for believing that large amounts of glycogen and fat cannot under certain circumstances exist simultaneously in liver tissue. It is true, of course, that the glycogen content is usually low when there is extensive fatty degeneration, and that maximum glycogen storage results in a low The fat content may, however, be normal or above normal when the liver contains quite large amounts of glycogen and vice versa. Since it is easy to demonstrate that insulin causes a marked lowering of liver fat in the diabetic animal and a similar but less marked effect in the normal, it is reasonable to think that the carbohydrate may owe part of its effects, at least, to liberation of insulin from the pancreas. It is well established that a diet high in carbohydrate will cause increased liberation of insulin, and it is equally true that insulin will lower the fat content of liver. Carbohydrate has little effect on the fat content of liver in the completely depancreatized dog. Insulin itself has, of course, a profound effect. There has been very little work on this action of insulin, however, and assuming that these results are familiar to you, I will spend the rest of my time discussing the effect of other substances on deposition of liver fat. To return to our diabetic dogs: in the experiments in which liver fat has been studied, the carbohydrate of the diet and the insulin administered are kept absolutely constant. Under these conditions fatty changes occur slowly in the livers of the animals, but in certain cases the accumulation of fat may be very marked within a few months after pancreatectomy. fatty livers can be quickly produced by adding fat to the diet of these diabetics. This liver fat is made up of more saturated fatty acids than those which are found in combination with phosphate in liver tissue. When the dogs' livers become fatty, sugar production in the tissues is diminished and the animals require less insulin to keep them sugar free. Thus fat itself, or substances like synthalin, myrtillin, and so on, which may produce fatty changes, affect very favourably the carbohydrate balance sheet in these diabetics, but the effect is produced by a highly unphysiological It is probable that these fatty changes interfere with a variety of hepatic functions, and this has indeed also been indicated by the results of Rosenthal and Lillie (1931), who found that a diet high in fat definitely increases the retention of the dye bromsulphalein. The increase in blood uric acid which may be observed in patients on a fat-rich diet, has been correlated by Harding, Allin and Eagles (1927) with dimished excretion, but the possibility may be considered that decreased liver function may have been in part responsible in some cases.

In the diabetic dogs on a fat-poor diet which I have referred to above. Allan et al found that fatty livers did not appear when raw pancreas was included in the diet. It has been found by members of our group (Hershey and Soskin) that crude lecithine contains some substance which prevents the occurrence of these fatty changes in the livers of diabetic animals. The results of experiments on normal animals (Best, Hershey and Huntsman, 1932; Best and Huntsman, 1932) indicated that the substance was a component of purified lecithine, and other experiments established the fact that the active material was choline. When choline is administered to a diabetic dog the amount of fat in the liver is reduced. When choline is administered daily to a depancreatized dog the animal remains in good condition for long periods of time, even though an amount of fat which would soon have produced disastrous results in the absence of choline is ingested. We have an animal which, on the fifteenth of this month (April), will have been one year without its pancreas. During the last seven months this animal has ingested 20 grams of fat per day, which in similar animals has rapidly produced fatty changes in the liver. Her condition is excellent, and the results on this one animal provide very strong evidence for the efficacy of choline in preventing the fatty changes.

To return again to a consideration of nondiabetic animals, as stated above, the fact that purified lecithine prevented deposition of liver fat led us to try the effects of the components of this substance. When glycero-phosphate or sodium oleate is administered there is no diminution of liver fat. Amino ethyl alcohol, which might also be present in this material, since the lecithine was not altogether pure. also gave negative results. Choline, however, consistently lowers the percentage of liver fat. The addition of any of the other components of lecithine or choline does not enhance the effectiveness of the choline. Betaine, a substance which is closely related to choline, possesses the same properties with respect to liver fat as choline. We thus see that choline is effective, not only on diabetic animals, but also on non-diabetic ones. Furthermore, Miss Ridout and I have recently found that an increase of liver fat produced by cholesterol feeding is inhibited by choline and betaine We thus believe, in so far as experimental animals are concerned, that we have added another weapon to the armamentarium available for the battle against fatty changes in the liver We know as yet little about the mechanism of the action of cholme, and we have no data which suggest that the body fat is appreciably diminished by choline The rate of oxidation of fat administration may, of course, be changed, but experiments designed to investigate this point have not as yet been completed

These experimental results may suggest to you certain practical applications Careful experiments are very difficult to carry out clinically and the encouraging results on a

few isolated cases which have been obtained may, of course, be completely misleading The experimental results which I have been describing, however, would seem to justify the assumption that excess deposition of liver fat in inimals can be best prevented or removed by the liberation of endogenous insulin by providing adequate amounts of carbohydrate, by the administration of insulin if sufficient is not available, and, in a much more dramatic way, by the provision of adequate amounts of choline or betaine Since choline or betaine have not been used extensively in clinical work, great care should be taken by those who may be eurious enough to explore the possibility that the results of the use of these substances may possess clinical interest

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PATHOLOGY OF ICTERUS

By PAUL KLEMPERER, MD, NEW YORK, N Y

From the Laboratories of the Mt. Sinai Hospital New York City Read in a Symposium at the Annual Meeting of the Med cal Soc ety of the State of New York at New York City April 5, 1933

TCIERUS is the term applied to the discoloration of tissues and body fluids by abnormal accumulation of bile pigment Its intensity varies with the amount of pigment from a slightly yellow tint to a deep greenish black, Moreover, modifications in the nature of the pigment may produce variations of the tint which according to Brugsch, is of diagnostic importance The essential condition in tissue icterus is an increase of the pigment concentration within the blood The various structures and fluids of the bodies however are not equally discolored, thus the central nervous system* rarely becomes jaundiced and cartilage and peripheral nerves hardly Bile pigment accumulates within the urine, sweat and milk, while tears, saliva, mucus, gastric and pancreatic juice remain un-stained Exudates and transulates contain ample bilirubin when it is elevated within the blood Bile pigment impregnates the tissues by diffusing through the vascular wall, but, differences in vascularization per se do not fully account for the variations in the intensity of jaundice in the various tissues and body fluids Elastic tissue has a great affinity for

* In leterus neonatorum the brain especially the basal ganglia may be intensely icteric

hilirubin which explains the ready pigmentation of structures such as skin, scleræ and blood vessels which are rich in these fibers (Rosenthal²) On the other hand, nervous influences may impair the permeability of the vascular wall, thus explaining, according to Meakins, the absence of jaundice on the paralyzed portion of the body or other conditions of partial acterus (Umber and Rosenberg) It is interesting to note that the fluid of blisters caused by a vesicant upon the unstained part contain the same amount of bilirubin as the blood-serum The intensity of the icterus in wheals depends upon the lymphagogue or exudative efficacy of the injected substance. Thus morphine and histamin attract more than proteins (Klein, Adlersherg and Perutz)

Bilirubin is excreted by the kidneys as a threshold substance The threshold varies with different species-in man it is 2 mg per cent, but is markedly raised in renal disease (Nonnenbruch, Peremy) The transudation of bilirubin into the ventricular fluid is hindered by the existing blood-liquor barriere of the chorioid plexus (Askanazy, Schmorl) eerebrospinal liquor is usually stained to a degree much less than the other body fluids

or the blood serum

The term jaundice should only be applied to conditions in which the color is due to bile pigment. In those cases in which other endogenous or exogenous yellow substances such as lipofuscin or carotin are responsible, it is advisable to speak of pseudo icterus. This term was suggested by Wahl for the cases in which ingesting of picric acid had caused an intense discoloration. However, it has been shown by Brulé et al, that picric acid produces liver damage which may also be responsible for bilirubin retention. Jaundice may be produced by the oxydation product of bilirubinbiliverdin, (Melas icterus). However, the existence of urobilin icterus is, at present, not recognized. Thannhauser and Rosenthal and his associates have shown the orange tint of the tissues and serum of hepatectomized dogs to be due, not only to bilirubin, but also to the presence of another pigment, xanthorubin. Fischer and Thannhauser have futhermore maintained that several pigments of similar chemical constitution but isomerically different may be derived from the blood pigment. These might come from different sites of formation, a fact which would be of great importance in the classification of the various clinical forms of icterus. Because of this, the exact knowledge of the chemistry of the various pigments is of immediate practical importance.

The chemical structure of the pigment of bile, the bilirubin, has been established by Fischer and Kuester. Later investigations of Fischer and Reindel and Rich and Bumstead have shown that the pigment found in old hematomas, the hæmatoidin of Virchow, is structurally identical with the bilirubin of bile. It is exclusively derived from the pigment of blood, but the process of transformation of the hæmatin into bilirubin is not yet fully understood. Fischer, 10 years ago cautioned against the belief that this process of transformation is very simple. He assumed that the hæmatin molecule is broken up into pyrrol complexes and that these were in turn rearranged to form the bilirubin molecule. Thannhauser recently has expressed a similar belief.

The presence of bilirubin is demonstrated by the characteristic color scale which it develops in the course of oxydation, by the absorption band of the spectrum, or by its ability to combine with diazonium salts to form an azo-compound. This reaction developed by Ehrlich and Proescher has been introduced into the clinical investigation of icterus by H. Van den Bergh. It is common knowledge that Van den Bergh and his collaborators demonstrated that the bilirubin of the bile turns red immediately after the Ehrlich reagent has been added while bilirubin

extracted from pigment stones in aqueous solution requires the addition of alcohol for the reaction. It is sufficient to keep in mind. that the same difference of a direct and indirect reaction was present in the serum of various patients and that Van den Bergh was the first to demonstrate that the direct reaction was found chiefly in obstructive jaundice, while icterus without obstruction usually gave an indirect reaction.

Many investigators have attempted to explain the difference in the reaction. Some writers believed that the direct reaction is determined by the simultaneous presence of other biliary components within the serum such as cholesterol and biliary acids. Barron has shown that bilirubin is adsorbed by the serum proteins and has to be liberated by alcohol in order to react. In adding other substances to the serum, which are likewise adsorbed by the serum proteins, such as biliary acids, cholesterol, or sodium oleate, the indirect reaction becomes positive. According to his opinion the reaction is directly positive, whenever the bilirubin concentration exceeds 16 mg. per cent. A similar belief is held by Elton, Snider and Reinhold, Strauss and Adler think of an interrelation between serum globulin and the type of Van den Bergh reaction. A drop in the globulin fraction is responsible for the direct reaction. Accordingly, the type of reaction might be influenced not only by a disturbance in the bilirubin metabolism but also by an alteration of the protein function of the liver. Griffith and Kay believe that the directly reacting pigment is neither bilirubin nor one of its common salts but that it differs in its physicochemical properties. Fowweather has established that the relation between the direct and indirect bilirubin is dependent upon a more reactive enolform and its tautomeric ketoform. It is interesting that Sobotka and Goldberg of our laboratories have at the same time demonstrated that biliary acids may exert an enolising influence upon other similar tautomeric equilibria. Although the nature of both types of bilirubin is not yet fully understood, the significance of the difference in the reaction must not be underestimated. This is especially true if one keeps in mind that the hæmatoidin formed outside the liver and the bilirubin of the bile react This, no doubt, indicates that an differently. activity of the liver is responsible for the difference. This consideration leads one to inquire as to the site of the bilirubin formation. It is impossible to discuss this question in brief. Moreover, a discussion may be safely omitted because the subject has been ably reviewed by many competent workers within the last years. But it may not be amiss to briefly

present some of the more important recent investigations which have been published since the last comprehensive reviews by Rich

in 1925 and 1930

Extrahepatic bilirubin formation has been proven beyond a doubt by the accumulation of bilirubin within the serum of hepatectomized Further direct evidence has been produced by Mann and his collaborators who have shown that the bone marrow is the chief site of extrahepatic bilirubin formation. By supravital perfusion of the spleen, Ernst and his coworkers have shown that biliriibin is formed from hemoglobin within this organ. Rich has shown that bilirubin in tissue cultures, is formed by meso That the liver cells merely modify, dermal cells concentrate and exercte the bilirubin formed outside the liver is the contention of Aschoff, Mann and Rich, to mention only the more important proponents of this belief Yet one must not forget that Thannhauser and Rosenthal have shown that bilirubin is but a small portion of the pigment which accumulates within the serum of hepatectomized dogs. The greater part is orange colored called anthorubin, which might be a propigment of bilirubin, which is changed into it only by the activity of the liver Moreover Rosenthal and his collaborators, by careful experiments have shown that the bilirubinemia caused by hemolytic substances such as Toluylenediamine and Phenylly drazine is far less intense in hepatectomized dogs than in control animals Rosenthal concludes that, while extrahepatic bili rubin formation cannot be denied, the essential part of bilirubin production belongs to the liver Taniguchi repeated some of these experiments and concurred with his conclusion. In most recent experiments Rosenthal tried to show that the polygonal liver cells proper are responsible for the bilirubin formation within the liver and not the Kupffer cells which belong to the reticulo endo thelial system. It is possible to paralyze this latter system for about 50 hours by injecting an electro colloidal copper solution If the reticuloendothelial system alone would be capable of bile pigment production, bilirubinemia and icterus could not be provoked in the period of arrested However injection of icterogen, a dimethylpyrrohol compound, into mice prepared in such a way causes joundice just as intense as in controls This, according to Roscuthal, proves the ability of the polygonal liver cells to actually Aschoff attacks the validity of form bilirubin these experiments by assuming that the damaged reticulo endothelial cells may liberate ferments which might be able to minufacture the bilimbin within the blood stream. In order to disprove Rosenthal's conclusions based on his Toluylenediamine and Plienylly drazine experiments the Aschoff school has repeated them and attained similar results. However, there is disagreement in the interpretation. It would lead too far afield

to go into the details of their argumentation. If one impartially reviews the investigations of the last two decades one is forced to conclude that bilirubin is formed both extrahepatically by the cells of the reticulo endothelial system and possibly by ferments within the blood stream as well as by the polygonal liver cells. For the present it cannot be decided whether extrahepatic or intrahepatic bilirubin formation is of greater importance under normal and pathologic conditions.

The classification of acterus greatly depends upon the viewpoint one takes in the question of bilirubin formation. If one believes that all the bile pignent is formed outside the liver and that the latter acts merely as an excretory organ as do the kidneys, one may divide jaundice into three groups.

1 Overproduction icterus due to excess forma

tion of biliriibin

2 Retention icterus due to mability of the damaged liver cells to adequately excrete the bilirubin circulating within the blood

3 Resorption acterns due to obstruction of the

biliary channels

If one sides with the dualistic concept of bilirubin formation he has to accept, just the same, the existence of an overproduction as welf as a resorption interus. Only in reference to the interus due to liver cell alteration has he to assume that its cause may he, not only in a retention of bihrubin due to excretory insufficiency, but possibly also in a perverted course of the bile pigment into the blood capillaries instead of the bille capillaries.

For practical purposes the liver is always the center of the ieterus problem. The vital question for the mm in practice remains as to whether the ieterus in a case under observation is due to liver daining or not. The answer to this question determines the choice of treatment and the prognosis. For practical needs the jaundice problem revolves about the simple question. Where does the pathology he, before, within or after the liver cell? With this question in mind, I now should like to review the various clinical forms of ieterus.

Jaundice as a diagnostic, therapeutic and prognostic problem will chiefly concern the general practitioner and the surgeon but occasionally the specialist also has to deal with the question

During pregnancy, icterus may occur as an incidental intercurrent disease, icterus in gravidi late, or it may arise as a result of certain pathologic alterations of the organism attendant upon pregnancy, icterus e graviditate (Heynemann) * It has long been known that a considerable per centage of cases of the primary acute yellow atrophy occur in late pregnancy or in puerperium Icterus is known and dreaded in the severe cases

^{*}Cases of acterns recurring at every pregnancy lave Leen tell; Schwal;

of toxemia of pregnancy and in eclampsia. autopsy severe destructive lesions of the hepatic parenchyma are found. In those cases which subside, a latent liver damage may persist for years, manifesting itself by the presence of noncharacteristic symptoms such as nausea, epigastric pressure, headache and dizziness. Functional tests will reveal an insufficiency of the liver (Stroebe). The occurrence of grave hepatic disorders during pregnancy raises the question as to whether a liver alteration of a milder degree does not occur more frequently (Breda). Hofbauer has called attention to certain morphologic alterations, characterized by glycogen deprivation and fat infiltration of the liver cells, which he called pregnancy liver. It is questionable whether these observations should be regarded as evidence of hepatic lesions. However, the clinical investigations with several functional tests such as, carbohydrate assimilation or bilirubin excretion, suggest the presence of slight liver insufficiency in a considerable percentage of pregnant women, (Eufinger and Bader, Kaufman, Seitz). One is justified therefore, in believing that icterus occurring during pregnancy may be of hepatic origin. In addition, one must bear in mind that the influence of pregnancy upon the vegetative nervous system may cause a greater irritability of the smooth muscle fibers. This in turn may lead to spasms of the Oddi's constrictor muscle and possibly to inflammatory conditions of the biliary tract and finally jaundice. It might be mentioned, in passing, that the alterations of cholesterol metabolism in pregnancy play an important role in gall stone formation and thus indirectly in subsequent obstructive jaundice.

Icterus in extrauterine pregnancy has first been reported by Dick, and similar instances have been observed by other competent clinicians (Schottmüller) even though Horowitz and Kuttner did not find hyperbilirubinemia in 15 cases. The cause of the jaundice may be the resorption of bilirubin which has been formed within the hematoma. Michaelis believes that autohemolysins formed in the hemorrhage may cause intravascular blood destruction with increased bilirubin formation. In any event, increased blood destruction is responsible for the icterus; this is likewise suggested by the presence, in such cases, of hæmatin within the serum (Schottmüller, Bingold). The fact is of diagnostic importance.

Brief mention should be made of *icterus* occurring during menstruation. This was first described by Senator, but is today almost forgotten. Further investigations with the newer methods are desirable. Bergmann did not find bilirubinemia during menstruation.

Icterus neonatorum is of interest for the obstetrician as well as for the pediatrician. Since Hirsch and Yllpö simultaneously discovered that the umbilical blood of the newborn has an elevated bilirubin titer, icterus neonatorum has been re-

garded as a mere aggravation of a physiological condition. Yllpö regarded a relative insufficiency of the fetal liver as the cause for the bilirubinemia and jaundice. However, Aschoff's collaborators, Lepehne and Schultz have shown an excessive blood destruction by the reticulo-endothelial system within the first days of life. I have also seen conspicuous erythrophagocytosis within the spleen and liver in icteric newborn. Icterus neonatorum falls therefore into the group of over production icterus. Whether the liver is also insufficient to eliminate the excess bilirubin is of secondary importance. At all events, there is no morphologic evidence of liver pathology. The excessive hemoglobin destruction has recently been ably explained by investigations of Goldbloom and Gottlieb and of Anselmino and Hoffman. They have shown that the intrauterine fetal organism exists under conditions of extreme oxygen dearth, which condition could never be tolerated in extrauterine The oxygen tension of the fetus corresponds to that at an altitude of 10,000 meters. The same compensatory phenomena are called into play which take place in life at high altitudes and which have been investigated by the British Mount Everest Expedition of 1924. Elevation of the red cell count and the hemoglobin and the increase of the total blood volume are of the greatest significance for the problem of icterus of the newborn. With birth, all those compensatory measures become superfluous and the adaptation to the lack of oxygen suddenly changes for an acclimatization to the normal conditions of extrauterine life. About 30 g. of hemoglobin are destroyed and transformed into bilirubin. While these investigations have fully explained the reason for the postnatal increase of the bilirubinemia which leads to the visible icterus, the physiologic bilirubinemia of the newborn at birth is not accounted for. Here Schick's hypothesis gives a satisfactory explanation. According to this author a considerable quantity of maternal blood is to be destroyed within the placenta during intrauterine life in order to supply the fetus with the material, especially, iron, from which to form its own hemoglobin. The pigment factor thus liberated furnishes the amount of bilirubin circulating in the newborn at birth. According to these considerations icterus neonatorum hardly be regarded as a morbid condition. Intercurrent diseases or the debility of the premature infant are usually responsible for death.

Those cases in which icterus is the leading symptom of a serious disorder of the infant are quite different. These instances have been called icterus gravis of the newborn. At autopsy, it is not uncommon to find a sepsis originating from an infection of the umbilicus; rarely congenital syphilitic hepatitis is responsible for jaundice. However, other destructive lesions, and in rare cases, even acute yellow atrophy have been observed, (Klemperer, Lit.). An umbilical infection

which does not cause general sepsis and early death may in due time produce severe parenchymal damage causing icterus Apart from such cases of acterus, due to hepatic damage there are cases of severe, occasionally, congenital icterus in which a blood dyscrisin seems to be responsible Such cases, characterized by an excessive number of nucleated red cells have been termed erythro blastosis of the newborn They may be com plicated by congenital hydrops and icterus of the The investigation of three such cases has caused me to regard them as the result of a disturbance in the coordinate development of the blood-forming organs The icterus must be considered as an over production icterus, masmuch as there are no liver lesions. These eases occur repeatedly in one family and most of them are fatal

Icterus syphiliticus and salvarsan icterus are of great interest for the dermatologist. It has long been known that the treponema of syphilis has an obvious tendency to cause liver damage This holds, not only for the characteristic hepatic lesions of the tertiary stage, but also for dis orders of the liver in the early phase of syphilis The occurrence of acute yellow atrophy in the secondary stage has been described by Lebert shortly after the discovery of the disease by The mild icterus in the secondary Rokitansky stage, first observed by French and German physicians in the latter part of the nineteenth century found only speculative interpretations (Wile, Lit) because anatomical investigations in such instances were lacking. Eppinger was the first who studied such a case in a man who had committed suicide. At necropsy he found degenerative and destructive liver cell lesions similar to those observed in some cases of the so called "catarrhal icterus" Clinical observations likewise indicate that the icterus in this period is due to a func-tional disturbance of the liver The problem of icteriis in the early stages became more complicated after the introduction of arsphenamine One had to keep in mind that this drug may also be responsible for the liver damage The problem of arsphenumine jaundice was one of the most controversal points in dermitology The present concept may be best summarized in the following way (Gjessing) Icterus which becomes manifest during or shortly after the treatment (Icterus paratherapeuticus of Milian) may be divided into-I Icterus intertherapenticus and II Icterus post therapeuticus The former is subdivided into Icterus (a) due to Jarisch-Heraheimer reaction, i e, due to an aggravation of a latent syphilitic hepatic lesion (b) Biotropic icterus caused by a stimulation of a previously existing non specific disorder of the liver or biliary trace (c) Toxic icterus result of an overdose, idiosyncrasy or poisonous preparations Intercurrent acterus

Icterus post therapeuticus may be divided

into (a) Icterus syphiliticus crused by a local (Hepato) recurrence ind in (b) accidental intereurrent icterus. The existence of a late arsphenamine icterus is problematic. The practical conclusions in regard to therapy are logical. The liver function should be watched during the course of treatment (Dixon et al) and if icterus should arise the dring used should be stopped and replaced by another one, since one is unable to decide whether the jaundice is due to a syphilitic liver lesson or due to biotropism for the first dring used. In post-therapeutic icterus arsphenamine treatment can be recommended because it is chiefly due to syphilis and requires intense therapy.

In the following resume of the different chinical forms of acterus emphasis will be placed upon one element of the pathogenesis which as has been mentioned previously as of utmost importance for the practitioner in medicine—the question of the presence or absence of lesions of the polygonal hepatic cells

In reviewing a large series of cases of icterus as they are encountered within a period of several years in an active hospital, difficulties arise in the classification of the actual pathogenesis of a considerable proportion is generally simple to determine the cause of icterus in cases of obstruction of the larger bile ducts, in severe destructive lesions of the hepatie parenchying as in acute yellow atrophy in its various states or in Jellow fever, and even in hemolytic jaundice of the constitutional type or in pernicious anemia and malarm However, the question of the patho genesis becomes very complicated in leterus occurring in the course of infectious diseases such as lobar pneumonia, septicemia, Weil's disease, in jaundice of cardiacs, in cirrhosis of the liver and particularly in the so called catarrhal jaundice

Among the cruses of obstructive trundice. occlusion of the bilinry ducts by stones or neoplasm is of prime importance. Among the more uncommon causes I mention, stenosis of the ampulla of Vater by neoplasm duodenal ulcers, juxtapapillar diverticulæ (Bengolea, Greder, Th Rosenthal) or permanent spasms of the muscle of Oddi (Pavel) The obstruc tion is usually complete in the malignancies, but incomplete in the greater number of cases of stone (Weir) Among the neoplasms, earemoma of the pancreas is more frequent than of the larger hiliary ducts Carcinoma of the ampulla of Vater occasionally causes intermittent jaundice (Stakevitch Carnot) differential diagnosis from stone occlusion occult blood or tumor cells within the duo denal contents should be looked for Jaundice in primary liver carcinoma may be due to pressure upon the common hepatic duct, or to alterations of the cirrhotic liver in which they

generally arise. Metastatic neoplasms cause icterus only when they obstruct the outflow of the bile. The presence of an ecchinoccus cyst (Castex et al), gummata, inflammatory or hyperplastic lymph glands, such as in tuberculosis, Hodgkin's disease or leukemia may produce icterus, but such an occurrence is rare. Chronic pancreatitis as a cause of obstructive jaundice is frequently mentioned by surgeons, but is rarely found at necropsy.

Inflammation of the biliary passages as a frequent source of obstructive jaundice is a moot question. Cholangitis may be present at various levels in the biliary passages, extending to the larger ducts from an infection from the duodenal lumen or to the finer radicals from the blood stream. (Ascending or descending cholangitis or cholangiolitis.) Ascending cholangitis is frequently the result of a primary obstruction in the bile passages, which makes it difficult to evaluate its relative significance in the causation of icterus. The persistence of jaundice after removing the obstructing stone is often regarded as the result of a persisting cholangitis. However, it must be borne in mind that prolonged biliary stasis can produce hepatic lesions which may be responsible for the icterus, while at this stage the cholangitis is only of secondary importance. The French school of Fiessinger and Albot, Benard and Caroli have always emphasized the existence of liver cell damage in cholelithiasis. have described minute alterations of the mitochondria, while Heyd, Killian and Mac-Neal in this country have paid chief attention to inflammatory changes in the framework of the liver. Naunyn and his school have stoutly stressed the importance of bile duct infections as primary cause of icterus. Moreover, Schottmüller, Ümber and others have repeatedly emphasized the significance of the hæmatogenous infection of the finer bile radicals. Among pathologists, Frænkel and Siegmund have demonstrated such lesions in cases of icterus.

Of considerable interest are also instances of chronic remitting jaundice, which have been called "cholangitis lentea." The conspicuous splenomegaly in such instances may lead to an erroneous diagnosis of hypertrophic cirrhosis. At post-mortem examination of two such cases, I found a diffuse inflammation of the small intrahepatic and precapillary bile canaliculi with more or less extensive hepatic fibrosis. The recognition of the pathogenesis of these cases is of importance because this knowledge alone will determine a rational therapy.

The foregoing discussion demonstrates the significance, as well as difficulties of the differential diagnosis between cholangitis and hepatic lesions in icterus. However, clinical observation supported by a study of the liver function may clarify these cases.

In acute yellow atrophy there can hardly be a question about the severe parenchymal destruction being responsible for the jaundice. The etiology of this most serious liver disorder is still obscure. The occurrence during pregnancy and in syphilis has already been mentioned. Cases have also been observed during or following severe bacterial infections and subsequent to intoxications. Public health officers may be interested in the occurrence of such cases among workers in the artificial pearl and in the aeroplane industry due to inhalation of tetracholorethane used in the manufacturing process (Fiessinger et al). Reports of cases of acute yellow atrophy following the use of atophan or cinchophen have aroused great interest in the medical profession in recent years. Because some cases of jaundice have been observed after small doses while in many instances very large doses over a long period have been tolerated without any sequelæ, it is safe to assume that an individual idiosyncrasy to atophan was responsible in the cases observed. Dr. Fishberg and I have been unable to reproduce hepatic lesions in rabbits even with excessive doses. The progress of the liver atrophy is not always acute; many cases show a prolonged course with persistent Conspicuous parenchymal regeneration is characteristic of these chronic cases and this leads to the picture of coarse nodular (Marchand) or toxic cirrhosis (Mallory).

Mention only shall be made of the severe liver lesions in phosphorus and mushroom poisoning, which are anatomically different from acute yellow atrophy (Klemperer).

The clinical and anatomic observations in constitutional hemolytic anemia, pernicious anemia, malaria and the sporadic incidents after transfusion of incompatible blood leave no doubt that the icterus is primarily due to an elevated bilirubin formation resulting from excessive blood destruction. Whether there is an additional relative or absolute insufficiency on the part of the liver to eliminate the bilirubin is of minor significance. These cases are placed into the group of over-production The increased blood destruction is due to an abnormal condition of the red cells and is not due to any primary hyperfunction of the reticuloendothelial system. Because of its unique architecture, the spleen is specially capable of intercepting and destroying red cells, and the removal of this organ may exert a favorable influence because of the elimination of the excessive destruction of the pathologic erythrocytes. In a number of cases, however, splenectomy is unsuccessful (Freund).

The interpretation of the icterus as it occurs in lobar pneumonia, septicemia, Weil's disease, cardiac decompensation and circhosis proves to be more complicated.

Jaundice in lobar pneumonia is not frequent. Dr. F. King has compiled 635 cases observed within the last 6 years, at Mt. Sinai Hospital; 42 (6.6%) of these showed ieterus. A moderate bilirubinemia without clinical jaundice occurs in every case according to Eltou. The prognostic significance of jaundice in pneumonia is controversial. Elton regards it as a favnrable event. According to Banti and our experience the prognosis is poor. Of 42 cases with ieterus, 21 (50%) died, while the total mortality varied in different years between 9.6 to 22.8%.

The cause of icterus in pneumonia is not vet fully understood. The older clinicians maintained that icterus occurs chiefly in right sided pneumonia and believed it to be due to bile stasis caused by the arrest of the diaphragmatic motion. It may be mentioned that Petroff only recently demonstrated that a more active flow of bile in rabbits occurs with deep respiration. This mechanical explanation. however, has been discarded. Banti believed that the hemolytic action of the various strains of pneumococci was responsible and considered the jaundice as a hyperproduction form of icterus. Eppinger observed two cases with abundant iron deposits in the lung and suggested that bilirubin may be formed from the intrapulmonic destruction of the hemorrhagic exudate and its resorption may eause icterus. Repeated intratracheal injection of blood in rabbits causes, according to Mangeri, an elevation of the serum bilirubin. However, personal investigation of the lungs in lobar pneumonia with and without icterus did not reveal a conspicuous hemosiderosis as Eppinger has described. It therefore remains doubtful whether icterus in pneumonia should be classified as an over-production type. Degenerative alterations of the liver cells have been observed-Rich believes these to be due to anoxemia. However, it is difficult to accept such lesions as the sole cause of icterus, because similar changes are observed without the existence of jaundice. Rich therefore claims that the combination of liver cell damage together with increased bilirubin formation is responsible for the icterus. Likewise a cautious viewpoint must prevail in regard to observations of cholangiolitis, although I have constantly found leucocytic infiltrations around and single leucocytes within the precapillary biliary canaliculi in every case of pneumonia icterus while they were inconstant in other cases of lobar pneumonia.

Most probably a similar situation prevails in icterus occurring in septicemia. The occasional observations of extensive liver necrosis in such instances, suggests a hepatic origin; however, one must not neglect the fact that identical lesions occur without icterus and that jaundice may have existed without any hepatic

lesion to be found at autopsy. One cannot conceal the fact that we do not yet know the type of liver cell alteration which is inevitably responsible for jaundice. Caution must also be recommended in the evaluation of cholangitis and of the presence of even conspicuous erythrophagocytosis. It is possible that only a combination of all these factors causes icterus.

It is not clear whether the icterus in Weil's disease is caused by liver changes as claimed by the French school or by increased blood destruction. In a considerable number of cases characteristic liver lesions are present, among which hypertrophy of the liver cells, frequent mitoses and occasional necrobiosis are most prominent. There is also a conspicuous erythrophagocytosis within the spleen which suggests an increased bilirubin formation. Both of these factors may account for the development of icterus.

Icterus in cardiac decompensation has formerly been considered as the result of pressure by the dilated sinusoids upon the bile capil-Oertel has demonstrated extensive hepatic necrosis in cases of cardiac icterus. believed that increased blood Eppinger | destruction within the congested lung chiefly after infarction causes increased bilirubin formation. Keefer and Resnik have experimentally shown that anoxemia impairs the elimination of bilirubin by the liver. Accordingly, Rich regards icterus in cardiac decompensation as the result of increased bilirubin formation and impaired climination. However, in these cases a discrepancy between the intensity of the jaundice and the degree of the hepatic lesions is not uncommon (Kugel and Lichtman). This indicates that the above explanations probably do not account for all the factors to which the jaundice may be attributed.

The explanation of icterus in liver cirrhosis is involved because its frequency and nature varies in the different forms of this condition. It is impossible to enter in a discussion of eirrhosis at this time. For convenience and in agreement with the point of view formulated at the last international Congress of Geographical Pathology, I shall distinguish three types. 1. Lænuce's cirrhosis; 2. Biliary cirrhosis; 3. Toxic cirrhosis. The differentiation between hypertrophic and atrophic cirrhosis has been abandoned. While icterus prevails in biliary and toxic cirrhosis, it is not conspicuous in the first type. Obstruction of the bile channels causes the icterus in biliary cirrhosis, while the severe damage of the liver parenchyma is responsible in toxic cirrhosis. In Lænnec's cirrhosis the cause of jaundice is not a single factor. Severe icterus develops occasionally as a terminal event. At times, there are repeated attacks (Fiessinger

et al 1932). The clinical investigation of such cases shows that other functions of the liver are also seriously impaired during these attacks and the anatomic histologic investigations reveal severe parenchymal lesions occasionally with extensive cell necrosis. (Bache and Klemperer.) Apart from a hepatic pathogenesis, jaundice may be the result of such a factor which simultaneously causes a sclerosis of the liver and a conspicuous blood destruction. Roessle designates such forms as "angiohæmatotoxic cirrhosis." The mild jaundice of certain cases may accordingly be explained as overproduction jaundice and the occasional severe attacks correspond to the blood crises of hemolytic anemias.

In the final discussion of the problem of the so-called catarrhal jaundice, I shall be very brief. I am well aware that this diagnosis neither embraces one single group of similar etiology and pathogenesis nor that a catarrhal inflammation of the biliary tract is the sole cause. If I still continue to use the term I do it is a matter of convenience and because of the lack of a better name, but at any event, will qualify it by adding the term "so-called." Every practitioner of medicine knows what is meant by the term which is used to designate the icterus usually occurring in young people, characterised by a sudden onset and a duration of several weeks which always results in apparent perfect recovery. If one can rule out cholelithiasis because of the clinical symptoms and the negative x-ray examination, the diagnosis of "so-called" catarrhal jaundice is justified. Other terms recommended such as simple icterus are of no advantage, infectious or toxic icterus is too specific and limited, while the term afebrile acute icterus (Garnier) is not correct because fever is present in some cases of this group. One may, therefore, continue the use of the qualified term though the name does not fully conform with the pathogenesis.

Clinical and histologic studies have shown that hepatic lesions are responsible for many of these cases (Klemperer et al Lit). But similar considerations indicate that another group of identical symptomatology is due to ascending or descending cholangiolitis and not essentially to liver damage.

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SIGNIFICANCE OF LIVER FUNCTION FROM THE SURGEON'S STANDPOINT

Read as part of the Symposium on Some Disorders of Liver Function at the Annual Meeting of the Medical Society of the State of New York at New York City April 5 1933

By CHAS GORDON HEYD, MD, NEW YORK, N Y

THE liver is interposed between the portal and systemic circulation The blood from practically the entire viscera of the abdomen passes through the liver and there is a very intimate lymphatic association between the liver and gall bladder and pancreas The liver reacts to influences such as infection and the by products of improper gastrointestinal digestion Deleterious material may reach the liver by way of the vascular channels or through the lymphatic routes, in addition to direct exposure by continuity of tissue liver thus possesses a unique influence as a protective inechanism and in turn suffers in varying degrees from any type of abdominal infection

To a remarkable degree the liver has the ability to regenerate by hyperplasia but it does not exhibit the work hypertrophy plienomenon from over-function In fact, the degree of liver regeneration is so great that as much as 70 per cent of the liver of a rat may be removed with complete regeneration in four to six weeks, and it has been demonstrated that after 85 per cent of the liver has been removed surgically, it can still function in a comparatively normal manner Material losses of liver substance however, such as occur in progressive, proliferative fibrous hepatitis, markedly impair its detoxifying function and its ability to maintain blood sugar level as well as the loss of its deamonization function in protein metabolism

The hepatic changes roughly classified under the loose designation of "hepatitis" may be recognized at operation. The degree of hepatitis and loss of liver function have a far reaching effect upon mortality statistics of gall.

bladder surgery The microscopic cyidence of liver disease, secondary to abdominal infection, is confirmed by histological examination of sections and it has seemed possible to suggest that the explanation for the so called "liver deaths' after a laparotomy are due primarily to liver insufficiency or liver dysfunction The anticipation and prevention of a possible failure in liver function before opera tion is the patient's best safeguard for surgery in that adequate and rational pre operative treatment may be undertaken The liver regulates, quantitatively, the amount of carbohydrate that is furnished to the body cells under the diverse conditions of carbohydrate intake and bodily activity Mann² has demonstrated that the normal blood sugar level is maintained by the liver and his experimental work has demonstrated that the liver exercises its function in regard to protein metabolism in three ways I deamonization, urea forma tion, and 3 uric acid destruction

If the protein metabolic function of the liver is inhibited or diminished there is the progressive mability for diamidization of protein and urea is produced in lessened amount. It follows therefore that any type of trauma, such as surgical intervention, infection, loss of heat production by products of portal obstruction, and anesthesia, may temporarily or permanently impair in varying degrees one or all of the functions of the liver. It follows therefore that depending upon the functional integrity of the liver the patient after operation will avoid post-operative complications of diverse types and varying degrees of severity

Early in 19223 it became apparent in a study of our post-operative results after cholecys-

tectomy that there occurred, infrequently to be sure, but nevertheless from time to time, three clinical states that intervened after operation on the biliary tract and almost invariably resulted in death. The character of these mortalities led us to believe that they were the direct result of a disturbance in the protective function, ordinarily exercised by the liver4. We began to study these cases with greater care both from the clinical and biochemical standpoint, as well as from necropsy examinations. The deaths that follow abdominal surgery are in general readily explicable, both from the point of view of the conditions found at operation, the type of operation performed, and the pre-operative condition of the patient. One ordinarily expects when a mortality follows a laparotomy that it may be ascribed to shock, hemorrhage. gastric dilatation, development of peritonitis, emboli, pneumonia and cardiac failure. We designated the unusual mortalities as deaths" and classified them into three types. The portraiture of each type may be made by giving the history of a typical example.

Type I. A woman, aged 37 years, entered the New York Post-Graduate Hospital complaining of gas after eating and occasional pain in the right upper quadrant. There had been one attack of pain requiring a hypodermic of morphine. On examination the blood count was normal, the Wassermann test was negative and a phenolsulphonphthalein test for kidney function was normal. The patient was operated on at 9 o'clock in the morning. A simple cholecystectomy was performed, the common duct was not involved, and nothing noteworthy was found in the pancreas or in the remainder of the abdomen. The liver, however, showed a slight enlargement. The edges were crenated, the consistency was leathery. From the area of the gall bladder region was a white, rosette-like tissue, extending well over the dome and inferior surfaces of the right lobe of the liver. The patient had a simple ether anesthesia. The immediate postoperative reaction was normal. However, the patient did not completely come out from the anesthetic and was not awake by 3 o'clock in the afternoon. At the end of 12 hours the patient was decidedly lethargic or semicomatose and there was a gradual ascent in temperature, successively through 102, 103, 104, 105 and 106, F. The pulse rate and respiration paralleled the temperature rise. The chemical examination of the blood showed a normal icteric index and a gradual ascending scale of urea-nitrogen. Clinical examination of the lungs gave no evidence of pneumonia. The patient died at the end of 36 hours.

Type II. A form of liver death much more

infrequent than Type I has occurred in patients who have had a previous cholecystectomy and rarely a drainage of the common duct. The patient is jaundiced, and the secondary operation consists of a choledochotomy, with tube drainage. For the first few days after operation the post-operative course is normal and satisfactory. Then there is a distinct change in the character of the drainage. The biliary discharge becomes less and less in amount and more watery in consistency. In spite of the constantly dimishing jaundice, as shown by the decreasing icteric index, the patient becomes delirious; there is marked cerebral excitation, subsultus tendinum and carphology occur and finally stupor and coma. There is no clinical evidence of intra-abdominal hemorrhage or infection, yet in spite of a diminishing jaundice, coma develops, which in all of its clinical manifestations is similar to that which occurs in a terminal cholemia. By reason of the marked cerebro-spinal irritation, spinal puncture has been made and practically normal fluid obtained, with a slight globulin reaction and cell count of 9 or 10 cells per cubic millimeter.

Type III occurs much less frequently than either Type I or Type II and apparently is more amenable to treatment. These patients have diseases of the common duct, and pancreatitis, do not have jaundice, and for the first 24 to 36 hours after a choledochotomy with tube drainage have an apparently normal post-operative course. Then the pulse rate becomes markedly accelerated. patient becomes markedly prostrated, with a fall in blood pressure and a cessation of urinary secretion, and exhibits cold, clammy, moist extremities. The abdomen is without any clinical evidence of infection, hemorrhage or any unusual post-operative abdominal con-A negative gastric lavage demonstrates an empty stomach and no gastric dilatation. One is impressed that while the clinical condition herein presented is very similar to shock it occurs from 24 to 36 hours after the operation and seems to be a complete vasomotor collapse from an overwhelming intoxication. Transfusion and repeated infusions of physiologic solution of sodium chloride with 10 per cent. dextrose are usually sufficient to save the patient.

It is a matter of physiological importance that the liver with its tremendous bulk and unique blood supply has only three types of cells—the polygonal liver cells, the cuboidal cells of the bile canaliculi and the reticular cells of Kupffer. By reason of the diverse metabolic functions of the liver, research workers, biochemists and clinicians have promulgated various tests for liver function

in which the attempt is made to detect some specific failure of liver function. According to Killians the tests of liver function are grouped as follows: (a) tests of the exerctory functhe urine and dye tests such as phenoltetrachlorphthalein, bromsulphthalein, etc.: (b) tests of the functions played by the liver in carboliydrate metabolism-galactose tolcrance: (3) tests of the functions of the liver in the analysis and synthesis of the intermediate products of protein metabolism-nitrogen partition of the blood and of the urine. With the exception of the galactose tests, and the dye tests of liver functions, the chemical analysis of blood and urine even in the every day routine work of the laboratory, may be made sufficiently comprehensive to include determination which will yield valuable data concerning liver function.

Of outstanding importance in the pre-operative and post-operative protection of gall bladder cases is an appreciation of the importance water-salt enterohepatic circulation (a) and (b) the enterohepatic circulation of bile pigments. The water-salt circulation is of far reaching importance and it is an interesting atavistic remembrance to the fact that all life originally began in the sea. Human life may be said to depend upon an adequate and precise adjustment of the water-salt balance. Rowntree, states that the total of all secretions poured into the intestinal tract varies from 7500 to 10,000 c.c., an amount of fluid more than twice the total blood volume. Orr' has succinctly demonstrated the outstanding of dehydration, hypochloremia and acid-base balance in pre-operative and post-operative treatment, and indicates that while an animal may lose 40 per cent. of its body weight in glycogen, fat and protein without death, a water loss of 10 per cent. is associated with serious complication, while a loss of 20 to 22 per cent. of water invariably brings about death. Any liver or gall bladder condition that is characterized by persistent vomiting, brings about a marked hypochloremia and the important indication when vomiting is present is to provide a proper amount of chlorides by the introduction of 500 e.c. of 5 per cent. solution of sodium chloride intravenously, or if a more rapidly acting salt therapy seems necessary 20 c.c. of 10 per cent. solution of sodium chloride intravenously.

The enterohepatic circulation of bile pigments is based upon the fact that when bile is delivered into the intestinal tract the bilirubin is converted into hydrobilirubin. The latter, by the activity of intestinal bacteria, is changed into stercobilin and urobilin. The urobilin is in a large measure reabsorbed by

the intestinal veins of the portal system and delivered to the liver cells. Some of this urobilin is excreted with the bile so that we have a constant urobilin cycle or an hepato-enterohepatic circulation. (Chart 1.) Under normal conditions no urobilin can be determined in the urine. When urobilin reaches 1 milligram in 100 cubic centimeters, or 1 in 100,000 it may be detected in the urine by adequate tests. For a normal enterohepatic circulation it is necessary to have intact liver cells, for in the presence of normal liver cells the urobilin does not escape into the systemic circulation. It is obvious that in the presence of complete obstructive jaundice there can be no reabsorption of urobilin from the intestine and hence probilin does not appear in the urine. If, however, there is an incomplete obstruction, which will permit of the delivery of some bile into the intestinal tract, then the presence of any slight degree of functional disturbance of the liver cells will permit urobilin to escape into the systemic circulation and its subsequent appearance in the urine. If the liver cells are injured, however, with or without obstruction,

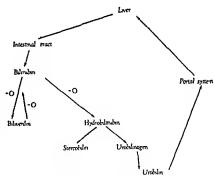


CHART 1. Enterohepatic circulation of bile pigments.

there is a delivery of urobilin into the systemic circulation. MacMaster and Rous¹o have drawn attention to minute quantities of urobilin that may be found even in the presence of complete obstruction. The mechanism for this presupposes that in conditions of chronic icterus there is an elimination of bilirubin into the intestinal tract by the systemic eirculation, and this bilirubin is clanged to urobilin and is reabsorbed by the portal system, and, in the presence of injury to the liver cells, is delivered into the blood stream and later appears in the urine.

We have relied almost solely on the following tests: 1. the icteric index; 2. the Van den Bergh, and occasionally the Fouchet; 3. the

galactose test, and 4. routine chemical analysis of the blood. The most effective test in our opinion is the icteric index and the occasional error that occurs from extraneous pigmentscarotin (carrots, oranges and eggs)-can be very easily avoided by a pre-operative diet. In our opinion, there are no means whereby the clinician can estimate the vital integrity of the liver cells or their ability to withstand The clinical estimation of surgical trauma. the patient's resistance, aided by serial icteric determinations, is in our opinion, the most valuable of all means of a pre-operative estimation of the expected mortality possibilities. It is our rule to have these patients enter the hospital two days before operation, and during this time we attempt to accomplish two specific purposes: 1. a complete and full water balance and 2. to increase the reserve of glycogen in the liver11. The routine laboratory tests of urine are carried out, together with the routine chemical analysis of the blood. patient is not given cathartics previous to operation, but each day the lower bowel is evacuated by the use of an enema. The patient is encouraged to drink freely of fluids, particularly those containing sugar, such as gingerale, lemonade, etc. At least 1500 c.c.—2000 c.c. of tap water is given by rectum, containing 10 per cent glucose and partitioned into three periods of eight hours. The diet is high caloric, carbohydrate, irrespective as to the weight of the individual, and practically no protein intake permitted. The carbon dioxide combining power determinations are of the utmost important as they indicate whether we are dealing with varying conditions of alkalosis or If the carbon dioxide combining acidosis. power moves to the right, the administration of glucose is always advisable, either by mouth, rectum or intravenously. Glucose maintains, in a large measure, the heat requirements of the body. It is also one of the most effective means of relieving dehydration. By reason of its readily oxidizable qualities it acts as a buffer and prevents the destruction of protein and therefore is an antiketogenic agent. Cases of alkolosis are usually associated with a marked degree of ketogenesis and therefore glucose has an additional value if this condition is present.

In patients with a jaundice we are confronted with an additional element of danger. Serial icteric determinations will indicate if the jaundice is stationary, arrested, or advancing. A Van den Bergh test in the beginning is possibly suggestive as to the etiological factor in the production of the jaundice. The preoperative diagnosis as to the causal factor in jaundice is of the utmost importance. An individual without jaundice, so far as surgical intervention is concerned, is an altogether distinct class in regard to operability and safety from a patient with an obstructive jaundice or a patient with both obstructive and intrahepatic jaundice. In the patient with jaundice, bleeding and coagulation time must in all cases be done and a clotting time that exceeds eight minutes, carries with it the possibility of post-operative hemorrhage. It is our feeling that blood transfusion before operation is of infinitely more value than blood transfusion after operation or when bleeding has already started. The suggestion of Walters of the intravenous administration of 5 c.c. of 10 per cent solution of chloride calcium is of the utmost value both before and after operation.

In conclusion, mention should be made of the contribution of Vogel¹² and the possibility of retained arsenic being a factor in liver degeneration and which even in mild cases is accompanied by some degree of jaundice. Arsenic is found in many individuals without any discoverable cause and without giving rise to symptoms. However, in a series reported by this author an excess of arsenic was found in the secretions in 34 out of 40 cases suffering from jaundice and in 9 of the 34 cases in which arsenic and jaundice occurred simultaneously, death resulted and in 4 of these cases death promptly followed an operation on the biliary tract.

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PERSONAL IMPRESSIONS IN THE TREATMENT OF A FEW OF THE COMMONER INVETERATE DISEASES OF THE SKIN

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Read before the Section on Dermatology and Syphilology, at the Annual Meeting of the Medical Society of the State of New York, at New York City, April 4, 1933

In adopting the suggestion offered by our Chairman, that I submit to you some of my impressions in the treatment of certain common dermatoses, I am properly grateful for the latitude which he has permitted me, in the consideration of the broad subject embraced in the title

A fact to be emphasized at the very beginning is this that I am fully aware of the wide gaps which bridge "impressions and facts," "impressions and statistics' and "impressions and proved clinical and laboratory data". With this awareness comparatively an easy one; as the saying goes, I have been saved a lot of work. You are not to hear a word about "References to the Literature," either foreign or domestic, nor about my case records, either public or private.

Rather than go into unnecessary details regarding certain dermatoses with which all of you are familiar. I propose to discuss the treatment of a limited number of affections from a broad, general viewpoint. Those which I have selected are the following acides sycosis barbae, psoriasis, chronic urticaria, disseminate neurodermatitis, chronic recurrent herpes simpley, and the various eruptions due to, and associated with, ringworm and monitia infections. I designate these as examples of some of the commoner inveterate dermatoses.

I believe that one of the most important factors relating to the treatment of chronic persistent dermatoses is the proper and adequate employment of topical remedies. The difficulties and disappointments encountered in the management of ambulatory patients and those treated at their homes, lies, in great part, in their mability -for many obvious reasons-to carry out our instructions with regard to external applications In patients with eruptions on the face, neck and hands, this restrictive element is of considerable significance in attempts to evaluate the effects of certain remedies, not to mention the unsatisfactory results to be expected from topical applications which are used only during the patient's hours of sleep mstead of a twenty-four hour It is only the exceptional patient who will appear in public with face and hands covered with lotions, salves or bandages vividly reminded of attempts to treat ambulatory patients with sycosis barbae by means of local applications of brilliant green. It is the exception, also, rather than the rule, to encounter patients afflicted with widespread, generalized or disseminated eruptions who obtain treatments

which we consider to be efficacious, in their own homes. Every effort should be made to hospitalize such patients.

Unfortunately, it is not an easy matter to persuade the majority of them—even those in good eigenmatenes—to enter a hospital or sanitarium On many occasions have I been strongly tempted to quote to the obstinate protestor the words used by a truculent Roman general in addressing his army, he said "Soldiers, I have often heard, that he is the first man, in point of abilities, who, of himself, forms good counsels, that the next, is he who submits to good advice, and that he who neither can himself form good counsels, nor knows how to comply with those of another, is of the very lowest capacity"

The advantages of hospitalization as compared with ambulatory and home treatment need not be enumerated, being in themselves so self-evident Nevertheless, mention should be made of certain important features not directly connected with the mechanical aspects of the management of the patient's skin disease, for example, the availability of hospital facilities in regard to laboratory and a-ray investigations, the facility with which such patients may undergo examinations by the family doctor or the dentist, or by other specialists called in consultation, the opportunities to observe changes and reactions produced by various medicaments and internal or parenteral remedies, and to note the results of skin tests and the patient's susceptibilities and idiosyncrasies

Aside from these advantages, we must take into account the benefits derived from rest in bed, change of environment and so forth. In patients whose emptions are suspected to be of allergic or sensitization type removal from home, office factory or shop is often almost a sine quanon in bringing about relief or circ

In the treatment and general management of the group of common diseases under discussion. the dermatologist naturally has ample opportunities to arrive at an appraisal of the value of many remedies The remedies which in my hands have proved the most useful and have stood the test of time, are those with which everybody is These are 1-rays and-in a much more restricted sense-ultraviolet light, of external medicaments, the ancient remedies-astringents, reducing agents, keratolytics, keratoplastics and so forth-still serve their purposes when and where judiciously used, so that my prescriptions of today vary but little from those of my younger days Their ingredients comprise now, as they did then, mercury, sulpling, resorcin,

salicylic acid, chrysarobin, tar, bismuth, zinc and so forth, in ointments and pastes; and boric acid, Burow's solution, solutions of potassium permanganate, iodine, nitrate of silver, shake mixtures of calamine, zinc, magnesium, tale, starch and so forth, in lotions, wet dressings and baths.

We all know that a great variety of older remedies disguised by new names, as well as many new synthetic and other types of drugs and chemicals are constantly flooding the market, and are often urgently recommended—not by manufacturers alone but by physicians as well-for many obstinate and recurrent forms of eruption. In refraining from specific mention of these, I do so, not because I am unaware of their existence or of their alleged value, but because I have had so little personal experience with most of them, that I have not been enabled to gain even a fairly good insight of their worth. To cite a few examples, I have been informed that pustular acne responds exceptionally well to intravenous injections of calcium chloride, and I hope myself to verify this observation in the near future. have read reports of good results obtained from the use of spleen extract for the relief of itching in various dermatoses, but have not yet had the opportunity to use the extract myself. The same statement applies to histamine, salts of silica and many other chemical substances.

On the other hand, I have given a number of remedies what I regard to be a thorough trial, and have, more often than not, been sadly disappointed in them. For instance, I have personally treated a group of patients with sycosis barbae by means of turpentine injections, intramuscularly, without noting the slightest benefit; perhaps my technique was at fault, or the patients were not favorable subjects, or my diagnoses were false, but surely the turpentine found a resting place in their buttocks.

The so-called "dramatic" effects of the arsenicals in syphilis, the gold salts in lupus erythematosus, the adrenalin injection in urticaria, are sadly lacking, to say the least, in the salts of thiosulphate, in the various calcium combinations employed intravenously, in the much-vaunted bromide salt preparations and in many other remedies recommended for use by mouth and parenterally. I do not imply that they are of no value, but I am sure that we must be careful not to overestimate them, in their application to the group of dermatoses with which I am dealing. At any rate, I have found their appraisal to be very difficult and I must admit that my attitude toward them is strongly tinged with a philosophic skepticism.

On the other hand, certain remedies have proved their worth beyond question. Of these few, I have found arsenic capable of exerting a powerful influence upon chronic psoriasis, eczemas, urticaria, acne and selected cases of neuro-

dermatitis. During the many years in which I have used arsenic as an adjuvant in the treatment of these and many other ailments, no instance has been called to my attention which caused me to regret the employment of that drug in any individual; as a matter of fact, I do not believe that any of the patients under my personal control have suffered as the result of arsenic medication; many have, to the contrary, been benefited by it.

I believe that arsenic is best administered by subcutaneous injections, in the form of a two to four percent solution or sodium arsenate, and—provided no contraindications exist—it should be given in quantities approximating the "dosis tolerata." When injections cannot be used, I prescribe the Asiatic pill, consisting of arsenious acid, black pepper and gum tragacanth, in ascend-

ing doses of arsenic.

In a relatively small proportion of patients with pruritus, eczema, psoriasis, disseminate neurodermatitis and urticaria, I have learned that autogenous blood injections seem to be beneficial. Whether or not the effect be partly or wholly psychic, or whether suggestion plays no role whatever in the procedure, is beside the point. Suffice it to say here that I believe that autohaemotherapy should, in selected cases, be tried, when simpler remedies have failed. It has the advantage, over other non-specific measures, of being practically painless and apparently harmless.

Acne Vulgaris

Acne manifesting itself in the form of a few scattered indurated papules on the chin of a middle-aged woman, is often far more resistant to orthodox methods of treatment than a severe and widespread papulo-pustular eruption in a healthy adolescent. It is unnecessary for me to dwell on the general treatment of acne patients, except to stress that the ingestion of iodine in table salt might be a possible factor in the persistence or recurrence of the lesions in certain patients; and to mention the role of iodine metabolism in its relation to thyroid gland imbalance, possibly associated, in the etiology of the affection, with puberty and adolescence.

I regard x-ray therapy to be the best and most reliable means of curing the eruption, and hold ultraviolet light therapy in reserve as a good adjuvant. In inveterate cases, more especially in those in whom a certain cumulative total dose of x-rays has been administered without accomplishing a cure, I advise the patient to use hot wet dressings of diluted Vleminckx's solution, with almost uniformly good results. (This solution of sublimed sulphur, 250.0, quicklime, 150.0 and water, 2500.0, boiled down to 1500.0, should be used freshly prepared and in solutions of various percentages, of sufficient strength to cause a moderate degree of scaling of the affected parts.) I administer arsenic alone, or arsenic combined

with iron in rebellious cases. A certain proportion of such cases have responded favorably, in my hands, to stock acne vaccines, provided they were administered over long periods. I have had no personal experience with bacteriophage and cannot recall conclusive results from endocrine therapy, even in patients with hypothyroidism, to whom thyroid medication was administered by experts in endocrinology.

Sycosis Barbae

Patients with sycosis barbae are divided into two classes; those in whom the eruption is of relatively short duration and limited in extent and distribution, and who have not been subjected to x-ray treatment; and those with widespread, chronic and rebellious eruptions, the majority of whom have already had x-ray treatment, with or

without sequelae.

In the first group, I believe that a certain proportion is susceptible to cure by x-ray therapy in fractional weekly dosage, up to a maximum of six unfiltered quarter-unit skin doses, combined with the mechanical depilation of the hairs with tweezers, in the affected areas. Together with this procedure, the patient twice daily applies hot wet dressings of diluted Vleminckx's solution. X-ray dosage is not given up to the threshold of depilation. If I find that four to six fractional treatments at weekly intervals do not produce the desired result, I stop x-ray therapy and caution the patient against a resumption of it in the future.

In the second group, constituting the extremely recalcitrant eruptions so familiar to all dermatologists, I have succeeded in bringing about complete cures by means of persistent mechanical depilation with tweezers and the equally persistent use of hot diluted Vleminckx's solution, of sufficient concentration to cause desquamation. I believe, also, that some of these patients are benefited by injections of mixed staphylococcic vaccines, provided that these are given over prolonged periods. As an adjuvant, ultraviolet light may be used advantageously, in patients who have not received an excess of radiotherapy.

Psoriasis

The question whether x-rays should be employed in psoriasis is a controversial one among dermatologists. In my opinion, carefully controlled x-ray treatment is quite safe, if the patient understands its limitations and the dangers involved in "shopping" among other doctors and other clinics. I therefore do not hesitate to use radiotherapy in intelligent patients, in whose cooperation I have confidence. I am particularly cautious about the restriction of x-ray dosage to the palms and soles, and therefore often resort to ultraviolet light. If improvement is not evident after four or five weekly fractional x-ray exposures, I do not continue this method of treatment.

In the management of chronic, inveterate eruptions, I rely upon chrysarobin as incorporated in Dreuw's ointment, combined with tar baths, autohaemotherapy and injections of arsenic in daily ascending doses.

Chronic Urticaria

Chronic urticaria seldom responds to a single remedy; very often we are compelled to do the best we can with a variety of more or less empirieal measures, trusting that one or another might hit the target in the center. In this obstinate ailment I have obtained most satisfactory results with pilocarpine hydrochloride, in a one per cent aqueous solution, administering three drops at the beginning of medication and increasing the dose gradually up to fifteen or twenty drops, three to four times per day. In patients who do not respond to pilocarpine, especially those in whom the articaria is associated with vagatonia, atropine has occasionally proved to be beneficial. Autohaemotherapy, colonic irrigations, intravenous injections of calcium salts, medicated baths, together with the indicated restrictions as to diet must frequently be resorted to. Sedatives and hypnotics (excepting opium and its derivatives) are used to allay the itching. The effects of endocrine therapy and ergotamine injections have thus far been indeterminate in my hands.

Disseminate Neurodermatitis

Disseminate neurodermatitis is to be sharply differentiated both from the circumscribed form (lichen chronicus circumscriptus of Vidal), and from eczematous eruptions of the contact type. Disseminate neurodermatitis is a classical example of familial and hereditary allergy and as such is almost universally associated with hay-fever, asthma or infantile eczema. While these patients are not sensitive to contact irritants, as is shown by their negative patch tests, their sensitivity as demonstrated by the immediate wheal reactions, is extremely polyvalent. Due to this polyvalence, many are found to be sensitive to ten, fifteen or even fifty common substances, so that the elimination of offending substances, or desensitization, is practically out of question. Therefore therapy must usually be confined to constitutional measures and topical remedies. Owing to the fact that in these patients the skin is relatively immune to contact irritants, much stronger topical remedies can and should be used than is the case with eczemas.

Physical and mental rest is indicated in the large majority of these patients. Sedatives and antipruritic remedies, consisting of wet dressings and medicated baths, should be employed in the early stages of treatment. After subsidence of acute symptoms, I resort to a plan of treatment in many ways similar to that outlined for psoriasis; x-ray therapy is administered with due cantiou and restriction and in many instances its

action is eminently satisfactory. But in others it is helpful only up to a certain point, so that radiotherapy must be stopped. In the latter class, I believe the best and quickest results can be obtained by the use of a week Dreuw's ointment, containing only from two to four per cent of chrysarobin and salicylic acid, combined with autogenous blood injections, medicated baths and injections of arsenic. Some patients respond well to ultraviolet light.

Recurrent Herpes Simplex

When herpes simplex habitually recurs on a selected spot, such as the muco-cutaneous border of the mouth, or on a circumscribed area on the trunk, and when the affected area is dime-sized or less, permanent cures are sometimes obtained with one or two sub-erythema doses of x-rays, administered at intervals of three or four weeks. When herpes simplex, instead of recurring in situ, develops into a widespread eruption and shifts its site of attack in successive recurrences, radiotherapy is contraindicated. In recent years, I have succeeded in curing the latter form of eruption with ordinary vaccination, using the vaccine supplied by the Department of Health; so that I now resort in all cases of recurrent herpes simplex, to this remedy. The effectiveness of this procedure does not seem to depend upon the vaccination "taking," as the majority of cases have been cured whether the vaccination "took" or not. The vaccination may be repeated several times, at intervals of approximately three weeks to a month.

Epidermophyton and Monilia

The important therapeutic problem in infections with epidermophyton and monilia fungi consists mainly in combating the secondary and concomitant eruptions—the epidermophytids and moniliids. These lesions, of which the patients complain most, are practically sterile, so that most of our topical remedics are anti-eczematous rather than antiparasitic. It is superfluous for me to recapitulate the much-discussed and much-written-about local remedies employed in attempts to eradicate the primary foci.

In cases which have proved rebellious to all other forms of treatment, I believe that trichophyton desensitization treatment (as first practiced by Sulzberger and Wise) has its distinct value. This consists of repeated intradermal injections of both epidermophyton and monilia vaccines, until the skin of the patient has become entirely desensitized to these extracts. As it is often difficult to decide in the individual case, which of these two groups of fungi plays the most important role, I believe that desensitization with the combination should be made a routine procedure. This therapy is not without its dangers and I use it only in refractory cases of long standing. As in all methods of hyposensitization, there is the risk of the creation of an increased state of hypersensitivity, with a resultant spread, increase and flare-up of the lesions. It is for this reason that I do not believe that this therapy should be recommended at the present time, as a routine procedure in general practice.

SOME PERSONAL IMPRESSIONS OF PRESENT-DAY SYPHILOTHERAPY By JOHN H. STOKES, M.D., PHILADELPHIA, PA.

Composed of the Syphilis Clinics of Johns Hopkins, the Mayo Clinic, University of Michigan, Western Reserve, and the University of Pennsylvania. Read before the Section on Dermatology and Syphilology at the annual meeting of the Medical Society of the State of New York, at New York City, April 4, 1933.

ADDRESS you today, as always apologetically, charged as I am with what is to me the almost impossible task of selecting personal impressions in a field so extended as that of the treatment of syphilis. I have decided to include the treatment of early syphilis because in it lies the foremost preventive duty of the everyday man in the field; non-specific therapy because it has an element of newness and of the future; and the situation which I believe confronts us all, but the practitioner especially, in meeting the demands of modern standards of treatment for syphilis, if we are to retain anything approaching individual as distinguished from socialized collective practice in this aspect of medicine.

The Treatment of Early Spyhilis. Twenty years of treatment experience is now culminat-

ing in the efforts of the League of Nations, and of the American Co-operative Clinical Group working with the United States Public Health Service, to evaluate results and offer principles applicable to everyday practice in early syphilis. From this material, which includes thousands of cases, from my own personal observation of the successes and failures of the practitioner, and even more from the questions he asks his syphilologic confrère, i should divide the subject into four groups of topics, with their corresponding advisory and critical principles. The questions most often asked are: "How much and what kind of treatment shall I give?" "Why can't I get or hold a negative Wassermann in this case?" "When is the patient non-infectious and fit for marriage?" "What shall I do to improve the tolerance of this patient who is reactive to any and every modern syphilotherapeutic drug?"

The advisory and critical principles that seem to me to supply the answers to these questions, as developed from the massive material referred to, plus my impressions and the literature, are these:

I. HOW MUCH AND WHAT KIND OF TREATMENT SHALL I GIVE?

- 1. Prolongation, mass and continuity (no rest periods in the first eighteen months), spell success in modern treatment. Much arsphenamin and heavy metal and continuous rather than intermittent treatment yield 2 to 7 times the results obtained by little treatment with lapses and rest periods.
- 2. No less treatment should be given to the seronegative or at least to the seropositive primary case than to the seropositive secondary eruptive case. If anything, relapse is more frequent in the first two, though cure is more difficult in the third.
- 3. An absolute minimum of five to nine injections of an arsphenamin is needed to control even 50 per cent of the tendency to mucocutaneous (infectious) relapse.
- 4. A minimum of 20, an optimum of 40 arsphenamin injections is needed to secure the best outlook for cure.
- 5. Prolonged heavy metal treatment (1 to 2 years) tends to prevent progression (cardiovascular and neurosyphilis).
- 6. Bismuth is preferable to mercury. Neither can take the place of an arsphenamin, which is still the chief modern therapeutic agent in early syphilis.
- 7. Neoarsphenamin can approach "606" in effectiveness, but only if (a) intervals between injections are shortened (3-5 days); and (b) bismuth is used in conjunction (preferably largely simultaneously).
- 8. The dosage range of 0.3 to 0.6 gm. neoarsphenamin and 0.3 to 0.4 gm. "606" should replace the Ehrlich maximum and 0.6 gm. respectively. With 0.45 gm. "914," reduce the injection interval to 3-5 days. With this dosage scale, 0.1 gm. of a 50 per cent bismuth salt can be given simultaneously in two series of 20 injections each.

No attention is to be paid to the negative Wassermann in gauging the amount of treatment, its cessation or resumption. Treat by arbitrary schedule, not blood tests,

10. Treatment, continuous for 18 months, should be prolonged to at least two years if (a) weak positive tests appear among the negatives; (b) if the blood test reverses to negative in the first three to six weeks. These cases are relapsing types.

II. WHY CAN'T I GET OR HOLD A NEGA-TIVE WASSERMANN IN THIS CASE?

1. You have allowed rest periods, or lapses have occurred in the first eighteen months. This is overwhelmingly the chief cause of the fixed positive Wassermann in early syphilis.

2. The beginning of treatment has been delayed beyond the seronegative primary

stage (diagnosed by darkfield only).

Weak positive serologic tests as warnings of relapse have been overlooked or disregarded and treatment discontinued too soon.

4. The first negative Wassermann test has been the signal for a break in treatment continuity. Better not take a test during the first six months. "Treat by schedule," not by test.

5. The cardiovascular or nervous system may be involved. Investigate by physical ex-

amination, x-ray, and spinal puncture.

6. Neoarsphenamin yields 1.5 times as many delayed reversals to negative in the blood tests of the first year as "606", but the second-year results show less disparity.

III. WHEN IS THE PATIENT NON-INFECTIOUS AND FIT FOR MARRIAGE?

1. After five years from onset in the average case, well and continuously treated at the outset (semen still questionable). There is relative freedom from infectious relapse after the second year.

2. Under absolute mechanical protection in intercourse during the above period, with kiss-

ing banned.

3. While receiving a therapeutically active arsphenamin (exception, arsenic-fast cases or therapeutically inactive neoarsphenamin) with heavy metal (bismuth).

4. Probably, but not certainly, after receiving 20 arsphenamin injections with "normal" therapeutic and serologic response.

5. No satisfactory rules applicable to (1) women; (2) relapsing types (9 to 15 per cent of patients); (3) chronic alcoholics and periodic drunkards. Physical examination of mouth, anus and genitalia, education of the patient, and persistent or relapsing positive blood tests give the only warnings.

IV. WHAT SHALL I DO TO IMPROVE THE TOLERANCE OF THIS PATIENT WHO IS REACTIVE TO ANY AND EVERY MODERN SYPHILOTHERAPEUTIC DRUG?

1. The great destroyer of treatment tolerance under present practice conditions, is rapidly injected or carelessly prepared neoarsphenamin. Don't shake, aerate, let stand, or inject at a faster rate than one-half and preferably one minute per decigram.

2. The second destroyer of tolerance is the

violent therapeutic shock (Herxheimer) from over-dosage with the first injection. Never give more than 0.3 gm. intravenously the first time.

3. The third tolerance destroyer is fear. The hurried, apprehensive, distraught "inwardly nervous" and "spasmophilic" patient is reactive. Combat with reassurance, a painless technic, calcium, rarely sedatives.

4. The tolerance of a patient is also injured by (a) intercurrent or chronic infection, including mouth and teeth and skin; (b) the allergic state, including sensitiveness to the drugs used; (c) the high carbohydrate diet and the seborrhoeic diathesis; (d) over-dosage.

5. For treatment, use the ounce of prevention. Once established, intolerance is difficult to remedy. A revised technic, a shift of drug, patch and other tests to determine the source of trouble are essential.

Evident though it must be that I have reduced the first of my topics to skeleton proportions, pressure of time compels me to deal with it in this summary fashion.

The Non-specific Factor or Resistance Mechanism in Treatment. Ten years ago, it was easy pigeon-hole treatment effects spirillicidal and resistance-building categories -arsphenamins in the former, mercury and iodid in the latter. Today bismuth has broken in between arsenic and mercury, and the various protein, infection and fever-inducing therapeutic agents have pressed for recognition beyond the infra-limits of the therapeutic spectrum of the 1920's. Undoubtedly more will be heard of this "stimulation therapy," as Schumacher calls it, so that I risk summing up a few principles for you. First, it should be emphasized that non-specific therapy in its entire range from milk injections to malaria, is out of place as a principal reliance where a rapid destruction of spirochetes for the protection of others from infection is demanded; in other words, in early syphilis. Even Kyrle's enthusiasm for malaria in secondary syphilis admitted this limitation. In the second place, the classification of nonspecific effects by Nonnenbruch, Miller, Jaffe and others indicates that at least fifteen different processes go forward at one and the same time under any one of the various forms of non-specific therapy, so that it is unwise to credit fever, the foreign protein, the active infective agent or other item in the collective phenomena with the exclusive or even the major action. The chief instrumentalities are in all probability the stimulation and hyperplasia of the reticuloendothelial system which follows all bacterial and foreign-protein invasion; the increase in proteolytic and lipoproteolytic enzymes, the latter emphasized

by Schumacher as the principal feature of non-specific defense against syphilis; antibody formation and mobilization associated with the rise of temperature; and the local inflammatory reactions aroused at disease sites by these forms of treatment. The more recent theories, of treatment mechanism especially as summarized by Tryb, give a large place to what might be called the non-specific action of the arsphenamins on the organs and tissues of the body, as defense stimulators, in contrast with the earlier conceptions of their direct spirocheticidal action. The extremely minute concentrations of arsenicals, especially arsenoxid, which seem effective therapeutically, may be conceived to be acting rather on a cellular resistance mechanism than on the organism direct or via blood or tissue protein combinations. The hampering effect of reticuloendothelial block on the action of the arsphenamins as studied by Kritschewski and others and the stimulative effect of these drugs on the Kupfer cell (Goldzieher and Peck) are all items in point. These rather esoteric details aside, it appears that nonspecific action is an important adjuvant for many patients with syphilis, and that it is not necessary to think of malaria with its discomforts and risks as the sole means of securing From the astounding endocrine shotgun recently proposed by Photinos, Michaelides, and Klissiunnis and the ultraviolet burns and autohemotherapy of Radjka and Radnai to the various induced infection and foreign bacterial protein agents there is a wide range of choice. My personal preference based on a fair experience runs to boiled milk as an easily available, safe and quite effective method of adding defense stimulation to the routine of treatment of many aspects of syphilis, including interstitial keratitis, gumosteomyelitis, but especially the serologically resistant and the arphenaminfast case. The occurrence of permanent reversals to negative in blood serologic tests previously uninfluenced by literally enormous amounts of standard treatment, have confirmed for me the favorable impressions of Greenbaum and Wright and of Burke. The method is very serviceable within limits, also, in dealing with malignant precocious tertiarism induced by inadequate arsphenamin treatment, and in total resistance to all treatment methods which is occasionally observed in early relapsing syphilis. The technic includes the use of an "A" grade milk, boiled five minutes, the dose from 2 to 10 cc. intramuscularly once or twice weekly, alone or in alternation with bismuth salicylate. The series of injections ranges from 5 to 10, the reactions are grippelike with only occasional temperature rises,

and a little or no incapacity. Rarely nitritoid reactions and urticaria compel discontinuance. The same precautions (aspiration on the syringe after introducing the needle) to prevent injection into a vein, are essential, as in all intramuscular technic. Sinus and other focal infections which may flare up under this treatment, are relative contraindications. In view of the fact that one may encounter a specific allergy to some one of the milk proteins, it would seem advisable to do an intra-cutaneous test with a minute dose before embarking on a treatment course.

The Average Practitioner and the Demands of Today's

Syphilology. While there is a certain ungraciousness in the act of a guest who washes professional linen in public, I have relied on your well-known good nature to permit me to repeat in substance, as a closing aspect of these personal impressions, the remarks which I perhaps rather brashly made at a regional social hygiene conference when challenged by the statement from an entirent source, that while almost any well-educated physician could treat syphilis, it took a real man to treat gonorrhea. This delusion, if it is generally entertained by the profession (and I believe it is) will lead us as directly as any one route, once the public grasps the situation, toward the socialization of medical practice in my field. The average physician, to judge by my experience in reading and writing answers for columnized consultations, queries minor notes, telegrams, letters and case histories, is so far unfamiliar with both the theory and the technic of treating syphilis that the patient who places himself in his care too frequently risks not only his outlook for recovery. but even his life. Perhaps my impressions come from a stratum below the level of average performance, and I am unduly pessimistic. Yet nothing more clearly seems to indicate to me our deficiencies than the physician's reaction to his own infection at its onset. proceeds to take uncalled-for risks-no routine serologic tests, no preliminary neoarsphenamin sterilization of the infective patient, much barehanded carelessness about the mouth, throat, and genitalia, untended needle pricks, a thought for every non-syphilitic possibility in diagnosis when lesions appear, with none for syphilis. Add to these, blunders that would make angels weep; satellite buboes excised for diagnosis, neoarsphenamin given for syphilitic mucous lesions misdiagnosed Vincent's infections and neither darkfield nor Wassermann test obtained beforehand. Then when the outbreak of secondaries forces the issue, and serology, reluctantly invoked, comes to the

rescue, a ghastly procession of therapeutic blunders leading to destroyed treatment tolerance, relapse, Wassermann-fastness, malignant precocious tertiarism, and paresis. Not even the intrinsic handicaps associated with the extragenital chancre in diagnosis can exonerate us of blame for the spectacle of crass ignorance and inadequacy that our reaction to syphilitie infection in ourselves presents. We can understand the overworked physician's irregularity in treatment, and delay per se in diagnosis-but the trouble is not of that order. Practising physicians only too seldom understand the first principles, to say nothing of the teclmical practice of modern syphilology. be sure, some of the principles are only just coming to light-but many have been known for years. They have simply not been taught, and the man out of school doesn't read. Early syphilis disseminating itself through relapse and recurrence, neurosyphilis fed by non-examination of the spinal fluid, wives infected by seronegative husbands, wholesale serologic fastness, the product of the three- or four-injection "neo" course with rest periods; syphilitic mothers and children from the withheld serologic test in pregnancy; late syphilis done to death in therapeutic shock and paradox, needed malaria and tryparsamide withheld for hundred-injection series of neo, bogus colloids and the like; while failing hearts and sclerotic circulations are pushed through the malarial entrance to paradise or the infernofor and from all these things, O Lord forgive and deliver us.

The professional situation in syphilis needs reform; and though this explosion is a poor way to introduce the idea, it needs too, more expert or special acumen. Few who know the disease would be prepared to argue that it has no specialty aspects; yet few indeed ever seek expert advice about it, comparatively few specialists exist, and few specialities return a smaller interest on the investment in time and experience which they involve. needs, too, lower costs for better treatment. as Keidel, Davis and Bromberg have pointed out. You are to be congratulated in that your own state leads the country, if I am not mistaken, as the first to make darkfield diagnosis by the deferred technic available to every physician, through your State Health Department. Serologie laboratories need clinic connections and contacts to bring their results and check-ups down to earth. Instruction in syphilotherapy should be brought to the doctor by a missionary force of disinterested persons who help him to apply what one of your health officers has called "sole leather epidemiology" in tracing out the focus of the infection and its peripatetic distributors, and

and the same of th

teach the actual technic of treatment on the patient in the office. The requirements for licensure in the practice of medicine should include at least examination questions on the venereal diseases, a step which Jadassohn rated as principally instrumental in raising the venereologic practice of Germany to its present high standing. But above all, the syphilologic situation of today needs a medical profession conscious of its inadequacy, ready to learn, and prepared to organize to meet needs in this field which only organization can meet. These include, reduction in individual expense; greater system and persistence in

treatment especially of early syphilis; fewer reactions through better technic; and central facilities of a high order for the evaluation of diagnostic and treatment problems in the individual and especially the late case.

The largest folder in my office files, labeled "Consultation by Correspondence," has provided me with the impressions that I have thus incontinently poured forth upon you to justify my personal fear, that only too few supposedly well-trained physicians know how to treat syphilis. Their inability to do so appeals to me as a critical problem whose solution is a pressing need of our day.

INFESTATION OF THE VAGINA BY THE TRICHOMONAS VAGINALIS Clinical Features, Diagnosis and Treatment

By JOSEPH J. BERKOWITZ, M.D., NEW YORK, N. Y.

An explanation of charts and illustrations shown in the scientific exhibit at the Annual Meeting of the Medical Society of the State of New York, in the Waldorf-Astoria Hotel, New York City, April 3-5, 1933.

YENERAL CONSIDERATIONS: Any vagina, whether or not it be the seat of a demonstrable vaginitis, may be harboring the protozoon flagellate, the Trichomonas Vaginalis. In a series of 76 consecutive cases, evenly divided between prenatal and gynecologic patients, from private and clinic practice, there was a total of 10 cases positive for the Trichomonas Vaginalis, an incidence of 13 per cent. Of these ten positive cases, four were in the prenatal group. All of these had symptoms and signs as described below. The other six were in the gynecologic group, and included a virgin, an early post-partum patient, and a patient in the menopause. Half of this group, i.e., three cases, had no symptoms or signs at all referable to the vagina, and the organism was found only in the course of the routine examination.

The mode of infection has not been definitely determined.12 Examination of the male partner has failed to demonstrate the organism either in the urine or in the preputial smegma in the majority of cases, although the organism has been reported on several occasions in the urine of both sexes and in prostatic smears.12% The common belief is that the organism is an intestinal parasite and obtains entrance into the vagina by extension from the rectum,4 particularly if cleansing after defecation is done from behind forward, which practice is apparently very common.⁵ This belief, while not established, will explain the reinfections that are so frequently noted after apparent cure. That the bladder may be the habitat of the organism either primarily or after the condition has developed, is militated against by the very small number of cases in which the organisms are found in the urine.2 I have never found them in catheterized urine specimens in cases in which the vaginal secretion was teening

with them. What is most probable is that the organism exists in a quiescent state either as to number or to virulence in numerous vaginas, and that some injury too, or alteration in, the vaginal canal, activates them. This likelihood is borne out by the case of the virgin in this series. She had never had any vaginal symptomatology until three days after an attempt at coitus which did not proceed beyond the external genitalia, at which time a discharge appeared which was repeatedly negative for the gonococcus, but was literally teeming with the *Trichomonas vaginalis*, 50-100 to the high power field (Fig. 1); and,

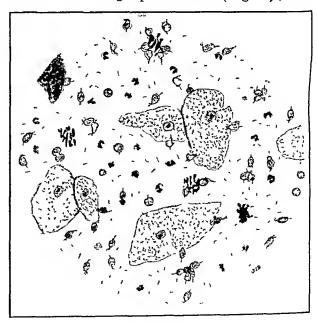


FIGURE 1

Secretion from a vagina infested with Trichomonas vaginalis as seen in a hanging-dop under the high power lens. Note the epithelial cells, leucocytes and bacteria of all kinds.

significantly, the organisms were most numerous in the vault of the vagina, and not on the mucous membrane of the labia minora or of the vestibule. Further support for this belief is found in the observation that the prenatal patients with positive smears all have active signs and symptoms, while half of the gynecologic patients harbor the organisms but do not show any of the signs or Then, too, while the symptoms of vaginitis. Trichomonas vaginalis is seldom found coexistent with the gonococcus, it will not infrequently follow upon a gonorrheal infection.2

The Trichomonas vaginalis does not invade the cervical canal.6 Examination of the cervical secretion repeatedly failed to show the organism in cases in which the vaginal secretion contained

them in great numbers.

The incidence of Trichomonas vaginalis is greater among those with low standards of per-

sonal hygiene.26

Prenatal patients suftering from trichomonas infestation have a higher incidence of puerperal morbidity than have those not so afflicted.6 But it has not been established that the organism is in itself the responsible factor, or whether its presence is an index of the degree of infectivity of the other organisms in the vaginal canal, much as the numbers of B, coli in water are an index of its pollution.

Symptoms: A patient harboring the Trichomonas vaginalis in her vagina may be free of all signs and symptoms. 16 Such symptoms as are present may vary from very slight to very profuse vaginal discharge; there may be vulvar pruritus and intertrigo; there may be chafing of the inner aspects of the thighs. These symptoms may be moderate or severe, transient or constant. It has been found that only 15% of positive cases present the typical symptoms.

Signs: There may be none. Usually there is present a greenish, yellow, foamy discharge, sometimes thin, sometimes thick. The external genitalia may be either slightly or intensely reddened and roughened. The vaginal mucosa is usually hyperemic, and presents a punctate mottling which extends into the vault of the vagina, and may also be seen on the vaginal portion of the cervix. In general, the local condition strongly resembles a gonorrheal infection for which it is frequently mistaken, and from which it must be differentiated.2

Diagnosis: The diagnosis depends on the finding of the organism in the vaginal secretion. This is best done in a hanging-drop. My technique is to insert a cotton-tipped applicator into the vagina before any examination is made or any instrument is introduced, and with it to transfer some of the secretion into one cubic centimeter of normal saline solution in a test tube. From this suspension, a drop is placed on a cover-slip, which is inverted on a plain slide or, better yet, on a hollow-ground slide, and is examined under

the high dry power. The organism, if present, will be readily recognized by its motility. It is usually pyriform in shape, and somewhat larger than a leucocyte. (Fig. 2.) While as a rule, the drop is seen teeming with them, the organisms may at times number as low as one or two per high-power field.

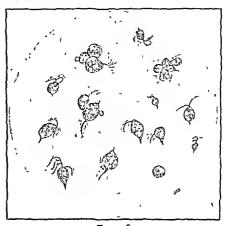


Figure 2 I arious forms of the Trichomonas voginalis organism as l arious forms of the Trichomonas voquants organism as seen under the high power lens. The drop is several hours old and is drying up, which is mimical to the flagellates. Some of them have lost their motility, and have gone to cyst(?) formation. Others have interest stowed up, so that their flagellar filaments ore seen indulating slowly. Note the voriations in size of the organisms

It is very important that a stained smear be made to examine for the gonococcus; and also that the urine be examined for sugar. Either or both of these conditions may be coexistent and should not be overlooked.

Treatment: There is, as yet, no specific treatment; nor has a permanent cure been found. De Lee says "I have never succeded in rendering the tract free from the infestation." Almost any physical or chemical agent will destroy the organism, but no agent has been found that will prevent recurrences. A satisfactory treatment is to scrub thoroughly the external genitalia, the vagina-with its rugae smoothed out by a bi-valve speculum-and the anal area, with tincture of green-soap either in full strength or diluted. This scrubbing should be continued for several minutes and should cover the entire surface of the vaginal mucosa. The canal is then irrigated with any antiseptic such as 1% lysol solution or hexylresorcinol solution or pyroligneous acid. The vagina may then be painted with mercurochrome or with 2% silver nitrate. It should then be tamponed with boroglycerin or with kaoline or

with Lassar's paste. The patient is instructed to douche every night with 1/2 % lactic acid solution or with tincture of green-soap solution. A treatment recently introduced8 consists of irrigation of the vagina under pressure with sodium perborate solution, a tablespoon to the quart, followed by the insufflation of dry guinine sulphate powder into the canal after it has been wiped dry. This treatment repeated two or three times a week for two months is said to free the tract of organisms for as long as six or eight The heat treatment with the Elliott bag given daily over a number of weeks has also been used.9 My experience has been that thorough scrubbing with tincture of green-soap, strength, together with the use of tincture of green-soap solution for douching has often given very satisfactory results as far as the relief symptoms is concerned, but recurrences have been noted. In the case of the virgin in this series where thorough scrubbing of the vaginal mucosa was impossible, complete relief from symptoms has been obtained by the instillation into the vagina every night of a syringeful of tincture of greensoap, full strength. In one case where ordinary

soap-suds were used for scrubbing and for irrigation, the organisms also disappeared. To be effective, the scrubbing should be repeated every three or four days, even during the menses and, with care, during gestation. The douche, of course, should be taken every night.

Summary: 1. The Trichomonas vaginalis may exist in the vagina in the absence of any of the usual signs and symptoms.

- 2. Infection is probably by direct extension from the rectum.
- The organism is a potential pathogen, especially in pregnancy.
- 4. Trichomonas vaginalis vaginitis resembles a gonorrheal infection, and must be differentiated therefrom.
- 5. The diagnosis is best made by the microscopic examination of the fresh vaginal secretion in normal saline solution.
- 6. Treatment is designed to bring mechanical, physical or chemical destruction to the greatest number of organisms thoroughly and persistently.

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A YEAR'S ACTIVITIES OF THE BRONX COUNTY MEDICAL SOCIETY By WILLIAM KLEIN, M.D., BRONX BOROUGH, NEW YORK

A report by the President retiring at the Annual Meeting on June 21, 1933.

THE activities of the constituent counties of our State Medical Society are many and varied. Geographic location, local customs, and political administrative cooperation are factors that influence the needs and actions of the individual societies. The number of members in the society also bears a relation to its activities. It becomes evident that what is applicable to one county society may have no bearing to the needs of another; and even the same problems may require different methods of solution. There are, however, general paths along which the activities of one branch of the State Society may be helpful and lead the way to the solution of similar problems arising in another county. It would therefore seem advisable to acquaint the several counties with the problems and solutions of one unit from time to time through the common medium of the Journal. It may prove helpful and even instructive. With this point in view, I will attempt to recite a few of the problems that confronted us during my term of office, and how we tried to solve them.

The population of the Bronx County is about 1,250,000, and the County Medical Society has a membership of over 1,000. It therefore ranks as a large organization.

Examination of School Children: In New York City the examination of primary school children, if not done by the family physician, is attended to by doctors employed by the City Health Department. In the secondary schools no provision

is made for the examination of the children. The respective principals who desire to have pupils examined for the participation in a variety of athletic activities must provide or procure such examination by any method whatsoever that suits his particular fancy and condition. With a high school population in the Bronx of about 48,420 the numbers participating in athletic fields are Individual principals have emconsiderable. ployed a variety of methods to have these children examined. The majority requested the parents to have the pupils examined by the family physician. Where the parents either neglected to heed the request, or were unable to comply on account of poverty, the principal or physical director engaged the services of a private physician who examined these pupils for a minimum fee paid by the candidate for athletic endcavor. This method was unsatisfactory. In the first place, the right physician was not always procured; and the examination was at times perfunctory, while at other times it entailed the coming of the pupils en masse to a doctor's office and to wait hours before their turn came. For one physician to examine 100 pupils in an evening was considered by the County Society as unsatisfactory. Many physicians complained that their patients were enticed to the offices of another doctor. Other inimical features were entailed in this procedure.

The Bronx County Medical Society studied this problem and succeeded in making the follow-

ing arrangements:

A gentlemen's agreement was entered into between the principals of the high schools and the Bronx County Medical Society. By this arrangement all children to be examined are given slips to be taken home, and are instructed to have the family physician examine them and fill out the slips. Failing to bring in the filled-out slip within two or three weeks or reporting the inability to engage the services of a private physician, the children are examined by the County Society in the following manner: The high school notifies the County Society that a certain number of children are to be examined on a particular day. The County assigns two or more physicians, depending upon the number of pupils to be examined. The assignment is made from a list in our office. This list is headed by those members who are on our relief list. They get first call. The rest are called alphabetically from a voluntary list. Usually young men who have time and ability but not much to occupy them in their practice, are listed. The pupils pay a fee of twentyfive cents, or none, when unable. Under the able guidance and instruction of Dr. L. A. Friedman, whose experience was invaluable, these physicians are examining on an average of ten children per hour per physician. It is surprising how thorough and satisfactory these examinations are done in what seems an incredibly short time. The examining doctors receive \$2.35 per

hour. The County Society does not derive any monetary benefit from this work. It is considered a public duty and serves many useful purposes. These examinations are conducted in the schools where clerical assistance and proper space are provided by the school. The doctors are impersonal and no one can or will make any remarks to the pupil, but each dictates his findings to the secretary. Pupils found in need of care and treatment are weeded out and referred to the family physician. If unable to procure such services in private, the County Society sends them to the various specialists who treat them gratis. Under this arrangement we have examined some 9,000 children from October, 1932, to June, 1933.

The advantages of this procedure are many. In the first place the examinations are impersonal, pupil and doctor remain practically unknown to each other. Secondly, the family physician has no cause for complaint. No one is trying to entice his patients away from him. Thirdly, the County Society is responsible for the work done and no other but a member of our organization is in atendance. The principal is relieved from a great responsibility and from many complaints. Much credit must be given to Miss Gladys Adams of The Bronx Tuberculosis and Health Society whose tireless work and assistance helped in these arrangements.

Baby Health Work: Due to the impaired budget of New York City, the Health Department was forced to relinquish a number of baby health sta-This work was immediately taken over by the Bronx County Society in conjunction with various voluntary health agencies. The method in brief is as follows: When a mother cannot afford the services of a private doctor for the routine and regular examination of her baby, she reports her case to a welfare agency. The agency determines the veracity of her statement, and then gives her a card with the names of a number of physicians in her neighborhood who will care for the baby in the office gratis. This obviates the perniclous habit of going to dispensaries, and facilitates the trial period of the young medicus in helping him to become acquainted in his own neighborhood. It is perhaps of interest to know that the welfare agencies wished that the doctor receive the regular dispensary fee which these people were in the habit of paying; but we objected on the ground that it would cheapen the doctor and would undermine the average neighborhood fees. A woman will boast if she pays little, but would not advertise the fact that she is a charity patient. This arrangement was used as an argument against the reopening of these or other clinics.

Cheap Insurance Schemes: In a large community we find that from time to time certain men holding medical diplomas would evolve schemes which sound good to the unwary, but are the kind of practice that undermines the profession. Most of these are modifications of the old ten cents a week game. The public is enticed by various promises and in the long run they pay more for less. One such scheme started last year in our county. This had the added feature of making the doctor joining it pay in \$150.00 for the privilege of becoming connected with this nefarious business. Certain druggists, too, were enticed and handed over the stipulated amount. Before they were too far advanced the County Medical Society exposed them, wrote warning editorials and opened the eyes of the druggists. It promptly ended the business.

Abuse of Hospitals: In larger centers of the state municipal hospitals are often abused by those who should be in the offices of the doctors. The professional charity worker and certain political appointees seem to be infected with the purely American disease, the craving for large numbers. It is perhaps to their advantage to be able to flaunt into the eyes of the public the great good they are doing. With an array of big numbers it is easier to get larger budgets and make the positions safer. The doctors who never retracted their willingness to treat the poor gratis always felt that too many non-deserving patients are taking advantage of the hospitals, often with the guiding hand of the professional social worker. County Medical Society undertook to investigate one large, typical, municipal hospital. After obtaining permission from the city authorities to do so, a committee was appointed for this purpose. The expense was borne partly by the County Society treasury, already impoverished, and partly by voluntary contributions by one set of our members. The committee engaged the services of a disinterested organization, and the investigation was as thorough and as unbiased as was expected. We believe that it is the first time that a County Society investigated independently a municipal hospital. The report will be of interest not only to us but to all organized medicine. The final report is expected some time in the Fall.

Private Hospitals: We have in our county about twenty-four private hospitals and sanatoria. In their eagerness to attract the doctors and their patients, some of these have established a sort of bonus for the doctor who refers cases to them. This practice is widely spread in large cities. Our county considered this both unethical and possibly leading to practices that are not in keeping with The Comitia Minora called the our tradition. proprietors of all private hospitals to a conference. After pointing out to them that this is a pernicious practice and what it may lead to. an agreement was entered into between the County Medical Society and the private institutions. This agreement is to the effect that they pledged themselves to refrain from any unethical and hidden practices. The county issues a certificate of approval to each subscriber and will see that only those which are in the agreement will be patronized. The great majority have gladly signed the agreement.

Patent Medicine Advertisements: Some local papers carried advertisements of the usual type of patent medicine. This particular one was a harmful drug acclaimed as non-injurious. The County Society with the cooperation of the Health Department prevailed upon the particular paper and the practice was discontinued.

Public Instruction: Our regular radio talks are in full progress. During the year our members broadcast about fifty talks. These were written and censored by our own men. Another fifty talks were given to mother's clubs, teachers, and lay organizations. We felt that the teaching of the public should be in the hands of organized medicine and not relinquish it to lay people who are interested in one thing or another but not in the doctor. The rôle of the family physician is always stressed as the bulwark of the family's well-being.

A number of other activities that originated in our County Society were carried with cooperation and unstinted help of the five other county societies comprising greater New York organized medicine. The coordinating committee of the five counties facilitates matters greatly for each individual county.

I wish to take this opportunity to express publicly my sincerest thanks to that indefatigable and tireless worker for organized medicine, Dr. C. E. Podvin.

TREATMENT OF CARCINOMA OF THE FUNDUS

By THOMAS P. FARMER, M.D., SYRACUSE, N. Y.

Read at the Annual Meeting of the Medical Socity of the State of New York, at New York City, on April 5, 1933.

DESPITE the disparity in figures in published reports of series of cases of carcinoma of the cervix and the corpus uteri, it can be fairly safely stated that cancer occurs three or four times more often in the

cervix than it does in the body of the uterus, and that the percentage of cures in the latter condition are probably twice as high as those of the former. Because carcinoma of the fundus is apparently more frequent than formerly was supposed, and because of the relatively good chances of cure, this condition merits more attention that has been paid to it in former years. It is especially important from a public health standpoint, not only on account of the possibility of increasing the percentages of cures, but also because it affords splendid evidence of the frequent cure of a malignant growth by a major surgical procedure.

Outside of the fact that bleeding is a leading symptom of both conditions, cancer of the cervix and of the corpus have little in common. Due to the obvious anatomical histological and physiological differences existing between the body and the neck of the uterus, neither the marked contrast between disease processes in these two locations nor the resulting differences in the manifestations of disease is sur-The differences between cancer of the cervix and cancer of the body are especially notable and have been frequently emphasized by many previous writers. That a better appreciation of these differences would materially aid in the early recognition and the proper treatment of these two diseases would seem most probable.

Although the etiology of cancer of the fundus is not clear, some quite definite facts seem to point to certain conditions as having a bearing on this problem and being of some practical importance. The average age of cases of cancer of the body of the uterus is probably between 53 and 54 years. It is more significant, however, that nearly 50 per cent of these cases occur in the sixth decade of life and approximately 75 per cent of the cases occur during the sixth and seventh decades. Apparently a much larger proportion of cases of cancer of the body occur in a smaller age group than is the case with cancer of the cervix, and this age group is distinctly a postmenopausal one. Donald and Shaw reporting on 177 cases state that only one and threetenths per cent of these cases were pre-menopausal and that in the cases in which bleeding had not stopped, the continuation of menstruation for a longer time that would seem to be normal was frequently due to the presence of other pathology, such as fibroids. Although cases of cancer of the corpus have been reported in women as young as nineteen years of age and while most all observers have seen patients under forty years of age, it can be fairly safely stated that the disease is principally associated with the period of atrophy following the menopause and that this probably bears a relation to the origin of cancer of the corpus. The age incidence of this disease without doubt is of great importance in emphasizing the responsibility of definitely determining the cause of all post-menopausal bleeding.

Fibroids accompany cancer of the body of the uterus in about 25 per cent of cases. Whether this is greater than the normal incidence of fibroids cannot be definitely stated due to our lack of knowledge of just what the normal incidence of fibroids happens to be. Nevertheless, it is the opinion of most authorities that this figure does represent an increase. Ewing has reported the observation in three cases of carcinoma developing in the mucosa overlying small fibroids. Probably of greater significance are those reports in which cancer of the fundus, although a rarer disease, has been found associated with fibroids more often than cancer of the cervix. These observations while only suggestive point to the necessity of the treatment of fibroids of any consequence at or after menopause and emphasize the danger of fibroids by their presence masking the symptoms of cancer. Because of this fact, the visual examination of the endometrium for coexistent carcinoma of the corpus should be a routine part of every supravaginal hysterec-

Several cases of early cancer developing in a hyperplastic endometrium have been reported. Because this occurrence is relatively infrequent, while hyperplasia of the endometrium is a fairly common condition, it has been questioned whether this is more than a coincidence. Fluhmann and Stephenson while apparently inclined to this view, state that "the possibility of coincidence, no matter how slight, does exist and one must always bear in mind the importance of careful study of all tissue obtained from the uteri of women with abnormal bleeding at the time of the menopause." Taylor who has made an extensive study of hyperplasia of the endometrium gives the following wise advice: "In patients of the menopause age and older an adequate dose of radium is particularly indicated, certainly as the most efficient method of controlling bleeding, possibly as a prophylactic measure against the development of cancer." Because I do not know of a case of cancer of the fundus, having occurred in a large number of women treated by curettage and radium for hemorrhage due to endometrial hyperplasia, most of whom must have passed through the age period of the greatest incidence of this disease, I am quite in agreement with this statement. The observations in carcinoma of the rectum made by Lockhart-Mummery and Dukes, showing epithelial changes beginning with hyperplasia and continuing through adenoma to cancer would suggest the strong possibility of such relationships in the uterus,

The contrast in the clinical course and the extension of cancer of the body and cancer of the cervix is especially marked and undoubtedly of much practical importance. Although cancer of the body may show very early recurrences and have a rapid course, it is usually a disease of longer duration than cancer of the The average duration of symptoms before operation has been reported as varying from one to nearly two years. The fact that death from recurrences occurs eight years postoperatively would question the validity of statistics based on a period of five-year curability. The disease offers no characteristic physical signs, pelvic examination frequently being negative. It is apparent, therefore, that diagnostic curettage is absolutely essential in many cases for the prompt recognition of the disease, though the Clark test may be helpful if positive. Because the disease does not tend to invade the parametrium but does show a large number of visceral metastases, notably in the ovary, it would seem possible that the disease is frequently spread by transplantation and that this often occurs through the tubes, as explained by Sampson. quency with which the vagina is secondarily infected would also suggest secondary invasion by transplantation. Nevertheless, the disease may also be disseminated by the lymphatics and blood vessels. However, the transplantation theory cannot be disregarded, despite objections to it, and consequently, great care should be paid to the possible spread of the disease through this method during pelvic examinations, curettage, the application of radium and at hysterectomy.

Although radium has largely supplanted surgery in the treatment of carcinoma of the cervix, the opinion of the majority of surgeons would seem to favor operation as the choice of treatment for cancer of the uterus, not only in the early cases but also those cases somewhat moderately advanced. cancer of the uterus which have been cured after simple curettage and after supravaginal hysterectomy have been reported. of these methods can be relied upon as a safe form of treatment. The entire uterus should be removed in as much as some of the lymphatics in the body of the uterus extend to the cervix and metastasis may occur through this route. As secondary growths in the ovary have been noted in as high as ten per cent of the cases, bilateral salpingo-oophorectomy should be done. The lymphatics draining the fundus of the uterus flow directly into the lumbar glands and not into the pelvic Consequently the wide removal of the broad ligament and perimetrium, necessary in dealing with carcinoma of the cervix, is not essential with carcinoma of the body. Bearing in mind the possibility of transplantation of adeno-carcinoma of the corpus, the pre-operavaginal preparations should include closure of the cervix by suture and packing of the vagina. After the abdomen has been opened attention should be given to the closure of the tubes and avoidance of puncturing or compressing the body of the uterus during the operation for the same reason. Personally, I feel it highly desirable to remove the tubes and ovaries at the beginning of the operation before the uterus has been handled at all. While there is a possible danger of transplanting the growth during curettage, a comparison of a group of cases curetted at least a few days before operation with a group of cases not submitted to curettage, shows no actual difference in results. In view of the fact that curettage is imperative in about thirty per cent of the cases in which the diagnosis is doubtful and that the diagnosis will be made in another twenty per cent of unsuspected cases, the procedure should not be omitted because of any theoretical considerations, though it should be used carefully and judiciously. The radiation treatment of fibroids or glandular hyperplasia without preliminary curettage excluding the exceptional case should be strongly condemned.

Radium is of considerable value in the treatment of cancer in the body of the uterus. The statement frequently made that adenocarcinoma of the corpus is not influenced well by radium cannot be substantiated in view of the reports showing cures running from twenty to fifty per cent of all cases. It should be particularly remembered that many of these cases were treated with radium because they were either unsuitable or too far advanced for The objections to the use of operation. radium are the difficulty of estimating the proper dosage, of making the correct application and of observing the progress of the reaction to its use. It is quite possible that if radium could be properly applied it might cure as many and possibly more cases of cancer of the body than is now accomplished by surgery. In the highly malignant types it would seem to give a greater chance of cure than operation. Certainly all cases in which surgery is refused or contraindicated, as well as postoperative cases showing recurrences should have the possible benefits of radium. The question as to the advisability of using radium preoperatively is an unsettled one. Objection has been raised against its use on the grounds that the radium tube in the uterus might act like a piston in a cylinder in forcing carcinomatous tissue from the fundus through the tubes. With proper care in the introduction of the radium tube after careful dilation of the cervix, avoiding tight packing of the vagina and holding the tube accurately in place by a mattress stitch through the ecryix so as to prevent its subsequent dropping into the vagina, such an occurrence should be obviated It is, therefore, my plan to use radium in all suspicious cases where it is necessary to wait for a histological diagnosis. No great technical difficulty has been experienced at the time of hysterectomy because of the previous Hysterectomy has usually radium treatment been postponed until four to six weeks after curettage unless it has been possible to operate within a few days External radiation should promptly he resorted to in the cases treated by radium and in which hysterectomy as omitted

Because carcinoma of the corpus is frequently cured following an operation after symptoms have been present for a comparatively long period, many physicians feel that the malignancy of this growth is rather low. While the various grades of maliguancy are

seen in the corpus, in a general way these growths may be just as malignant as those involving other parts of the body and their more favorable course is due to the anatomy of the parts involved, especially the protection to the extension of the growth by the muscle of the uterus. When the scrosa has been penetrated, it has generally been my experience that the course of the disease has been rapid and most unsatisfactory and I would agree with Ewing and Norris that the chief point in the favorable prognosis of uterine cancer is the integrity of the myo-Norris analyzing his cases from the metrium standpoint of duration of symptoms finds that there were 565% three year cures when symptoms had not been present longer than six months, 31 2% such cures when symptoms had been present from seven to twelve months, and 178% cures when symptoms had been present over one Undoubtedly the most important single controllable factor of benefit to the patient in the management of cancer of the fundus, is, as with growths in other locations, the early diagnosis of the disease

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LABORATORY AIDS IN THE DIAGNOSIS OF UNDULANT FEVER

Issued by The New York State Association of Public Health Laboratories, October, 1933

That the diagnosis of undulant fever can rarely be made with certainty by clinical observation alone is now quite evident. The course of the disease is highly variable, the chief complaint may be any one of a large variety of symptoms, and the total symptomatology may constitute a clinical picture which resembles diseases as different from one another as influenza, typhoid and rheumatic fevers, tuberculosis, pyelitis, acute cholecystitis, and appendicitis. Some patients may not be acutely ill. Headache, insomnia, and a feeling of depression may be the only complaint. Clinical records, together with the results of agglutination reactions done on blood serum sent to the laboratory without any suspicion that the patient had undulant fever, have made it clear that the laboratory findings may often be of primary importance in the diagnosis of undulant fever.

LABORATORY AIDS IN DIAGNOSIS

I. The Agglutination Reaction. Main reliance must be placed on this test. A marked agglutination reaction with a suspension of B. abortus culture in a 1:80 or higher dilution of the patient's serum is almost conclusive evidence of past or existing infection induced by a microorganism of the abortus-melitensis group. The agglutination reaction may, however, be negative during the first two weeks of undulant fever and sometimes even longer. Repetition of the test with later specimens of serum is, therefore, frequently necessary. Occasionally, when patients are very ill, the agglutinative properties of their serum may be

slight. While serum from cases of tularemia or undulant fever may agglutinate suspensions of both B. tularense and B. abortus, the former infection is so rare in New York State that this seldom needs to be considered.

II. Blood Cultures. The isolation of B. abortus from the blood stream may be accomplished in a limited percentage of cases only by the very prompt inoculation of suitable culture medium and its incubation under special conditions. On first isolation the growth of the organisms is slow, so that two weeks or longer may be required before sufficient growth for identification has occurred. Failure to isolate the microorganism has little significance.

III. Stool and Urine Cultures. B. abortus can seldom be isolated from feces or urine. Attempts to demonstrate the presence of the microorganism in these discharges are usually futile.

IV. Skin Reaction. Intradermal tests with killed suspensions of B. abortus for evidence of undulant fever must still be considered in the experimental stage. Reports indicate that severe reactions occasionally occur.

EPIDEMIOLOGY

In New York State, cattle or dairy products have been shown to be the usual source of the incitant of undulant fever. Hogs or goats have seldom been implicated. Contact with cattle having infectious abortion disease or the use of raw milk or cream from such animals has generally been found to have occurred when cases of undulant fever are studied.

Patchogue

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EXHIBIT ON METABOLISM

The scientific exhibits on metabolism in the New York Academy of Medicine during the Graduate Fortnight ranked among the largest and most complete that have ever been assembled on any one subject. While the exhibits were prepared by specialists and research workers, yet they were in a form that a general practitioner

could comprehend In fact the exhibits were designed to educate the general practitioner in new fields of knowledge which his successors will enter and occupy. There are no bounds to the field of medical research, nor to the opportunities for a physician to extend the scope of his knowledge and usefulness

TRUTHFUL ADVERTISING

Commercial advertising is paid propaganda setting forth only the virtues and attractions of a ware that is for sale. It is subject to all the exaggerations in which enthusiastic salesmen indulge; and when uncontrolled, it may be downright deception. "Buyer, beware" is an ancient saying that still has its force.

When a storekeeper deliberately makes a false statement to a buyer, through which the customer suffers harm, he is subject to the penalties of the law. But when a newspaper or magazine publishes misleading statements in an advertisement, the seat of responsibility is often problematical.

The most direct law dealing with fraudulent advertising is the Federal Food and Drugs Act, which includes cosmetics in its scope. But this law is ineffective for it deals only with labels on the packages of goods. A dealer can make grossly exaggerated claims and statements in newspaper advertisements, when the law forbids him to place the same claims on a package of his goods. The dealer has accomplished his purpose when he has sold his goods, and yet it is only then that the buyer reads the label on the box or bottle. A label is usually a colorless statement of vague claims, while the advertisement is a lurid promise of miraculous results.

A new Food and Drug Bill that is under consideration by Congress, extends the provisions of the present law to newspapers and radio broadcasts. However, it makes a distinction between the published article or broadcast, and the advertiser. It would exempt the publisher or broadcaster from liability for false statements; but would hold the manufacturer or dealer responsible for the statements in the advertisement. This is a wise provision, for a publisher cannot be expected to have facilities for judging the truth or deception of an advertised statement; but a dealer or manufacturer is supposed to know the nature and value of the product which he handles.

The principal responsibility which the proposed law would place upon the publishers is that of supplying the names and addresses of the advertisers of suspicious articles.

The N.R.A. code of fair practices will assist in the promotion of truthful advertising, and also in the enforcement of the proposed law, for under it a dealer can report an exaggerating competitor to the Federal Government.

The proposed extension of the new Food and Drugs Act is an important step in raising the standards of advertising.

INSURANCE OF HOSPITALIZATION

The Hospital Council of Cleveland, Ohio, has submitted to the State Insurance Commission a plan for the insurance of hospitalization of individuals on a group payment plan, which is described in the November issue of the Ohio State Medical Journal. Specifically, the article discusses the Ohio insurance law as applied to the plan, and is based on the opinion of the Attorney General given at the request of the State Superintendent of Insurance. The general principle of the opinion is that corporations which engage in health or sickness insurance must allow the insured their free choice of physicians or hospitals; but that a hospital may make direct contracts with citizens of the county in which the institution is located.

The Cleveland plan is a proposal to form a corporation called the Hospital Council which should be the agent of fifteen hospitals in selling insurance of hospital service to specified groups of individuals. Since the corporation is not for profit, but merely acts as the agent of the fifteen hospitals, the Ohio law would be observed.

The plan offers ward service to an individual at \$7.20 per year, and semi-private room service at \$9.00 per year; and goes into detail as to what nursing, laboratory, x-ray, and other

services are included and what kinds of cases are excluded. It also limits the service to twenty-one days in any year.

The proposal also limits the insurance to persons who are in the employed class; but further stipulates that they must be in groups of not less than ten working for any one employer. The service is to be given to the employed persons only, and not to their families. It will therefore be seen that the Cleveland plan would cover only a corner of the field of medical insurance, and yet would require a force of salesmen, managers and clerks to keep track of the business.

There is nothing inherently wrong in the general principle of insurance for hospitalization; but there are numberless objections to any specific plan that has been proposed. However, the prospect of attaining success is alluring, and will doubtless spur promoters to attempt to form hospitalization insurance groups, until some one succeeds in pointing out a practical plan. At present the assumption of the risks of the organization of insurance groups belongs to business men rather than physicians. But any insurance man acts unwisely if he fails to seek the advice of a county medical society.



MEDICAL PROGRESS



The Treatment of Glaucoma.-B. W. Rycroft says that masmuch as the cause of glaucoma is unknown the treatment, though adequate, is empirical. The treatment of acute glaucoma consists in the following procedures: (1) The patient is put to bed sitting up; (2) aspirin or morphine is administered for the pain; (3) leeches are applied to the outer canthus; (4) miotics are instilled locally; (5) hydragogue cathartics are administered; (6) an electric eyewarmer is applied; (7) tension is reduced by diathermy or saline, followed (8) by operation under subtendon or retrobulbar novocaine anesthesia. The treatment of chronic glancoma must always commence with: (1) a medical investigation of the cardiovascular system with due attention to hyperpiesis and renal dysfunction; (2) the elimination of gross foci of sepsis; (3) the guarded use of mioties until such time as deterioration of vision is no longer controlled; and (4) coincidentally the use of prolonged local eye massage. The indications for operation in chronic glaucoma consist in an increased frequency of acute exacerbations, in an increase of relative scotoma and field loss, and in a persistent high tonometric tension. The ideals to be attained by operation are that filtration must be spread over a wide area, that it must be permanent and adequate but not excessive, and that there must be a minimum of trauma, no risk of late infection and a good cosmetic result. The Elliot operation approaches these ideals most closely.

In secking a physiological basis for the treatment of glaucoma, the author has studied the effect of histamine on the eye and endeavored to find whether this substance was present in the aqueous in cases of acute glaucoma. By animal experiments it was found that histamine injected into the anterior chamber of the eye the intraocular pressure all the while being kept constant-produced a rise of intraocular pressure, which was not brought about by an equal amount of saline. When histamine was injected into the blood stream there occurred a fall of blood pressure, and a coincident rise of intraocular pressure, provided the capillaries maintained their tone. Friedenwald has found that the histological findings of animal eyes into which histamine has been injected conformed in close degree to the pathological findings of eyes removed for acute glaucoma. There appears, then, to be a close relation between the effects of histamine on the eye and the picture of acute glaucoma. In four cases of primary acute glaucoma equal amounts of

aqueous and saline were injected on the flexor surface of the forearm. The next day histamine was injected. In no case was a flare produced by the injection of aqueous, although all the patients reacted to histamine. These experiments have, therefore shown no vasotoxic substance in the aqueous.—British Medical Journal, September 16, 1933, ii, 3793.

The Pathogenetic Significance of the Enterococci.-It is a mistake, says M. Gundel, in the Deutsche medizinische Wochenschrift of Sept. 8, 1933, to suppose, as has been done until quite recently, that pathogenic action on the part of the enterococci, as regular inhabitants of the lower part of the intestine, is an exceptional phenomenon. Both microbiologists and elinicians have, within the last few years, been justified in taking an increased interest in these microorganisms, which have not in the past been accorded their proper place as agents of disease. Two types, A and B, of enterococcus, are now recognized. Type A upon blood agar is characterized by slender, blackish, small to medium size colonies with a whitish center and a greening of the nutrient medium in greater or less degree. Type B, on the other hand, exhibits a considerably more luxuriant growth, the whitish colonies resembling staphylococcus colonies, which are for the most part marked by a delicate black border, and which grow luxuriantly on agar. The latter is the type that predominates in the lower intestine. Foremost among infections of the gastrointestinal canal caused by the microorganisms are inflammatory changes of the bile ducts, which push into the background those of the upper intestinal tract, while a special role in the pathogenesis of appendicitis has recently been attributed to the enterococci. These organisms not infrequently serve also as the exciting cause of appendicitic abscesses and postappendicular peritonitis. In addition, though yielding first place to the colibacilli, the enterococci are observed as the next most frequent cause of cystitis and pyelitis. Although the pathogenic role of the enterococci is still a debated question in many of these diseases, no such doubt is any longer possible when these microorganisms are seen in pure culture as exciters of septicemia. Here the incontrovertible diagnosis of enterococcus may lead to recognition of the focus, whether in the biliary tract, the intestinal canal or the urinary tract. But also from a clinical-diagnostic and prognostic point of

view, a definite diagnosis is especially important with reference to enterococcus endocarditis, which is strictly to be differentiated from endocarditis lenta. The enterococcus problem has, therefore, an importance beyond that of pure biologic research. The differentiation and identification of the members of the streptococcus group do not simply constitute a game for specialists, but are also of great importance for the general medical practitioner.

Attempts at Therapeutic Malarialization in Acute and Chronic Leucemia.—Benedetto De Luca states that he recently had an opportunity to observe the effect of the therapeutic use of malaria in 2 cases of leucemia, the one acute, the other chronic. In the former he injected into the blood the parasite of quartan, in the latter that of tertian, malaria. In both cases the temporary effect was very striking, the number of white cells diminishing in marked degree, while at the same time the differential count improved. Thus in the acute case, a white cell count of 251,000 per cubic millimeter had fallen, after 7 chills, to 48,000, and immature cells were reduced from 80 per cent to 16 per cent; in the chronic case a fall from 220,000 to 115,000 white cells was observed, and of immature cells from 51 per cent to 15 per cent. There was also a very marked reduction in the size of the spleen in both cases, but especially in the chronic one, in which the enormous size of the organ had occasioned almost intolerable discomfort. When the malarial attacks came to an end, however, there was a strong tendency for the leucocytes to multiply to their former number and for the differential count to assume again its former large percentage of immature forms. The spleen also exhibited a tendency to return to its former excessive size, though not so rapidly as might have been expected from the simultaneous multiplication of leucocytes. The liver behaved similarly, but in less degree. Subjectively both patients felt much better in the period immediately following the cessation of the chills; but during the period itself in which the explosive attacks were appearing, both were greatly prostrated; in the acute case, particularly, the patient begged that the treatment be stopped, insisting that he could not possibly bear the fever any longer. This is explained by the fact that while the leucemic picture was improving, the red blood picture was undergoing a marked impoverishment. In other words, the effects were at the same time beneficial and injurious. This makes it desirable to limit the number of febrile attacks to 10 or 12. After the attacks, the former hematopoiesis was resumed rather rapidly. In fact the maximum clinical improvement coincided with the period of hematic repair, notwithstanding the contemporaneous increase of white cells. This improvement in hematopoiesis, though temporary, may persist for a month or more. In the acute case, despite the use of deep roentgenotherapy of the spleen, carried out twice with an interval of 50 days between sittings, the improvement was rather ephemeral and less marked than in the chronic case, in which the diminished tendency of the disease to progress must be taken into account.—Rifirma medica, August 12, 1933.

The Treatment of Cancer with Connective Tissue Extracts.—H. Searle Baker is of the opinion that the excessive growth of cells is controlled by substances secreted by the connective tissue of their area. If a cell or group of cells be deprived of adequate inhibition, by lymph stasis or actual failure of secretion, it will reassert its fundamental tendency toward unlimited growth. It is not impossible that the inhibitory factor is an enzyme, and for various reasons it is considered that its major function is lipolytic. It is secreted in the connective tissue and functions to the best advantage in the area of its secretion. Working on this hypothesis, treatment is designed to introduce this essential substance into the carcinoma by the intravenous administration of an extract of connective tissue derived from an area, in the pig or cow, corresponding to that of the primary growth in the patient. The result of this treatment has been that the patient loses his cachectic appearance and the carcinoma diminishes in size and becomes attenuated in vigor. Thirteen cases are reported to illustrate the definite value of this procedure in carcinoma. The method employed in making a breast extract consisted in taking 33 Gm. of connective tissue from a sow's breast (for breast carcinoma) immediately on the death of the animal. This was thoroughly ground in 10 c.c. of glycerin with fine sand. To this 90 c.c. of water was added and the whole filtered at the maximum pressure consistent with effective sterilization, through a Seitz filter; 0.5 per cent phenol was added and the reaction adjusted. To this 0.5 per cent sodium phosphate was added and the pH checked. Then 0.1 per cent sodium taurocholate and 0.1 per cent sodium glycocholate were added, the pH adjusted, and the extract was boiled in nitrogen. The activity of this extract is only retained for from 10 to 14 days, when precipitation may occur. The preliminary dose was in every case 1 c.c. and subsequent doses were gradually increased, the maximum dose employed being 25 c.c. method of choice is the intravenous route, and the interval between doses should not exceed four days. The injections are accompanied by slight temporary discomfort. The author considers the results obtained by this treatment to be definitely promising and hopes that other workers will be stimulated to follow up this line of inquiry—The Lancet, September 16, 1933, cenny, 5742

Acute Poisoning from Potassium Permanganate. - According to Vincenzo Mario Palmieri, despite the widespread use of permanganate of potassium in industries and in medicine, cases of poisoning by this substruce are quite rare, its irritant and caustie properties render its use repugnant to would-be suicides and too easily detected for purposes of homicide, while its characteristic color and immediate causticity make its accidental ingestion rather improbable unless the victim's Palmieri resensorium is already clouded ports the strange case of a man who was brought to the hospital in extremis by two of his friends, who stated that he had been taken suddenly ill while drinking in a tavern first impression, accordingly was that he was suffering with acute alcoholic intoxication, he was in a state of unconsciousness, with extreme pallor, lips and oral mucosa swollen, a blackish fluid drooling from his mouth, while he made meffectual attempts to vomit pulse was thready, its rate 125 per minute, and his respiration of Cheyne Stokes type. On the following morning, when his temperature rose to 398°C, with abdominal distention, hippocratic facies and complete coma it became evident that this was no common alcoholic poisoning, and a consultation resulted in a diagnosis of acute appendicitis and peritonitis Operation was out of the question under such grave conditions, and the patient died 31 hours after admission without regaining conscious-An anonymous note now reached the hospital stating that the death was due to a "powder" put into his wine by friends vestigation resulted in the discovery that the poisoning was the result of a practical joke played by his drinking companions upon a man already in an advanced state of alcoholic ntoxication The friends of the victim knowing that he was using local irrigations of potassium permanganate for a gonococcus infection had conceived the idea of giving him reatment per os to help along his cure. They had accordingly introduced 10 gm of the substance into his red wine during his temporary absence from the table. On his return he had drunk the glassful at one gulp then almost instantly was seized with contortions became deathly pale, groaned with agony, tried ineffectually to vomit and fell forward unconscious upon the table Autopsy revealed a perforation of the posterior wall of the stomach and the presence of acute peritonitis, with signs of caustic action throughout the entire

alimentary canal There was recovered from the stomach 0.173 gm potassium permanganate (calculated from the manganese oxide found there)—Riforma medica, August 5, 1033

Carcinoma of the Male Breast - Judson B Gilbert writing in Surgery, Gynecology and Obstetrics, October, 1933, Ivii, 4, presents a clinical and pathological study of 47 cases of male breast cancer, six of which were pre-viously reported by Wainwright (1927) Male breast cancer comprised 124 per cent of ad missions to the breast chuic of the Menional Hospital and only 014 per cent of all caneers m males Of the 47 patients, the eldest was 83 years of age, while the youngest was 31, the average age was 514 years. The left breast showed a slightly higher percentage of involvement than the right. It appeared that in this series heredity was of secondary importance as a causative factor of male breast cancer Although "occupational mastitis," due to chronic irritation, is not infrequently a pre cancerous lesion, a previously existing benign tumor was noted in only three patients, or 63 per cent of the series. The incidence of trauma was recorded as a possible etiological factor in 14, or 29 per cent of the cases, but no proved instance of a single trauma causing cancer was noted in the series Emphasis is laid on the coincidence of gynecomastia with caucer, and evidence of their relationship is considered on experimental, clinical and anatomical grounds In this series nine patients, or 19 per cent of the entire series, presented hypertrophied mammary glands, corresponding in general topography to the female breast. It would seem that breasts of this type are more likely to be the seat of cancer The symptomatology. pathology, and distribution of metastases in the male breast correspond to the well recognized manifestations of mammary cancer in general The prognosis of cancer of the male breast is poor Five patients observed prior to January, 1928, survived five years or 11 per eent, of these 26 patients, are still alive without evidence of disease recommends irradiation therapy as a valuable adjunct in the operable cases and as a palliative measure in the inoperable cases Better knowledge, more varied and better modalities and the fact that the skin will stand heavier dosage than was previously supposed, offer the radiologist a greater opportunity to cope with this disease As a means of relieving the constant pain of bone metastasis and as a method of treating local recurrences radiation should be recommended in these hopeless cases

The Modern Treatment of Diseases of the Heart—Curtis Bain, writing in the Practitioner,

October, 1933, cxxxi, 4, expresses views regarding the sequence of events in cardiac failure based upon work as yet unpublished. He says the fundamental result of structural disease of the heart is that the circulation is slowed. Some forms of heart disease, such as mild degrees of mitral stenosis and regurgitation, are not incompatible with normal circulation speed. Others may have a little slowing and yet be able to live normal lives, as in many cases of aortic regurgitation and liyperpiesis, and in some with myocardial lesions. When the blood travels at about two-thirds of the normal speed, there will be symptoms of cardiac failure on exertion, dyspnea, and angina pectoris. For minor attacks of nocturnal dyspnea rest and opiates are indicated. Adrenaline may give relief, but cannot be depended upon. prognosis in cases in which the attacks recur is not good. When attacks of angina pectoris increase in frequency, it is not necessary to confine the patient to bed, but he should not be allowed to walk up stairs or out of the house. The essential factor is mental and physical rest. Lacarnol in doses of 20 drops a day has proved helpful. When freedom from attacks has been achieved for a fortnight, massage is invaluable. Walking should be resumed gradually. In venous congestive failure the treatment is rest in bed and adequate doses of digitalis. In urgent cases with vomiting, no more than glucose drinks may be tolerated, but otherwise milk may be given. Brandy is useful to control restlessness. overloading of the veins can be relieved by venesection, removing one-half to one pint of blood. If the liver is much enlarged six leeches should be applied over the organ. This diminishes the size of the liver and affords the patient much relief. The prognosis of edema is worse than that of The treatment consists in venous congestion. limiting the fluid intake and giving digitalis in doses of not less than one drachm a day. If the edema persists one of the xanthine group of diuretics should be added to the digitalis. Calcium diuretin in doses of 15 grains three times daily is safe and efficient. If no diuresis results within six days, salyrgan should be given intravenously. The diuresis following the use of this drug is usually prompt, but if it does not occur in twentyfour hours, ammonium chloride (20 grains three times daily) is given by mouth, and salyrgan is repeated after three days. Finally it may be necessary to draw off the fluid by Southey's tubes or multiple incisions down the shins. Quinidine is a valuable remedy in auricular fibrillation and flutter. It is dangerous, however in the presence of heart failure or of an active infection of the The most suitable cases are those with valve lesions, and thyrotoxic cases in which normal rhythm has not returned after thyroidectomy.

The Tame White Rat as Carrier of the Microbe of Weil's Disease (Spirochaeta ictero-

genes).—According to P. Uhlenhuth and E. Zimmermann, after the wild rat had been established as the carrier of the microbe of Weil's disease (Spirochaeta icterogenes), it seemed reasonable to assume that, in view of the close relationship, white rats as well as gray might be primarily infected with this microorganism. These authors accordingly made investigations in 33 tame white rats of 4 different breeds, first carrying out a serological test for antibodies with a typical Weil stock, and afterwards making a search for spirochetes by inoculating a liver-kid ney mixture into guinea pigs. It was not long before serologically positive animals were established; the titer lay mostly between 1:1000 and 1:5000, that is, decidedly high, and the antibodies of the rat serums had a thoroughly specific character, as revealed in a protective test in guineapigs with two rat serums. The examination for spirochetes was also successful. Of the 33 rats, 17, or 52 per cent, were serologically positive, and in 7, or about 21 per cent, the presence of spirochetes was confirmed by the guineapig test. Of these 7 white rats, 6 belonged in the serologically positive group, and only 1 in the serum-negative. Hence the actual number of spirochete carriers must evidently have been somewhat higher. It was next of interest to learn how these white rats had become carriers. Inquiry elicited the information that two of the breeds had earlier been caged with wild rats for breeding purposes, while this was not the case with the others. From these first two breeds 21 animals were born, of which 16 were serologically positive, and 6 were spirochete carriers. From the breeds not exposed to wild rats 12 animals were born of which only one was serologically-positive and two were spirochete carriers. It thus became perfectly evident that the infection came from the cages in which wild rats had been placed. Further experiments then revealed that it is rather difficult to infect white rats artificially so that they contract Weil's disease, but that when conditions were offered for infection in the natural way, the white rats responded equally with the wild gray rats, no difference being discernible. The experiments therefore prove that under appropriate conditions there is the same danger of infection of human beings from white rats as from gray. The case of a laboratory worker is cited, who after a severe bite from a white rat suffered with "an acute nephritis of unknown etiology," characterized by icterus, pains in the calves of the legs, and other symptoms of Weil's disease, over which, however, the kidney symptoms so predominated as to make an atypical picture. Serological examination later confirmed the authors' suspicion that this had been a case of Weil's disease, and that the patient had been infected with Spirochaeta icterogenes from the white rat bite.—Deutsche medizinische Wochenschrift, September 8, 1933.



LEGAL



MEDICAL TESTIMONY-LEGAL RIGHTS OF UNBORN CHILD

By Lorenz J Brosnan, Esq.
Counsel Medical Society of the State of New York

One of the Surrogates courts of this State recently was presented with a situation that should be of interest to every physician. The Surrogate was called upon to determine the legal rights of a child yet unborn at the date of the death of a person under whose will it was sought to permit the child to benefit

A certain woman died on May 22, 1922, having a considerable estate In her will she set up a trust for the benefit of her "grandchildren hving at the time of my decease" At the time of her death, there were four grandchildren who were born several years prior to her death, one the child of her daughter and the others, children of her two sons. On February 6, 1923, a period of eight months and fourteen days after the testatrix died, her daughter gave birth to another child Upon behalf of the said child, an application was made to the Surrogate to determine its rights under the In determining the matter a very well written opinion was rendered by the Surrogate The question of fact first considered was whether, if the child was in being on May 22, 1922, although yet unborn it was entitled to partake of the trust fund as "living" at the date of death. The court came to the conclusion that if the child was conceived prior to the death of the testatrix it was "living" on May 22, 1922 The word "hving' according to the Court has been defined as "having life, the state or quantity of being alive" Court made reference to a considerable mass of case authority from both the Courts of this country and of England, recognizing the principal that a child 'en ventre sa mere," as it has been called for many years, which is subsequently born alive, and capable of living may benefit under an estate as a "child living" Reference was made by the Court to the Real Property Law of the State which includes as a legislative enactment a recognition of the rights of posthumous children

Assuming then that such a child might be considered for legal purposes as "living" and therefore a possible beneficiary, the Court was under the necessity of determining whether the child was conceived prior to May 22 1922. The evidence submitted as to the fact situation was simple and apparently uncontradicted. At the date of the death of the testatrix her daughter was living with her husband at Santo

Domingo where he was stationed as an officer in the Marine Corps They were living under the same roof and occupied the same bed He was not absent overnight from their home between March 25, 1922 and May 25, 1922 On May 23rd a cablegram was received which in formed them of the death that had occurred, and on May 25th the decedent's daughter stilled to the United States leaving her hus band at Santo Donningo At that time she had passed her normal menstrual period by about ten days Certain testimony was sub mitted to the Surrogate given by the physician who later attended the child's mother during her pre-natal period, and at her delivery stated that he was consulted in September and was told that she had had her last menstrual period April 18th and had had a "showing' on April 30th He also testified that the woman's progress was normal and that from his obser vations the child was born at the end of a normal period of gestation. In support of that conclusion he testified

My ante partem examination records on January 9th 1923 show the diagnosis of a pregarate; of 8 months position of fetal heart normal, rate 140 vertex presentation and a right occiput interior position tending to show that the patient would be delivered in about one month from January 9th 1923"

The contention was advanced in opposition to the application that since conception could have taken place later than May 22, 1922, it was incumbent upon the petitioners to definitely establish an earlier date of conception, but the Court did not agree with that view The Court stated the rule to be applied as follows

'The respondents contend that as conception could have taken place after May 22 1922 if some of the medical theories could be proved correct the burden of proof to establish the faet of conception prior thereto has not been sustained by the petitioner A disputed medical theory impossible of proof is not evidence to rebut a presumption of law

There is a presumption that a child is conceived nine months or 280 days before its birth and when the child is a product of marital relations the presumption is that the conception came through intercourse by the hisband When no evidence is offered to rebut this presumption it becomes conclusive.

In summatizing certain theories advanced the court said

'Conception in its obstetric sense means the union of the male and female elements of procreation, from

which union a new being is developed. It is the means for the propogation of the human species.

The testimony of the medical expert offered by the respondents regarding the time of conception was to the effect that the medical profession is in a position of uncertainty, and its only recourse now is to guess at the exact date. The possibility that conception could have taken place later than May 22, 1922, is advanced by the respondents. Upon the doubt created by the medical expert, the respondents are relying to sustain their contention.

There are three theories as to the time when conception may take place. The medical expert testified that it was impossible to establish any absolute rule as to the length of the period of gestation; that there was a rule to count from the beginning of the last menstrual period, and that it varies anywhere from 252 to 260 days, from 265 to 280 days. The oldest theory is that ovulation occurred every month coincident with menstruation, and that the pregnancy supervened directly after menstruation; pregnancy being established the instant the menses did not appear. A newer theory of Reichert is that conception takes place prior to the menses that are coming, or that should come. Another theory by Frankel and other eminent physicians is that the cell from the woman is discharged from the ovary about 14 to 16 days after menstruation takes place. These three theories account for the variation of days as the period of gestation. Most text-books, the expert testified, will state the period of gestation, or when conception takes place is unknown, and has never been definitely proved, and is every man's theory.

Consequently, because of this indefiniteness in the medical profession, the courts fall back upon the ordinary length or duration of the period of human gestation of

280 days as a phenomena of life as a matter of common knowledge of which the courts will take judicial notice."

The Court, deciding to overrule the respondent's contentions, and to rule that this was one, so far as the proof went, where normal conditions had been present, also made reference to certain methods of determining the time of conception as follows:

"The Naegle method of ascertaining the probable date of birth is by counting back three months from the last menstrual period and add seven days. This method would bring the probable date of birth as it actually was, February 6, 1922.

Another method observed by the medical profession in ascertaining the date of conception and probable birth is noting the date of quickening. In the instant case, the quickening was September 11, 1922, as disclosed to the physician by the mother. The usual time for quickening to occur is four and one-half months from the date of conception. Dating back four and one-half months, or 135 days, from September 11, 1922, makes the date of conception May 1, 1922.

The medical expert was asked the questions: 'If it

The medical expert was asked the questions: 'If it is an established fact that quickening occurred September 11th, did conception take place four to four and a half months prior thereto?' Answer: 'Yes.'"

Consequently, the Court ruled from all the proof before it that the child was conceived on May 1, 1922, before the death of her grandmother, and was therefore entitled to share in the trust set up under the will.

CLAIMED NEGLIGENT DELIVERY

A general practitioner was asked by another doctor to attend and care for his patients while he went away from the City on a vacation.

Among those patients was a woman about 25 years of age, who was pregnant and due to deliver herself about two months later. The patient was examined several times at the doctor's office as to her physical condition and blood pressure and he advised her as to her diet and prenatal care.

At about 4 o'clock one morning about one month before the anticipated date of delivery the doctor received an urgent telephone call from the husband of the patient, telling him that his wife was having labor pains and that he was greatly worried. The doctor advised the husband to send her to a certain sanitarium where previous arrangements were made for her confinement. The doctor then called the sanitarium on the phone and asked the nurse in charge to notify him when the patient arrived in order that he might examine her. About an hour later he went to the hospital and did examine the patient. He found the position of the baby to be normal; the fetal heart regular and found that the woman was having pains every three or four minutes and that the cervix was about two fingers dilated. The doctor left the sanitarium, instructing the nurse on duty to call him when necessary. Pursuant to such call he arrived at the hospital again three hours later and found the patient on the delivery table having frequent pains and the head of the baby visible only during those pains. Because the patient was not fully dilated the doctor had time to remove his street clothes and prepare both the patient and himself for the delivery. Without any manipulation whatever he proceeded to deliver a small male child which he placed in a crib and then expelled the placenta, which took but a few moments. When he then turned to the baby he found there was no sign of life and proceeded in an attempt to revive the child, which was unsuccessful. In his attempt to revive the child he noted that the heart pulsation could be felt on the right side and not on the left and he diagnosed the child's condition to have been that of dextra cardia of congenital origin.

The mother had an uneventful recovery and left the hospital at the end of the usual period of time. An action was brought against the sanitarium and the doctor who delivered the patient, in which the claim was made that the sanitarium had represented to the patient and her husband that it had in its employ a successful and experienced obstetrician which it would supply to the patient

and that in reliance upon such representations the patient had entered said hospital and submitted herself to the care of the said sanitarium and its doctors, nurses and attendants; that the defendant sanitarium had failed to furnish the patient with proper care and treatment but on the contrary furnished the services of the defendant doctor and of a nurse, both of whom it was claimed were not competent to treat the case. It was claimed that by reason thereof the patient sustained injuries and the child was born smothered in the patient's womb. Both the doctor and

the sanitarium denied all allegations of negligence contained in the plaintiff's case.

The case came on for trial before a Judge and Jury and after all the evidence had been submitted the case was sent to the jury which, however, was unable to agree upon a verdict and a second trial was necessary. The case was thereafter retried and the issues were again submitted to the jury for its determination. On this occasion the jury returned a verdict in favor of both the doctor and the sanitarium, thereby favorably disposing of the matter.

ALLEGED NEGLIGENT TREATMENT OF FRACTURED FIBULA AND INTERNAL MALLEOLUS

A young man was struck by an automobile while crossing a highway and sustained a fractured leg. Certain treatment was rendered by a general practitioner who was immediately called to attend the patient, and some hours later the patient was taken to a nearby hospital and a specialist in surgery called into the case. The said doctor examined the patient and found that his foot and leg were in wooden splints. He removed them and found the ankle and the lower part of the leg extremely swollen. By manipulation the doctor found that the patient had a fracture of the lower portion of the fibula. X-rays were taken which showed a fracture of the fibula about three inches above the lower tip, and also a fracture of the in-ternal malleolus. The doctor placed the foot and leg in pillow splints and ordered the application of icebags.

The said treatment was continued for five days, at the end of which time the doctor determined that the swelling was sufficiently down for him to undertake to reduce the fracture. The doctor put the man under an anesthetic and forced the foot and broken fragment of the fibula inward against the tibia. The foot was then inverted, and while held in that position the doctor put a two-piece moulded plaster of Paris splint on the leg from the toes to the knee. He had x-rays taken through the splint which showed that the bones were in good position.

No change in the cast was necessary for about three weeks. When the doctor removed the cast, he found the bones in apparently good position. He then gave the patient passive motion of the ankle in all directions and found

motion to be good. He replaced the split cast on the foot for protection. By that time the patient was in a wheelchair.

The doctor saw the patient almost daily thereafter at the hospital for another month, and each time he saw the patient he removed the cast and massaged the foot. The doctor then, at the patient's request, transferred him to a sanitarium and recommended that he should submit to baking and massage treat-Several times thereafter the patient came to the doctor's office, and examination showed normal motion in all directions except a partial limitation of flexion. When the doctor last saw the patient about fourteen weeks after the injury, the patient stated that he was dissatisfied with the result and that he intended to go to a well-known orthopedist to have an operation performed. The doctor advised against such procedure, stating that he felt a satisfactory result would be obtained without the necessity of such surgical interference.

The next the doctor heard of the matter was when a lawsuit was instituted against him charging him with alleged malpractice in the treatment of the fracture. When the case was reached for trial in its regular order, the patient's attorney was not ready to proceed and the court directed that the case be marked off the calendar. Sometime thereafter the defendant's attorney made a motion to dismiss the complaint on the ground that the plaintiff had failed to diligently prosecute the case, and the plaintiff's attorney on being served with the papers for said motion consented to a discontinuance of the action.



NEWS NOTES



COMMITTEE ON PUBLIC RELATIONS

The monthly meeting of the Committee on Public Relations of the Medical Society of the State of New York was held at Elizabethtown on October 24, 1933. There were present Doctors Sadlier, Fisher, Johnson, Hambrook, Mitchell, Cunningham, and Ross; also Dr. Farmer, Chairman of the Committee on Public Health and Graduate Education, and Executive Officer, Dr. Lawrence.

County Committees: The Secretary of the Committee was instructed to prepare a brief bulletin to be sent to each county medical society for the purpose of informing it about the work of the State Committee on Public Relations, and what was expected of its Public Relations Committee. The Committee also decided to promote the activities of the county committees by assigning its members to speak at the meetings of the county societies so that the state committee should be represented on the program of at least one meeting of each county society in the course of a year.

The Hard of Hearing: Doctor Hambrook for the sub-committee on hard-of-hearing, reported that the committee was at work on the problem of organizing a program to give better service in schools to the hard-of-hearing, and to provide that the schools should have the services of an otologist.

Welfare Department: The chairman reported that the joint letter of the chairmen of the Public Relations Committee and the Public Health Committee, and Doctor Howe of the Department of Education, sent out last year, had resulted in having a larger number of school children examined by their family physicians.

There was a discussion regarding the economic relation of physicians to the Welfare Departments of the State. A conclusion was reached that the Public Relations Committee should undertake to formulate a policy of the economic relationship of the profession to the administration of public welfare; and when this was formulated, to present it to the Executive Committee of the State Society. Doctors Mitchell, Sadlier, and Ross were appointed a sub-committee to formulate a statement of policy and report at the next meeting of the full committee.

Lectures to Medical Students: Subjects to be discussed in the lecture to the students of the Medical Schools of the State this year were taken up, and a conclusion was reached that ethics, economics, organization, and public relations were the most important. It was decided to have two members of the medical profession attend each lecture this year, each to speak for about two

minutes after the scheduled lecture in order to emphasize its salient features, and to show to the students that the profession of medicine is interested in their education.

Essex County: At the afternoon session, Doctor W. A. E. Cummings spoke for the Essex County Committee on Public Relations. He said that the Welfare work in the County was well done; that the health officer did much of the immunization of the school children against diphtheria; that the pre-school children were not immunized; and that the Society depended for publicity upon the activity of church organizations.

"The Essex County Medical Society decided not to adopt a fee scale for welfare work, and there is no complaint for lack of cooperation with the Welfare Department. A few hard-of-hearing children are found. Some of them are under treatment. There are seventy beds in the hospitals in the county, and a number of maternity homes. One township in Essex County with 6,000 population has spent this year for work relief \$217,000; but the State has reimbursed the township to the amount of \$115,000."

Franklin County: Doctor R. J. Perkins of Franklin County said that the physicians of the county society got up a fee scale at the request of the Board of Supervisors. It was practically the same as the fees in private practice. The county paid for medical care of the indigent in accordance with this fee scale until last year, and then the Supervisors asked the physicians to cut the fee scale because it was more expensive than the county could afford. The county society offered to take a cut of twenty-five per cent. The Board of Supervisors then gave the profession a fee schedule of their own, but the doctors insisted upon their former fee schedule.

The County of Franklin has two county nurses, but the doctors have asked for three. There are maternity clinics, a few pre-school clinics, and diphtheria clinics. Franklin County has a Public Health Committee made up of two nurses, three supervisors, and three physicians. The State District Health Officer takes an active part in the public health work. The County Medical Society is a leader in all health activities. Tuberculosis work is very well done. Every child in Saranac Lake and in Malone is x-rayed. Venereal disease clinics and well-baby clinics are held in Malone. These clinics are approved of by the County Medical Society. The county pays a doctor ten dollars for conducting each of these clinics.

W. H. Ross, Secretary.

SIXTH DISTRICT BRANCH

The twenty-seventh annual meeting of the Sixth District Branch of the Medical Society of the State of New York was held on Wednesday, October 8, 1933, in the Norwich Club House, Norwich, Chenango County, New York, with a registration of 119 physicians, and the President, Dr. Stnart B. Blakely, of Binghanton, presiding. Sessions were held in the morning and the afternoon, with a social luncheon at noon. The ladies of the members were entertained by a local group of the wives of physicians of Norwich.

At the election of officers, the two vicepresidents were moved up to the next higher offices, and the secretary and treasurer were re-elected. The complete set of officers elected

were:

President, Dr. John E. Wattenberg, Cortland.

First Vice-President, Dr. Leo P. Larkin, Ithaca.

Second Vice-President, Dr. Reeve Howland, Elmira.

Secretary, Dr. Hubert B. Marvin, Binghamton.

Treasurer, Dr. W. A. Moulton, Candor.

Two commercial exhibits were shown; pharmaceuticals by the Norwich Chemical Company; and instruments by Hamlin's Inc., Binghamton.

The scientific program was carried out as follows:

The Canti Movie Film, showing the behavior of living tissue cells on vitro, and the effect of radium on cancer cells. This film was in the 35 nm. size, and was loaned by the American Society for the Control of Can-

cer, and shown in the local theater by the courtesy of the management.

"The New Economic Philosophy applied to Medicine" was the subject of a paper by Dr. Frederic E. Elliott, Brooklyn, Chairman of the Committee on Economics of the State Society.

Dr. Frank C. Yeomans, New York, gave a paper on "Some Practical Points in Proctology," illustrated with lantern slides.

Dr. Thomas P. Farmer, Syracuse, read a

paner on "Uterine Bleeding."

Dr. Edward M. Livingston, New York City, gave a practical talk on "Aids to Precision in Bedside Diagnosis; a practical study and interpretation of Abdominal Pain, Rigidity, and Tenderness," illustrated with lantern slides and a moving picture showing the method of cliciting the signs. This was a repetition of Dr. Livingston's demonstration before the Third District Branch on September 5. (See this Journal, September 15, 1933, page 1120.)

The Sixth District Branch is located in the South Central part of the State, and is composed of the medical societies of nine counties

whose membership is as follows:

Broome	145	5
Chenango		3
Chemung	69)
Cortland	2-	1
Delaware	28	3
Otsego	50)
Schuyler	12	2
Tompkins	59)
Tioga	24	1
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444

RELIEF OF QUARANTINED PERSONS

The enactment of the Public Welfare Law has given rise to some uncertainty as to who is responsible for the relief of a person quarantined for a communicable disease—whether the local Health District, or the Welfare of the town or county shall pay for the medical care and provide the necessities of life for the quarantined family. The State Attorney General has rendered an opinion which has the approval of the Departments of Social Welfare and of Health. The following outline of that opinion is designed to serve as a guide for the Welfare and Health officials of both the State and the local communities in determining their responsibilities in individual cases.

Definition of Indigency

An "indigent person" is one who is unable to maintain himself or the members of his family lawfully dependent on him for support; or one who ordinarily is able to maintain himself or his family, but because of his illness or the illness of some member of his family, or for any other reason, is, or becomes unable, to do so.

Class 1

Indigent persons for whom it would be necessary to provide care either at home or in a hospital irrespective of the quarantine by the health officer. Procedure: The health officer, when it comes to his attention that such a person is in need of maintenance, or of medical care either at home or in a hospital, and apparently unable to provide it for himself, should immediately report the facts to the proper public welfare official. From this point responsibility rests with the public welfare official for determining whether the person is in fact indigent and if so for providing necessary care

Class 2

Persons made indigent by reason of quarantine, as in case of a wage-earner, and requiring care either at home or in a hospital. This would apply, for example, to a situation in which the wage-earner, on whose wages he or the family depend for support, is himself the patient, or is prevented from working by a quarantine established on account of the illness of a member of his family.

Procedure: As in Class 1, the health officer should immediately report the facts to the proper public welfare official, stating the character and extent of the medical care which he believes to be necessary. From this point responsibility rests with the proper welfare official for determining whether the person is, in fact, indigent; and if so, for providing necessary care.

Class 3

Persons who are not indigent but who are financially able to pay, who are sent to a hospital, not upon their own option, but pursuant to a local ordinance or regulation, or to the order of the health officer.

Procedure: The health district should assume responsibility for payment of the cost of the necessary hospital care, and may subsequently take necessary steps to recover from the patient or those responsible for his support and care.

Class 4

Persons who need hospitalization, but about whom there is a question as to whether they are indigent, or will become indigent, as a result of quarantine.

Procedure: The question of the necessity of hospitalization should be decided solely by the health officer; and consequently the health district should be primarily responsible for the hospital bills in a case where hospitalization is necessary.

If in the judgment of the health officer the case is, or is apt to become, an indigent case, he should immediately notify, if in the city, the city commissioner of public welfare, or if in the county, the county commissioner of public welfare; and if subsequently such official decides that the person is, or has become, indigent, then the public welfare officer should assume the hospital expense from the date of indigency, thus relieving the health district of the expense.

If the public welfare official decides that the person is not, or has not been rendered indigent, then the original liability of the health district continues, and the hospital expense should be paid by the health district with the privilege, of course, of recovery, if possible, for such expense from the patient.

Class 5

Persons who are afflicted with a communicable disease and who are indigent, or become indigent, as a result of quarantine, but the individual does not require hospitalization for his own sickness, and the health officer hospitalizes the patient because of a local ordinance or for the protection of the public health.

Procedure: Responsibility for the expenses of hospitalization in this classification is upon the health district. The individual does not require hospitalization, and consequently is not a welfare charge; but he was hospitalized for the purpose of protecting the public health; and the expense for hospitalization is therefore obviously a charge against the health district.

Editorial Comment

Immediate action by health officers and physicians: When a communicable disease occurs in a family, or is strongly suspected, a responsibility for starting the machinery for action and relief rests upon the family physician and the local health officer.

The family physician is under obligation to report the case to the health officer promptly.

The health officer is under obligation to investigate the financial condition of the afflicted family, and to report its probable needs to both the Board of Health and the Welfare officer, thereby giving both agencies warning of impending conditions, and forestalling disputes and inefficiency of relief.

NEW YORK STATE SANITARY OFFICERS' ASSOCIATION

The twenty-third annual meeting of the New York State Sanitary Officers' Association was held in Syracuse on September 27, 1933. The annual meeting of the Association has heretofore been held at the time and place of the official Conference of Sanitary Officers called each year by the State Commissioner of Health, according to law and at the expense of the State and the local communities. This year the State Conference was not held on

account of the depression; the Sanitary Officers' Association therefore held its meeting independently, the health officers coming at their own expense to the number of about two hundred. Through the cooperation of Dr. William A. Howe, Chief of the Medical Inspection Burean of the State Department of Education, school physicians who are not also health officers were invited to participate. There were morning, afternoon, and evening sessions.

The morning session was devoted to a scientific program, with Dr. Myron M. Metz, First Vice-President of the Association, presiding.

Dr. George H. Ruhland, Commissioner of Health of Syracuse, welcomed the health officers in a brief address. He stressed the importance of the public health problem, increased because of present widespread economic distress.

Mr. Emmet R. Gaulin, Chief of the Department of Sanitation of Monroe County, gave a paper entitled, "The Importance of the Work of the Veterinarian in a Community Health Program." After discussing the beginning of the application of veterinary medicine to public health problems in the effort to cradicate tuberculosis from herds of dairy cattle, he discussed mastitis and contagious abortion in cattle, and rabies. He showed that the cooperation of the veterinarian was essential to the control of all of these diseases, which are menacing to human good health.

A paper on "The Immunization of Children Against Measles, Scarlet Fever and Other Infectious Diseases by Means of Parental Blood," was given by Dr. Frederick W. Sears, District State Health Officer, in which he emphasized the value of serum from adults in the prevention of serious symptoms in measles.

Dr. Charles G. Lenhart, of Rochester, read a paper on "The Relation of the General Surgeon to the Health Officer."

A paper entitled "Infections and Heart Disease" was read by Dr. O. W. H. Mitchell of the Syracuse College of Medicine. He limited his discussion to two types of infection, rheumatic fever, and subacute bacterial endocarditis. In discussing this paper, Dr. George H. Ruhland emphasized the importance of the distinction between the infectious type of heart disease, and the degenerative or senescent type.

The effect of the financial and economic crisis upon health conditions was discussed, and the proposed sixty million dollar ten year bond issue by the State to provide funds for unemployment relief was approved.

A motion was passed urging that the welfare laws should be redrafted so as to unify the various agencies at present administering the laws, and that such unification should be so effected that the administration will be under local officers who will be responsive to public opinion in the locality, and not subject to political considerations and influences.

The afternoon scientific discussion was concerned with health problems in relation to children and the schools. The general paper on "Childhood Tuberculosis" by Dr. William P. Brown, of the State Department of Education, distinguished sharply between the childhood predominantly glandular type of tuberculosis and the adult pulmonary type which might follow the former type. The discussion by Dr. James C. Walsh, Superintendent of the Jefferson County Tuberculosis Hospital, Dr. William J. Ryan, Superintendent of the Rockland County Tuberculosis Hospital, and Dr. Charles S. Prest, Secretary of the Queensboro Tuberculosis and Public Health Association, represented radically different points of view as to methods of dealing with the problem. Dr. Prest's discussion was especially interesting, for it was not intended to be a case-finding program, but a scientific research of the incidence and development of childhood tuberculosis and its possible development into the adult type.

The evening session was a dinner conference. The President of the Medical Society of the State of New York, Dr. Frederick H. Flaherty, gave an interesting address entitled "The Physician and the Health Officer."

Dr. Thomas Parran, Jr., State Commissioner of Health, followed with an address on Milk Control which was broadcast over the local N.B.C. station. Dr. Parran recounted the conditions which led up to the recent crisis in the milk industry and the necessity for its governmental regulation. He showed that regulation had already resulted in benefit to the producer, the distributor, and the consumer.

Dr. Thomas P. Farmer, Chairman of the Committee on Public Health and Medical Education of the State Medical Society, gave an address entitled "Some Plain Truths About Public Health."

The health officers of New York State form a group of over nine hundred practicing physicians, who are leaders in the public health movements of their localities. The great majority are active members of their county societies, and their voluntary attendance at the conference is evidence of their interest in their specialty.

GUY H. TURRELL, Secretary.

GRADUATE FORTNIGHT OF THE NEW YORK ACADEMY OF MEDICINE

The Sixth Annual Graduate Fortnight of the New York Academy of Medicine which was held during the two weeks of October 23 to November 10, 1933 was the largest and most successful of the series. The subject of the Fortnight was "Disorders of Metabolism" and included the whole range of metabolic conditions from allergy to vitamin deficiency, and from the common disorders such as diabetes to the newer phases of blood disorders.

The program was in three parts

1. Twenty afternoon clinics in fifteen hospitals.

2. Evening lectures in the main assembly room of the Academy building.

3. A scientific exhibit open throughout the day and evening.

Admission to the hospital clinics was by

ticket, and the demand was so great that the available room was taken before the opening of the Fortnight. About 125 subjects were listed for demonstration.

The evening lectures attracted audiences which filled the auditorium to overflowing. Twenty-one lecturers were listed, of whom nine were from other cities besides New York.

The exhibits that were listed numbered over one hundred, and consisted of charts, x-ray films, specimens, pieces of apparatus, and books. One had to study an exhibit or listen to the demonstrator in order to appreciate its full scope and significance.

The Fortnight gave the visitor a vivid impression of the immense amount of material for graduate instruction that is available in

New York City.

ONEIDA COUNTY

The regular quarterly meeting of the Oneida County Medical Society was held at the Oneida County Hospital at Rome on Tuesday, October 10, 1933, following a splendid lunch provided by the Superintendent and Board of Managers of the Hospital.

Dr. W. B. Roemer for the Board of Censors presented the following applications for mem-

bership, and they were duly elected:

Edgar O. Boggs, Boonville, New York. Arthur F. Gaffney, Oriskany Falls, N. Y. Karl W. Gruppe, 258 Genesee Street, Utica, N. Y. Vito S. Lee, 654 Bleecker Street, Utica, N. Y. Radford C. Tanzer, 258 Genesee St., Utica, N. Y.

Secretary Hale announced that he had reported to the Investigating Committee of the State authorities regarding illegal practices by an Indian Medicine man in Rome, and two health concerns in Utica. This brought a query as to whether osteopaths might write prescriptions, and to the suggestion that the State Department of Education be notified of the facts.

Dr. 11. H. Shaw spoke of an investigation followed by conviction, of a case of illegal practice at the city court a few months ago.

Dr. T. Wood Clarke offered the following resolution on the occasion of the honor accorded to one of our members:

Whereas: A member of the Medical Society of the County of Oneida has recently received from the sovereign of his native country a distinguished honor, in that he has been knighted by King Vietor Emmanuel III and has been awarded the title of Cavaliere of the Order of the Crown of Italy, and

Whereas: This honor has been conferred upon this member of our Society in recognition of his unselfish and unremitting labors during a quarter of a eentury for the betterment of the Italian population of the City of Utica and the County of Oneida; therefore he it

therefore be it Resolved: That the Medical Society of the County of Oneida formally expresses its appreciation of this honor conferred upon its distinguished member, and extends its most hearty congratulations and fervent good wishes to the recipient of this well deserved recognition, Cavaliere Doctor F. John Rossi.

The President, Dr. B. P. Allen, introduced as speaker of the day, Dr. Walter L. Machemer, Surgeon at the University of Buffalo Medical School, who spoke on "Diseases of the Breast." This paper was discussed by Doctors Shaw, Boggs, Allen, Powers and Golly.

The Society adopted memorials of Dr. D. C. Broga of Rome and Dr. C. R. Barlett, of

Boonville.

The program of the meeting was printed in the style and language of Rome, both ancient and modern. The menu was headed "Index Ciborum," and began with "Olivæ Iberici," and ended with "Potus, Liquor Fortis and Liquor Mitis."

There were also three pages of quotations, beginning with one from Psalm 133: "Ecce quam bonum jucundum habitare frates in unum," and ending with the following in ultra modern Roman, ascribed to one of the physicians of Rome: "I have, by actual test, proven to my own satisfaction that a Buick, while a good car on land, is very unsatisfactory as a hydroplane. I was all wet on that subject."

WILLIAM HALL, JR., Secretary.

SUFFOLK COUNTY

The 127th Annual meeting of the Suffolk County Medical Society was held on October 26, 1933, in the Henry Perkins Hotel, Riverhead, N. Y., with 60 members present and the President, Dr. L. F. Garben, presiding. Morning and afternoon sessions were held with a social luncheon between.

Officers were elected as follows:

President, Morley B. Lewis, Sag Harbor. Vice-President, Wilbur C. Travis, Northport.

Secretary, Edwin P. Kolb, Holtsville. Treasurer, Grover A. Silliman, Sayville.

Censors, W. H. Barnhardt, Central Islip; B. P. MacLean, Huntington; Paul Nugent, East Hampton.

Delegates to State Society, L. F. Garben, Islip;

Albert E. Payne, Riverhead.

Alternates, Guy H. Turrell. Smith Branch; Frederick S. Child, Port Jefferson. Smithtown

Member of Executive Committee of the Second District Branch, W. H. Ross, Brentwood.

New Members elected were: Louis F. Foster, Center Moriches. Morris Chesanow. East Islip. William Holmes Ross, Patchogue. Frank P. Holmberg, Sag Harbor.

Dr. L. F. Garben reported on the formation of an arbitration committee to adjudicate workmen's compensation cases after the plan of the committee in New York County. There was considerable discussion over the details of the agreements with the insurance carriers, some members urging that definite fees and fixed conditions be adopted. The concensus of opinion was that since the committee was formed for the purpose of arbitration, it should be guided by general principles rather than fixed rules.

Dr. W. H. Ross for the Economic Committee urged the need for more constructive planning by the members to meet the developing conditions in economics, especially in the relation of the physicians to the Department of Welfare, and the officials engaged in Workmen's Compensation.

Dr. L. F. Garben gave the annual presidential address, making suggestions regarding the work of the Society. These suggestions were referred to the Comitia Minora.

Dr. Louis A. VanKleeck, President of the Second District Branch, gave a brief address outlining a plan for united action by the four county societies on Long Island. He referred to the prospect of a grant of money for the purpose of promoting the unification of all public health activities in the counties. Long Island is a field peculiarly fitted for the demonstration, since it has a population of about three million people who are set apart by water boundaries, and who represent every type of political organization from the intensely urban to the strictly rural.

Dr. Alee N. Thomson, Secretary of the Second District Branch, outlined the plans for the meet-

ing on November 16 in Garden City.

Dr. E. M. Livingston, of New York City, gave an address on the subject "Abdominal Pain-Its Relation to Tenderness, Hyperalgesia, and Abdominal Rigidity," illustrated with lantern slides and moving pictures. The address was an interpretation of the character and location of the signs and symptoms which are dependent on the origin and distribution of the nerves of the abdomen. This distribution of nerves is a valuable diagnostic key which a physician may apply at the bedside with accurate results.

EDWIN P. KOLB, Secretary.

LIVINGSTON COUNTY

The annual meeting of the Livingston County Medical Society was held at the Big Tree Inn, Genesco, N.Y. on Wednesday evening October 11, at 6.30 p.m.

The following officers were elected for the year 1934:

President, L. A. Damon, Sonyea, N. Y.; Vice-President, Homer Bull, Geneseo, N. Y.; Secretary-Treasurer, George Doolittle, Sonyea, N. Y.; Delegate to State Society, Gerald Murphy, Mount Morris, N. Y.; Censors, Drs. Preston, Burt, Newton, Shanahan and Swan.

Drs. Robert F. Lewis and Harold Morris

Sessen of Lima, and Christian E. Laatsch of Sonyea, were elected to membership.

A memorial was adopted on the death of our oldest member, Dr. W. E. Lauderdale of Geneseo.

An address on the more common skin diseases was given by Dr. Earl D. Osborne of Buffalo, N. Y. Dr. Osborne's presentation included the diagnosis and treatment of ringworm, acne, psoriasis and eczema. The paper was fully illustrated with excellent lantern slides and was freely discussed.

GEORGE M. DOOLITTLE, Secretary.



BOOK REVIEWS



AN ELEMENTARY HANDBOOK ON RADIUM AND ITS CLINICAL USE. By D. F. CLEPHAN and H. M. HILL. 12mo of 164 pages, illustrated. New York, Oxford University Press, 1933. Cloth, \$2.00. (Oxford Medical Publications.)

Miss Clephan has been associated with the work on radium therapy at the Middlesex Hospital for many years; and Mrs. Hill, as Radium Officer at the Royal Free Hospital, has had first hand experience in modern methods of treatment.

This little handbook is not as elementary as its title would indicate, and it serves the purpose as a general introduction to a more advanced study of the subject.

The book gives some of the landmarks in the history of radium therapy and a short description of radio-activity and radioactive elements. The authors are very clear in their remarks on the practical considerations in the use and care of radium and radon, as well as in their discussion of the fundamental and general principles of radium therapy.

An excellent description is given of the methods employed in the application of radium in the treatment of special portions of the body, and the complications and contra-indications of the therapy are thoroughly covered.

The concluding chapter contains an excellent discussion of the present position of radium therapy in the treatment of malignant disease.

The volume is very much worth while for the student, and for those who wish to get a quick and accurate glimpse of the subject.

W. Sidney Smith.

THE ELEMENTS OF MEDICAL TREATMENT. By ROBERT HUTCHISON, M.D. Second Edition. 12mo of 188 pages. Baltimorc, William Wood & Company, 1933. Cloth, \$2.00.

Reviewing this little book on therapy has been a decided treat. It has been found highly practical and will prove of great value. Its practicability and value lie in its simple, concise language, its many worthwhile suggestions and the ease with which these suggestions can be carried out.

The treatment of fever, pain, insomnia, constipation, diarrhea, heart failure, bronchitis, anemia, high blood pressure, urinary infections, dyspepsia, intestinal parasites, diseases of the gall-bladder, nephritis, hemorrhage, tonics, diabetes are discussed. The article on endocrine treatment leaves much to be desired, but the discussion of the use of vaccines, serum, physiotherapy and psychotherapy are excellent.

Of decided value are the descriptions of several minor medical operations such as blood transfusion, subcutaneous infusion of saline, intraperitoneal injection of saline, rectal saline, paracentesis of the pleura, pericardium and peritoneum, spinal puncture, vein puncture, intravenous medication, cupping and the application of leeches.

M. A. RABINOWITZ.

Abortion: Legal or Illegal? By A. J. Rongy, M.D. 12mo of 212 pages. New York, The Vanguard Press, 1933. Cloth, \$2.00.

In this well written book with a catchy title the author wishes broadening the legal ground for abortion. Mother Church and Bible toters are thoroughly taken into camp. The warp and woof of his argument is that, according to his guess, over 2,000,000 abortions are done every year in this country. Why not legalize them? More

and better abortions. Many women go to New York and Chicago, where the abortionists reap a golden harvest of over a hundred million dollars a year. The author is not quite clear here—possibly this is the national figure. One wonders where he gets his figures. The tax gatherer should be interested, for Wilbur's Committee found that one-half of the country's physicians were saving \$3,800 a year or less. Legal abortion would undoubtedly distribute its rewards more evenly. Infanticide in selected cases should pay well. Lately we have been told that illegal abortion in Russia is about as common as it ever was. If this be true, let us make the most of it.

Charles A. Gordon.

THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Ycar's Progress in Medicine and Surgery. Series 1932. Chicago, The Year Book Publishers [c. 1933]. Neurology, edited by Peter Bassoe, M.D., and Psychiatry, edited by Franklin G. Ebaugh, M.D. 12mo of 488 pages, illustrated. Cloth, \$2.25.

This book is a review of the more important contributions in the field of neurology and psychiatry during 1932. There are several articles on epilepsy. Head injuries are discussed from the standpoint of mechanisms, encephalographic observations and complications. Disseminated encephalo-myclitis, multiple sclerosis, and Schilder's disease are grouped as diseases belonging to a form of non-suppurative infectious encephalo-myclitis. Two articles by Cushing are of utmost importance; one being a description of the clinical picture of basophilic adenoma of the hypophysis and the other on the relationship of brain lesions to gastric ulcer.

In the division on pyschiatry, there is an article on "The crisis in psychiatric education," in which psychiatric teaching in the medical schools of the country is reviewed. There are also articles on the relationship of psychiatry to pediatrics and finally discussions on mental deficiency and mental hygiene.

STANLEY S. LAMM.

UROLOGY IN WOMEN. A Handbook of Urinary Diseases in the Female Sex. By E. CATHERINE LEWIS, M.S. Octavo of 76 pages, illustrated. Baltimore, William Wood & Company, 1933. Cloth, \$2.25.

This little book of seventy-six pages is an up-to-date, concise compendium of the diseases of the female urethra and bladder. A small section is devoted to a consideration of a very limited number of lesions of the ureter and kidney. The treatment of each condition is outlined in each instance. While the work is more appropriate for the student, the urologist and gynecologist would do well to review it, particularly the consideration of the female urethra. The book is well illustrated. The references, however, are limited.

Augustus Harris.

THE PRINCIPLES OF TREATMENT OF MUSCLES AND JOINTS BY GRADUATED MUSCULAR CONTRACTIONS. By MORTON SMART, M.D. Octavo of 217 pages, illustrated. New York, Oxford University Press, 1933. Cloth, \$3.75. (Oxford Medical Publications.)

This book covers the author's thirty years' experience in the treatment of Muscle disabilities by controlled muscular exercises produced by electric stimulation. The work covers much more than the title implies. It gives an excellent résumé of the normal physiology of joints and muscle action, as well as the acute and chronic pathology resulting from joints and muscle

injuries. Muscle mechanics are also carefully considered.

The use of electric stimulation to produce muscle contractions has received very little attention from the profession except from a comparatively few interested individuals. If this book is carefully studied and directions followed, it will put this method of treatment nuch more in use, as it deserves to he. An apparatus to produce graduated nuscular contractions devised by the author is described in detail.

If a new edition should be published it could be improved by the inclusion of illustrations, the lack of which makes the present edition rather difficult reading.

The book will be a very valuable addition to the library of any physician interested in traumatic surgery, as well as to the Obstetrician for its use in treating weakened abdominal muscles after pregnancy.

Joseph B. L'Episcopo.

ELEMENTS OF ELECTROCARDIOGRAPHIC INTERPRETATION, By LOUIS N. KATZ, M.D., and VICTOR JOHNSON, Ph.D. Octavo of 38 pages. illustrated. Chicago, The University of Clicago Press [c. 1932]. Paper, \$1.00.

This is a small, inexpensive, pamphlet which is devised for the needs of the student and the physician whose specialty lies outside the field of electrocardiography.

It describes the common deviations from the normal electrocardiogram clearly and conciscly, each deviation being demonstrated by illustrations of actual electrocardiograms. These illustrations are clear and easy to interpret because of the clear descriptions that are attached to each tracing. This, in our impression, fulfills the need for which it was compiled.

ARTHUR E. LAMB.

MINOR SURGERY. By FREDERICK CHRISTOFHER, M.D. Second edition. Octavo of 998 pages, illustrated. Philadelphia, W. B. Saunders Company, 1932. Cloth, \$10.00.

This book gives a cross-section of surgical practice that exceeds the average concept of Minor Surgery. It gives many excellent suggestimns to be used in major surgical problems and covers the field of so-called minor surgery in a very complete and descriptive manner. The illustrations are excellent and the operative procedures are very painstakingly presented. The Bibliography is extensive. I feel that this book can very fittingly be added to the library of any Doctor and might easily be considered indispensable to the general practitioner.

Environ J. Grace.

THE COMMON CAUSES OF CHRONIC INDIGESTION, Differential Diagnosis and Treatment, By THOMAS C. HUNT, M.D. 12mo of 341 pages, illustrated, Baltimore, William Wood & Company, 1933. Cloth, \$4.25.

In this monograph, the author has approached the problem in a practical manner. Most of the details of specialized laboratory and x-ray investigations have been omitted and more stress has been placed on the clinical aspects of Indigestion.

The book has been written by one who has had a great deal of experience with patients presenting digestive disorders. The chapters an indigestion in old age and the cardio-vuscular system and indigestion bear tribute to the practical aspects which the author at all times rightfully considers of the greatest importance.

The functional and organic disorders responsible for symptoms are thoroughly discussed and at the end of the book, the practitioner will find useful information of the methods of investigation, case taking and prescriptions.

The book can be recommended to the physician doing general practice. IRVING GRAY.

DIET IN SINUS INFECTIONS AND COLDS. By EGON V. ULLMANN, M.D. Octavo of 166 pages. New York, The Macmillan Company, 1933. Cloth, \$2.00.

"Diet in Sinus Infections and Colds" is a valuable book written to be readily understood by those of the lay folks with a general knowledge of biochemistry and an interest in diet scientifically controlled. It is of great value to the physician whose dictary and related biochemical knowledge needs freshening or support. The detail of food, its proper preparation and end result are all carefully and clearly set forth and numerous balanced menus with recipes are given. The practical difficulty in appreciating this work is in following the detail, which only the most interested patient could be depended upon to do.

The experience of the author as well as many others as established the value of diet in upper respiratory infections conditions, both as a prophylaxis and in treatment. Here we have set forth the usual causes of cilihrer of dietary regimen and how to avoid them, as well as many general comments in dietary faults worth everyone's attention. The book is well written and casy to read.

CHARLES R. WEETH.

THE HEROIC AGE OF SCIENCE. The Couception, Ideals and Methods of Science Among the Ameient Greeks. By WILLIAM A. HEIDEL. Octavo of 203 pages. Baltimore, Williams & Wilkins Company, 1933. Cloth, \$2.50. (Published for Caruegie Institution of Washington.)

Professor Heidel has written a delightful "booklet," in which he champins the "Ancient Greeks" in their conceptions, ideals and methods of science. He limbts a strong brief for their genius, mental agility and powers of observation in all of the departments of cognation; and stresses the lact that they were pioneers in observation and induction, classification, analogy and experimentation. He urges that such master-minds as Hippocrates, Aristotle, Plato, Archimedes and all the rest set the pattern, for all time, for method in scientific procedure and ascribes error in technique to paucity of apparatus, such as the microscope and other instruments of precision of our day, as well as an unavoidable lack of knowledge of chemistry. The book is the product of a profound scholar, and is replete with quotations from the original Greek, illustrating the mode of thought and action of the ancient Maestro. It is a cultural contribution to the history of science, including medicine, and a choice addition to any library.

L. M. VAN COTT.

A SHORTER ORTHOFEDIC SUBGERY. By R. BROOKE, M.D. Octavo of 150 pages, illustrated. New York, William Wood & Company, 1932. Cloth, \$3.75.

It is a scrious question if a Shorter Orthopedie Surgery acommplishes anything—it is neither fish, flesh nor fowl. It is neither a quiz compend nor a text on the subject and is very prone to give the student a false conception of the subject. Furthermore the book does not seem to be very well balanced, as fully four pages are devoted to the cervical rib, a not too common condition, whereas only one short paragraph is given to osteparathritis of the hip, a condition much net with.

The makeup of the book is excellent and the photographs are good. It would seem that not only movie actors and diplomats must always smile when photographed but also cripples, when carrying around on their backs pounds of plaster of Paris. Now I know of nothing in a plaster of Paris jacket to make anyone smile.

I agree fully that the standard textbook in Orthopedic Surgery has become a massive tome but I do not think that the subject can be covered even briefly in the one hundred and fifty pages that go to make up this volume.

JA. C. RUSIMORE.



OUR NEIGHBORS



MEDICAL CHARITY IN WEST VIRGINIA

The October number of the West Virginia Medical Journal contains the following editorial comments on medical charity:

"Why should medical charity be dispensed on a different basis than other commodities? All the people, including the doctors, contribute to a common fund through taxation to provide food and clothing. But medical treatment is still saddled onto the doctor and he must make the most of it. It does not seem at all fair.

"Five years ago, when times were good, we heard little about medical charity. That was because there was little medical charity work to do, and it was handled by the medical profession with little trouble and less credit. Today, when we have millions on the roster of unemployed, the problem becomes a proposition of staggering proportions because the doctors have had less and less pay work and more and more charity work. Now, at long last, the medical profession is beginning to make itself heard. In many states, including West Virginia, a schedule of allowances has been adopted for doctors attending charity pa-This fee schedule is approximately one-half the amount generally charged in rural sections. In other words, it is better than nothing. At least it is supposed to be.

"Let us look at the general plan of medical practice as it has been handed down to us

over a period of several hundred years. Under that plan we have charged our patients just about what we thought they were able to pay. The excessively rich have paid thousands of dollars for the same operation that would cost a laboring man less than a hundred. Well-todo business and office executives have been called on for much higher fees than clerks and carpenters and butchers. This plan, tried out by untold generations of medical men, has been remarkably successful. It has pleased the doctor and has pleased the doctor's patients. It has become so much a part of medical economics that the plan has been recognized time and time again by the courts throughout this country. The doctors have prospered under this plan, and, until a few short years ago, they have been glad to follow it.

"The doctors asked for some relief from the great burden of medical charity. In making that request, it seems to us that they implied a willingness to throw overboard their timetried system of charging according to the incomes of their patients. There is only one justification for charging high fees against the rich. That justification is found in the free work that is given to the poor. Once the doctors start collecting for their poor work, there is no longer any justification for the marked difference in the charges."

MOTION PICTURE EXHIBIT IN THE PENNSYLVANIA ANNUAL MEETING

The announcements of the features of the Annual Meeting of the Medical Society of the State of Pennsylvania on October 2-5, is contained in the September issue of the *Pennsylvania Medical Journal* which describes a proposed motion picture exhibit as follows:

"At least 20 films will be projected. In keeping with the established policy of the Society in the make-up of its programs, every interest will be served so that the man engaged in general medical work will find considerable to engage his attention, and those devoting their time to highly specialized lines will suffer no neglect. Those physicians engaged in general work who are at times compelled to function as specialists in their respective communities will here find opportunity to refresh their tech-

nic of examination and perhaps amplify their therapeutics. The practical aspect of medicine will be emphasized in every respect. As in the case of the Scientific Exhibit, the effort has been made to correlate the motion pictures with the subjects covered in papers by authors appearing before the various sections. films will be arranged in such a manner that they will be shown in the morning preceding the presentation of the same subject in the afternoon before the sections, in the formal essays. For example, motion picture films on cardiology will be exhibited on Tuesday morning; the papers on this subject will be read on the afternoon of the same day in the Section on Medicine. A motion picture film relating

(Continued on page 1356-- adv. xii)



This mother registers surprise while the gas meter registers 540 cubic feet of gas per month for the cereal she cooks one hour every day. Pablum (Mead's Cereal pre-cooked) requires no cooking and saves this expense. The mother need only add water or milk (of any temperature) to serve Pablum for the baby and the other members of the household.

Pablum, moreover, is rich in minerals and vitamins, is base-forming and nutritious.

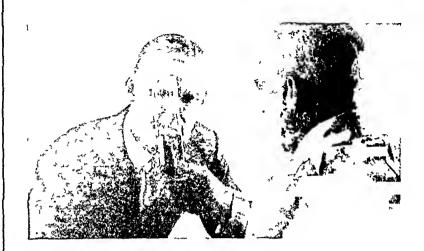
can obtain the extra rest which is so necessary for her health after confinement and during

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RAHWAY, N. J.

(Continued from page 1354)

to the treatment of strabismus will be shown on Thursday morning, and on the afternoon of the same day, H. Maxwell Langdon will read a paper on this subject before the Section on Pediatrics. While the purpose of the photographic review is primarily to refresh latent knowledge on the particular subject, it serves the additional purpose of creating a degree of scientific curiosity that makes for more extended inquires along this same line, and the objective of all education is indirectly attained. It is anticipated that requests may also reach the committee for a repetition of the showing of these films after the papers as well as before, and if feasible this will be done.

"There will also be a most comprehensive series of motion pictures illustrating electrocardiographic tracings which are correlated with animated motion pictures of the heart and valve action. Though this is of outstanding interest as an isolated display, the additional feature that is coordinated with the scientific exhibit of the Philadelphia Heart Association and the formal papers to be read on the subject of coronary disease, makes it unique in the field of such exhibits."

Moving pictures have been shown in connection with the scientific exhibit for the past two

years with increasing interest and success. This feature is described in a personal letter from Dr. Walter F. Donaldson, Secretary of the Medical Society of the State of Pennsylvania, as follows:

"The picture theater immediately adjoining the scientific exhibit is made attractive to members by fixing definitely in advance the time for showing certain pictures and providing facilities for request repeats of pictures. At our 1931 session we had a registered nurse in full uniform during exhibit hours at the door of the theater, writing on a blackboard the name of the picture and keeping a definite record of the attendance upon each picture. During the 1932 session we did not have the nurse, but instead a uniformed policeman, who excluded from the theater as well as from the scientific exhibit those not wearing our official registration button. This year we had both policeman and nurse.

"The average attendance upon the twelve pictures shown on Thursday of the 1933 session was 49 per picture. The attendance upon the various pictures shown throughout the three days averaged 39, ranging from 5 to 65. The most popular pictures were 'Experimental Studies in Blood Coagulation,' 'Plastic Surgery,' 'Breech Extraction,' and a group of cardiocirculatory pictures.

It was noted that the attendance throughout the

(Continued on page 1358-adv. xiv)



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Revealing as it does, for the first time, the cell alignment of unprocessed catgut, this X-Ray research has made available to Curity scientists facts which have enabled them more intelligently and more accurately to govern eatgut processing, and to definitely improve the treatment of eatgut to accomplish certain results.

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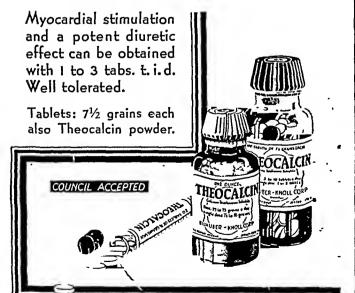
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(Continued from page 1356—adv. xii) various scientific exhibits was greatest where the zeal of the demonstrator was most marked.

"If called upon to give the requisites for a successful scientific exhibit, and moving and sound picture theater, I would suggest the following, in the order of their importance:

"1. Sufficient funds to furnish adequate space and facilities, without material expense to exhibitors.

"2. An ardent chairman with good judgment.

"3. Exhibits by men and women who are 'zealots' in their chosen subject. This assures devoted demonstrators who will not only answer questions helpfully, but will buttonhole the passersby.

"4. Correlation between the Committees in charge of the various sections of the scientific program. This year twenty-five per cent of our scientific exhibits were thus related to papers and discussions. This should apply to pictures shown as well as other diagnostic or therapeutic demonstrations."

THE MAINE MEDICAL JOURNAL

Some unique reasons for the existence of the Maine Medical Journal are given in the following extracts from its October issue:

"All writings have as their functions the recording and communication of thought and experiences, and unless a state membership can by any stretch of imagination declare itself sufficiently sterile in thought and experiences, no one can question the value of their recording and their intercommunications.

"A true criticism may be made, to the effect that too few of our members are not sufficiently articulate and lack the experience in medical writings. This argument is a most powerful one favoring the maintenance of a journal towards the development of that highly-prized and valued art.

"To amalgamate with any other periodical is too facile a course and will lead to over stagnation. By virtue of our own Journal only can our membership be stimulated to develop the art and science of medical writing.

"The problem is primarily one of self-education and stimulation toward the development of a talent undoubtedly present, though latent, among our members in the art of creative medical expression. The experiences of a fellow practitioner in this state are of more interest to us than the experiences of men elsewhere.

"Our state membership typifies the general practitioner, whom we are again beginning to appreciate as forming the bed-rock of medical practice. Ours is the opportunity and duty to further that recognition by transplanting his experiences and incorporating them into the much-needed and well-merited place in medical literature. Our Journal is the instrument towards its development and perfection."

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table form of vitamin A, carotene, and a tasteless vitamin D prepared for therapeutic use by methods (Zucker process) developed at Columbia University. It is naturally palatable, not artificially flavored.

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Prescribe these naturally palatable vitamin products - they cost no more.

Taste the carotene products yourself. Write for samples. We also offer Smaco Cod Liver Oil fortified with carotene and vitamin D for those physicians who prefer to prescribe cod liver oil. It is three times as potent in both vitamins A and D. Therefore one teaspoon is equivalent to three teaspoons of good grade cod liver oil. Improved flavor and minimum cost to patient. For vitamin Dalone (for the prevention or cure of rickets), we offer Smaco Vitamin D, a highly potent extract of the antirachitic principle of cod liver oil prepared by methods (Zucker process) developed at Columbia University. Ten drops equivalent in vitamin D potency to three teaspoons of good grade cod liver oil.

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> COMMITTEE ON **PUBLICATION**

MATERNAL CARE IN PITTSBURGH

The Medical Society of the County of Allegeheny, Pa., in which the City of Pittsburgh is located, has sent the following notice to its members:

"Attached is a copy of the Plan of Operation of the Public Relations Auxiliary Committee on Maternal Care, for the execution of which the Council of the City of Pittsburgh has appropriated \$50,000. Since the plan becomes effective immediately, it is important that you acquaint yourself at once with its provisions.

"You will note that the plan applies only to residents of Pittsburgh who are on relief. Attending physicians, however, may reside be-

yond the city limits.

"Patients should procure from the Alleglieny County Emergency Association, City-County Building, a printed form executed in duplicate, both copies of which should be presented to you during the first or second visit. The signed copy is to be forwarded to the above Committee together with the medical history of the case and formal bill for \$25."

The plan is outlined as follows:

"The members of the Allegheny County Medical Society agree to render to the expectant mother adequate medical supervision during her pregnancy, labor, and puerperal period, including the baby after its birth, under the following conditions:

"All duly qualified and registered physicians residing and practicing medicine in Allegheny County shall be entitled to participate in this plan and the remuneration unless later re-

moved for cause,

"The patient shall have a free choice of

physician or hospital.

"At the time of the first contact between the physician and patient the physician shall make a thorough physicial examination of the patient including a pelvic examination, pelvic measurements, Wassermann (or Kahn) and a blood count when necessary.

"The physician shall instruct and insist upon the patient making monthly calls during the first months of her pregnancy, bimonthly during the seventh month and weekly during

the eighth and ninth months.

"The physician shall respond promptly when the patient goes into labor and spend sufficient time with her watching the progress of labor and the welfare of the infant to insure the patient's safety. If complications develop, he may have any patient removed to the hospital of his selection under specified conditions.

"After delivery the case shall be reported to a visiting nurse service. The nurse responding to the call shall follow the orders left by the

(Continued on page 1362-adv. xviii)





Indoors, how will they get enough sunshine vitamin-D?

NATURE planned plenty of vitamin-D for humans when she gave us sunshine; but modern living has placed most people beyond the reach of the health-giving ultra-violet rays of the sun—indoors.

Experiments in Chicago and Baltimore prove that the ultra-violet effectiveness of the sun is greatly reduced by the presence of dirt in the air in our large cities. The Chicago Department of Health finds that "only half the sunlight with its curative ultra-violet rays

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In the winter, even at mid-day, the ultraviolet effectiveness of the sun is extremely low, because only when the sun's altitude is 35 degrees or more does the light have appreciable anti-rachitic effect.

To compensate for this deficiency of sunlight, and the lack of vitamin-D in foods, Bond Bread (approved by the Committee on Foods of the American Medical Association) richly provides vitamin-D. First, to build and maintain strong bones and sound teeth, and second, to decrease dental decay, be sure that your family and your patients enjoy this delicious, flavorful bread regularly.

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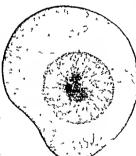
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(Continued from page 1360—adv. xvi) physician and report any change in the condition of the mother or infant, and whenever necessary the physician shall visit the patient even though it involves an additional call or calls. The physician shall be responsible for a proper record of the puerperal period.

"At the end of the puerperal period the physician must insist upon the patient calling at his office, when any treatment necessary shall be given and her condition recorded."

"Upon completion of the case (about six weeks after delivery), the attending physician shall submit the entire case history to the Public Relations Auxiliary Committee on Maternal Care. If the history is approved, recommendation for payment will be made to the Controller of the City of Pittsburgh. Payment will not be recommended when for any reason the entire service and history are not considered satisfactory by this committee.

"The plan outlined above shall apply also to hospitals, the patient going to the hospital

of her selection.

"If a complicated case is referred to the hospital when in labor the compensation shall be divided as follows; 60 per cent (attending staff physician not participating); the 40 per cent shall go to the physician submitting satisfactory evidence of proper prenatal care."

RELIEF AND PREVENTIVE MEDICINE IN TENNESSEE

Commenting on the comparative value of medical relief to the poor, and preventive medicine, the October Journal of the Tennessee State Medical Association says editorially:

"Some counties in which the economic conditions are bad have appropriated money out of the county treasury to support so-called county units. Certainly a county health unit properly organized and directed may be capable of rendering worthwhile service if it can be afforded.

"At the present time a majority of the work of these units consists of the administration of immunizing treatments to prevent smallpox, typhoid and diphtheria; making some school inspections; in carrying on a minor amount of sanitary work and in carrying on a considerable amount of publicity work.

"The relative importance of these activities can be overestimated and oversold and their

costs can be multiplied enormously.

"The administration of typhoid vaccine to an entire country school requires little time: Very slight overhead expense and no more skill than is required to administer a hypodermic injection of any kind. This particular activity, however, lends itself beautifully to (Continued on page 1363—adv. rix)

(Continued from page 1362-adv. xviii) the purposes of publicity. The entire time, expense and skill involved in giving such reatment to an entire school would not be equal in many instances to the time, skill and expense required to give proper attention to an ndigent woman in confinement in the same community by the local general practitioner The latter activity does not lend itself to the purposes of publicity. Relatively few people will know anything about the incident. The practitioner, of course, has no publicity bureau

to prepare articles for the county newspapers

"The doctor in charge of a local health unit

draws his salary from the state. For these times it is a high salary. The state defrays the cost of his transportation. The state pays his office rent and the state pays for his office help.

"There is not a graduate practitioner in the state who is not perfectly capable of administering any of the several vaccines and sera for the prevention of these various diseases If the practitioners were paid a reasonable sum for these activities this income would help defray their office expenses and help them get by in this crisis Such a plan is being carried out in at least one state with efficiency and economy"

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1 J. Soc. Chem. Ind., 1923, 42, 185, 205.

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PREVENTING LOSS OF WEIGHT IN THE NEWBORN

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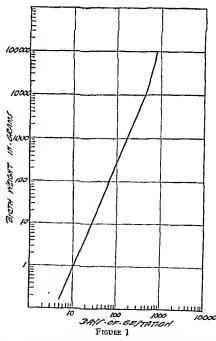
From the Department of Pediatrics, The Fifth Avenue Hospital, New York.
Read at the Annual Meeting of the Medical Society of the State of New York, at New York City, on April 5,1933.

OSS of weight in the newborn is sanctioned universally. It is a period of semi-starvation during the first days of life that is too stupefying to be ignored, too debilitating to be physiological, too prolonged to be a sacred law of nature. A century ago Claussius was the first to record the characteristic loss in weight of the newborn. And such is still being recorded apparently without question. Civilization may have perfected the newborn physique but it has simultaneously impaired the maternal milk secretion; it may have improved the methods of delivery but it has not been contributory in combating the new-born's birth shock. The present postnatal procedure of awaiting an ample food supply from the mother is no longer productive of the nutritional adequacy that maintained in primitive times. The modern consequence is an initial period of semi-starvation, a condition non-existent amongst animals and Bushman progeny. Several questions arise in a careful study of this problem. Is the loss of weight in the nowborn necessary? Is it detrimental? What is its cause? How can it be prevented? Is its prevention advantageous?

IS THE LOSS OF WEIGHT IN THE NEW-BORN NECESSARY?

The newborn is markedly underdeveloped for the duration of human gestation. Birth involves an abrupt change in the newborn reflectanism. It is unprepared for its individuallzed existence in comparison with other mammals, occupying a place somewhere between the domestic mammal and the wild marsupial whose young remain dependent upon the mother. Man appears to be the striking exception in his slow rate of intrauterine development attaining a birth weight of about a quarter of that developed by other animals. Although the relation between birth weight and gestation time is clastic yet it appears on an analysis of animal species that the larger the animal the longer is its embryonic life. If the birth weight is plotted against the gestation

time on double-log paper a straight line relationship is found except for a slight deviation in the case of the heaviest animals. (Fig. 1.) There is some law operative which insures that these limitations necessarily follow. The only reason for using double-log paper is for the convenience of getting the data on the same graph. The time required for the differentiation of man in utero is

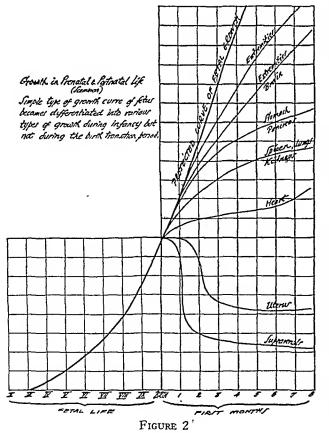


out of all proportion to all animal species. Yet the product is about a fourth of the expected birth weight because of adjustment to the human fe-

N. Y. State J. M December 1, 1933

male. But this high degree of under-development makes the newborn supervision all the more urgent to meet potential pathology with delicate desideratum.

The neonatal growth gradient continues unaltered during the post-natal period. The loss in weight during the first week of life does not reflect any deep-seated change in the growth trend of the neonatal period. The newborn physique is so labile a structure that it reacts manifestly to minor exogenous and endogenous factors that begin to play upon it after birth. But there appears no fundamental change in the growth trend which proceeded undisturbed in utero. This fact we have felt necessary to attain in order not to attempt to alter what was once considered a transitional depression in the growth process. Scammon demonstrated the various types of growth that occur in the body as a whole in comparison with the changes in size of its tissues and organs in fetal and post-natal life. If they be compared by bringing them together on an equivalent scale it becomes evident that the characteristic form of growth of the fetal period continues for several months after birth. This transition is illustrated schematically in Figure 2.



Postnatal loss of weight does not maintain in animals. The birth process appears to be unrelated to any change in the growth cycle postnatally. Such has been the observation of Scam-

mon, Jackson and others for man and of Donaldson, Lowrey, Schmalhausen and others for animals. An inquiry into weight change in animals after birth or hatching shows that no losses result anywhere comparable to those observed in man. Animal species of all sizes, of varied gestation periods, of all scales in evolution, receiving no scientific supervision after birth or hatching appear to thrive either immediately or at the utmost after the second day of extrauterine life. These are the results accumulated from data obtained from animal husbandmen of experimental stations and from curators of zoological parks in this country and abroad.

This survey of uninterrupted growth after birth of animal species is a revelation of the unique place man holds in his adjustment to environmental forces from the very moment of The transient loss in animals is truly physiological in that it consists of some skin, hair, amniotic fluid, meconium and urine. The change represent the irreducible minimum of loss in weight which lasts from an hour to a day since maternal food is already available and adequate for the young. Animals seek the breast immediately after birth and suck continuously unless interrupted by sleep. Even the Bushman mother, free from the stress and strain of modern life is able to nurse her offspring in sufficiency following birth thus minimizing civilization's lag in growth after human birth. (Table I.)

WHAT IS THE CAUSE OF LOSS OF WEIGHT IN THE NEWBORN?

Universality of loss of weight in the newborn without exception has glorified the phenomenon into a so-called physiologic law. A century of literature acknowledges the existence of varied attempt at physiologic correlation. Attempts at interpretation of the newborn's loss in weight have led early investigators far afield.

The newborn excretion is neither massive nor unusual for the sum total of loss due to swallowed amniotic fluid, vernix caseosa, meconium and urine is indeed negligible in comparison with the actual loss of weight during the first days of life. Cammerer demonstrated metabolically that the loss in weight is nothing more unusual than the difference between intake and output. greater portion of the output is independent of alimentary elimination. It consists of fluid loss from the skin and lungs as insensible perspiration not due to an excessive metabolic rate, but rather to an inadequate total fluid intake to compensate for the newborn's daily requirement. Actually, therefore, the loss in weight is due to some starvation which is never physiological. (Table 11.)

HOW CAN THE LOSS OF WEIGHT BE PREVENTED

The effectiveness of therapeutic procedure parallels its degree of dependence upon physio-

.

GROWTH VALUES OF ANIMALS

		ROWTH VALUES O	F ANIMALS		
Animal	Gestation Time (days)	Birth Weight (grams)	Per.Cent Loss Birth Weight	Duration Weight Loss (hours)	Average Daily Gain Developmental Period
Opossum	8 8	0 5 0.5	0 0	0 0	
Mouse	21 21 21	1.6 5 25		·.	0.08 0.24 1 2
Rabbit	30	70	0	0	
Cat	60	100	0	0	
Wolf	61	250	0	0	4.0
Guinea pig	63	120	2	24	2.0
Puma	92	500	0	0	5,5
Lion	105	1000	0 .	о [10 0
Pig	120	1700	3	6	14.0
Lemur	144	240	0	0	
GoatSheep	· 150 150	2800 4000	4 4	12 12	24.0 26.0
Mandrill	200 200	480 480	0	0 0	••••
Hippopotamus	225	50000	4	48	200.0
Bear	240	1500	0	0	7 4
ElandStag		60000 24000	0 3	0 24	100.0
Chimpanzee	260	1000	4	24	
Roedeer	280	3000	0	0 .	11.0
Cow	. 285	37000	3	24	125.0
Horse	. 330	50000	1	24	200.0
Seal	. 350	10000	o	o	30.0
Camel	. 360	80000	ı	74	400.0
Donkey	. 370	20000	1	24	53.0
Rhinoceros	510	50000	4	48	200.0
Elephant	615	240000	4	48	400.0

TABLE I

logic changes which are to be corrected. Many attempts have been made to decrease the loss of weight in the newborns but without consistent results because the methods devised were apparently unrelated to the fundamental cause of the sudden drop in body weight.

We have initiated our present study as a result of favorable experiences in the nutritional care of prematures. During the first few days of life we were able to correct the striking physiologic deviations from the norm by the oral administration of 5 per cent dextrose solution reinforced with 5 per cent glycocoll offered every two hours immediately after birth. The dextrose consistently alleviated the low blood sugar observed in these premature infants and the glycocoll appeared to raise the internal body heat to a normal level thus overcoming the low birth temperatures. The continuous administration of the solution the first two days after birth between feedings prevented

in a large measure the initial loss in weight which the prematures could well nigh not afford. This observation in connection with premature, debilitated and small infants led us to a more careful study for the development of a solution which would be preventive of the initial loss in weight in all newborns. feeding regime is well tolerated. The actual colostrum intake is small even if valuable and the ingestion of feeding formulae minimal under the most favorable conditions. The amount of food consumed in terms of percentage of body weight is less than one per cent on the first day, gradually increasing to over 10 per cent of the body

OBSERVATIONS ON THE INITIAL LOSS OF WEIGHT IN NEWBORNS

	Weight Loss		Birth Wt. Regained (%Infants)				
Author	Grams	% Birth Wt.	7th day	14th day	21st day	Prelacteal Procedure	
Adair	266	8	••			Colostrum and Water	
Autonov	•••		6	50	75	Colostrum and Water	
Bakwin	• • •	8				Colostrum and Water	
Bauchaud	200				••	Colostrum and Water	
Bergman			11		٠,	Colostrum and Water	
Borrino	240				••	Colostrum and Water	
Dluski	212				••	Colostrum and Water	
Drossel	•••	8.8 7.5 7.5 6.8		••	••	Colostrum and Water Water 10% Sugar Ringer's solution	
Eder		5	67	83		Sodium citrate—lactose sol'n	
Fuhrman		9.4]	••		
Gregory	203	•••			••	Colostrum and Water	
Heiman	•••				81	Colostrum and Water	
Herzfeld	• • •	9.8	••			Colostrum and Water	
Kirstein	. •••	7.8					
Neff		7.5		85			
Oberg			10	80		Colostrum and Water	
Randall	•••	6.1		90		Complemental Feeding	
Robertson	330	9 2		٠	٠.	Colostrum and Water	
Schulte				45		Colostrum and Water	
Schulz				50		Colostrum and Water	
Seifert			20		• • •	Colostrum and Water	
Steiner	222					Colostrum and Water	
Tyson	266	8.1		62		Colostrum and Water	

TABLE II

The Solution to Combat Birth Shock. The newborn's nutritional requirement can only be fulfilled once he has been alleviated of the symptoms eonsequent upon the physiological trauma of birth. We have observed that nutritional therapy is specifically indicated the first two or three days of life before the required normal

weight after the fourth day. This limited intake is a consequence of birth shoek. We have, therefore, found it advisable to prevent initial loss in weight not by forcing feeding mixtures from the day of birth, but rather by the administration of a solution suitable to the physiologic needs postnatally. After a series of attempts to determine

the relative effectiveness of various measures we have found that the solution

60% gelatin (pH 62) 30% dextrose

05% sodium eliloride

the most desirable for reducing the initial loss in weight of the newborn to the irreducible numinum. It so happens that our favorable clinical observations with this solution have brought out its identity with the gross content of colostrum. This solution was administered to consecutive staff cases immediately after birth and every two hours thereafter for the first three days when the valuable breast milk was supplemented by

life The high degree of bound water content in the newborn is indicative of its indispensability in the body's immitable structure. This presup poses no available water reserve for ready mobilization comparable to fit or carbohydrate.

Determination of the amount of water eliminated from the lungs and skin of newborns reveiled it to be about three times as great per kilo of body weight as that of an adult. In fact the adult retains about 35 grams of water per kilo body weight while the newborn binds about 150 grams of water per kilo body weight or over four times the adult requirement. These considerations of the water metabolism emphasizes the direction of

EFFECTIVENESS OF VARIOUS SOLUTIONS IN PREVENTING LOSS OF WEIGHT

on	Cases	Schedule	Instal Loss (Ounces)	Per Cent Loss	Day Birth Weight Regained	Per Cent Cases Gaining Weigh
5% 5%	15	q 4 h X 4	7 6	7 2	7	78
3% 3% 0 5%	17	q 2 h	4 7	3 9	6	76
3% 3% 0 5%	8	q 2 h X 6	9 8	8 1	10	60
3% 3% 0 5%	12	q 2 h X 6	6 2	4 8	5	92
6% 3% 0 5%	12	q 2 h X 6	4 7	3 4	6	96
6% 3% 0 5%	29	q 2 h X t2	2 1	17	5	100
	55% 35% 0 5 5% 0 5 5% 0 5 5% 0 5 5%	5% 15 3% 17 0 5% 8 0 5% 12 0 5% 12 0 5% 12	5% 15 q 4h X 4 3% 17 q 2h 3% 0 5% 8 q 2h 3% 0 5% 8 x 6 3% 6 x 6 3% 6 x 6	om Cases Schedule (Ounces) 5% 15 q 4 h X 4 7 6 3% 17 q 2 h 4 7 4 7 3% 17 q 2 h X 6 9 8 3% 8 X 6 9 8 9 8 3% 12 X 6 6 2 6% 12 X 6 4 7 3% 12 X 6 4 7	on Cases Schedule (Ounces) Loss 5% 15 q 4 h X 4 7 6 7 2 3% 17 q 2 h 4 7 3 9 3% 8 q 2 h X 6 9 8 8 1 3% 12 q 2 h X 6 4 8 8 1 6% 3% 12 q 2 h X 6 4 7 3 4 6% 3% 12 q 2 h X 6 4 7 3 4 6% 3% 12 4 7 3 4	on Cases Schedule (Ounces) Loss Weight Regained 5% 15 q 4 h X 4 7 6 7 2 7 3% 17 q 2 h A 7 3 9 6 3% 8 q 2 h X 6 9 8 8 1 10 3% 12 q 2 h X 6 6 2 4 8 5 6% 3% 12 q 2 h X 6 4 7 3 4 6 6% 3% 12 q 2 h X 6 4 7 3 4 6

TABLE III

feeding formula according to the needs of the individual infant (Table III)

The newborn's requirement of the constituents of this solution may be envisaged from the following considerations Continued water administration is indispensable from birth on Stander and Tyler found the fetal water content of the blood was less than that of the mother's We have observed by determination of the refrac tive index, viscosity and blood volume that the blood is concentrated at birth as a consequence of shock and of subsequent water deprivation Normally, the water content of the newborn is about 85 per cent gradually diminishing with age This high degree of tissue hydration at birth is indicative of the correspondingly high degree of immaturity of the hody and necessarily bespeaks the tremendous water requirement at this stage of

dirtely after birth Inadequate fluid intake in the newborn is conducive to the development of a variety of symptoms, initially alimentary in na ture, long before frank deliydration becomes ap parent to the clinician But mere water intake lins shown no consistent maintenance of the required tissue hydration in the newborn marked lability in water metabolism is apparent from hourly determinations of the refractive index of the blood in comparison with that of older We have therefore not only offered water but other dissolved constituents as well to favor its retention. This instability in water metabolism has been interpreted on the basis of immiturity of the central water-regulating mechanism but we have found no evidence for such assumption Addition of nutrious for stabil

intake in newborns has been adequately met by máximal amounts of gelatin and minimal amounts of: sodium chloride. Gelatin has several physiologic advantages for the newborn—markedly hydrating, well tolerated and easily assimilable. Sodium chloride, a neutral salt prolongs the retention of ingested water by virtue of the dual properties of the salt—the hydration of the sodium ion and the neutral salt effect. Studies of the blood composition of newborns have shown that the total protein content is at low normal levels in comparison with older children, a further indication for the addition of gelatin. Similarly the sodium chloride content of the blood of newborns has been observed to be at low normal level gradually rising with regain of the birth weight. Hence the justification for addition of minimal amounts of sodium chloride to raise the low plasma sodium chloride concentration. This restores to blood and tissues their normal degree of hydration in view of the absolute relation of this salt to the water content of the body. But the addition of gelatine has another advantage. By virtue of its specific dynamic action it elevated the body temperature, subnormal And its metabolic products likewise contribute toward the elevation of the blood pressure, lowered as a consequence of birth shock.

Determination of the blood sugar concentration at birth reveals consistently low normal. Therefore dextrose has been added to the solution offered the newborns not only to maintain a normal blood sugar level but as well to offer a readily assimilable carbohydrate adequate at least for the basal metabolic needs of the body during the first days of life. The entire solution is isotonic because half of the molecular concentration consists of three per cent dextrose and the other half of a 0.5 per cent sodium chloride. The solution is further made colloidally osmolar by the addition of six per cent gelatin which parallels the concentration of the blood. The consistency of the solution warmed before feeding is such as to favor retention thus overcoming regurgitation so prevalent in young infants.

The tryptic rather than peptic digestion of gelatin favors a slowness of molecular absorption from the solution, advantageous in the initial alimentary adjustment of the newborn. Incidentally the gross concentration of the solution parallels that of colostrum although our purpose in its administration is of course not at all exactly that which nature transfers to the newborn colostrum. The great emphasis that has been placed upon the physical and chemical properties of breast milk in so far as its universal tolerance in infants is concerned has led to its apparent simulation in artificial feeding mixtures. And so it is in that spirit of simulation of gross properties rather than in duplication of the minutae of colostrum that we compare the solution herein devised. We have attempted to modify the solution further for its acid-base content because of the low pHs observed during the first day of life and the reciprocal CO₂ content that parallels the so-called "acidosis of newborns." The variability of the acidbase equilibrium in the newborn and the refinements we found necessary were out of all proportion to the disturbances produced by the attempted administration of such a modified solution. We have, therefore, been content with a solution which will maintain the required level of tissue hydration and be well tolerated, non-irritating and non-expensive.

Preparation of the Hydrating Solution. To a cup of cold sterile water add about 6 level table-spoons of gelatin (pH 6.2), about 3 level table-spoons of dextrose and about a level teaspoon of table salt. The gelatin should be free from flavoring, coloring or sweetening if it is to be well borne as the first nutrient of the newborn. Allow to soak for 10 minutes. The remaining 3 cups of water required to make a quart of the solution are brought to the boiling point and added slowly to the mixture. The solution is stirred continuously until all is dissolved. This nutrient solution for the newborn consists of 6 per cent gelatin, 3 per cent dextrose and 0.5 per cent sodium chloride, having a caloric value of 12 calories to the ounce.

Clinical Course of Treated Newborns. Solutions of varying composition were tested clinically for relative effectiveness in preventing loss of weight in the newborn. The soluble nutrients were selected as previously discussed on the basis of the therapeutic needs of the newborn after experiencing physiologic trauma incident to birth. Our studies of nutrition of the newborn indicated an initial requirement in a hydrating solution of a coloric value sufficient to maintain basal needs the first three days of life. Such a solution consisting of well tolerated substance-gelatin, sugar and salt-brought more rapid recovery from the effects of the birth shock than did the immediate feeding of milk mixtures. In fact, the final, most effective solution offered during the first three days of life actually prepared the newborns for more efficient nursing and utilization of feedings. The solution was given every two hours throughout the 24 hour cycle. The results are expressed in Table III.

The final hydrating solution found effective clinically consisted of 6 per cent gelatine, 3 per cent dextrose, and 0.5 per cent sodium chloride. When offered to twelve infants with controls at two hour intervals during the day the percentage loss in body weight was no more than 3.4. But when the same solution was offered throughout the 24 hour cycle at two hour intervals both between and immediately after nursing the percentage loss in body weight was the irreducible minimum—1.7 per cent. The caloric intake exceeded the basal requirement in most newborns and thus tided the baby over the first days of reaction

from the birth process. All of the infants began to gain weight on the fifth day of life at a rate which far exceeded that of the controls.

Complemental feeding in 300 control infants merely reduced the initial loss in weight from the usual 10 per cent anywhere from 6 to 9 per cent. The newborns were put to the breast 6 hours after birth and then continued on four-hour mirsing periods with complemental feeding wherever indicated. The actual amounts offered to each baby in varying types of milk mixtures depended on the adequacy of the breast supply. The feedings were offered only after the breast supply was exhausted and continued until the total ingestion of human milk fulfilled optimal requirements in each baby. In common with other observers we have adjusted the complemental feedings without endangering the baby's natural source of nutrition.

The old dictum of Czerny's of not offering newborns any feeding until the breast milk has become available, no longer holds. The basis of that practice was to ohviate the development of unnatural and harmful fecal flora, a condition that has never been confirmed bacteriologically. The modern prolonged interval for the development of an adequate supply of breast milk no longer warrants the practice of semi-starvation. As a result the enfeebled infants lack the energy to nurse, particularly from engorged breasts. Incomplete emptying of the breast is in itself the most effective stimulus for milk secretion. The consequence is a vicious cycle with an unnecessarily prolonged adjustment to the optimal nutritional requirement.

Early complemental feeding invigorates the newborn to the extent of obtaining more breast milk, hence it is mutually beneficial in accentuating the most effective stimulus to increased breast flow. Careful regulation of complemental feeding never minimizes effective nursing. But complemental feeding in the 300 newborns observed has not resulted in eliminating the initial loss in weight. Administration of the hydrating solution the first three days between nursing and then complemental feeding with nursing evidently propared the newborn for rapid adjustment to the required breast and artificial feeding.

The control series revealed a greater loss for larger newborns. Even on complemental feeding 9 pound infants lost on the average about 9 per cent of their birth weight while smaller infants lost less but never below 6 per cent of their birth weight. (Table IV.) The striking advantage of the administration of the hydrating solution was to equalize this variation in postnatal loss of weight to the extent that the average was less than 2 per cent.

The clinical superiority of the newborns who received the hydrating solution led us to favor the latter procedure on the basis of its maximum

Initial Loss of Weight in 300 Newborn Controls (Breast and Complemental Feeding)

Bìrth Weight	Number of Cases	Average Initial Loss (Ounces)	Per Cent Loss Birth Weight (Average)
9 8 7 6 5	21 75 115 64 19 8	9.6 8 6.2 6.5 5.9	8.8 7 1 6.8 6.8 6.9 6.2

TABLE IV

effectiveness in behalf of the newborn. (Figure 3.) The cousiderable fluid intake showed by the newborns receiving the hydrating solution is, of course, paralleled by an increased caloric intake in comparison with the controls during the first critical three days of life. It is to be reiterafed

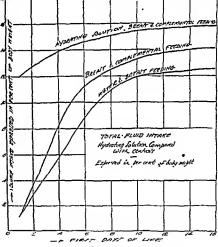


FIGURE 3

that the primary purpose was not caloric adequacy but rather fluid adequacy although it was intended to offer the newborn at least the caloric requirement essential for basal activity, that is, at least 150 calories for the first 24 hours. (Table V.)

Newborns adequately hydrated rapidly lose the so-called physiological apathy, somnolence and stupor. Newborns maintained on water the first three days in addition to the inadequate supply of breast milk not infrequently showed acetonuria. It has already been universally demonstrated that the compensated acidosis of the new-

AVERAGE CALORIC INTAKE IN TREATED AND CONTROL SERIES

Birth Weight (pounds)	Solı	ution S	eries	Control Series				
	Days							
	1	2	3	1	2	3		
9	209	235	245	73	116	131		
8	142	163	185	86	120	136		
7	166	171	225	73	108	120		
6	156	188	198	68	116	121		
5	163	189	193		• • •	• • • •		

TABLE V

born is an entity which undoubtedly contributes to the familiar newborn apathy. The administration of the hydrating solution effectively cleared this needlessly accepted symptomotology.

Adequate hydration of the newborn freed him from the familiar starvation stools. On the "solution" the meconium stools were larger and more rapidly eliminated during the first three days of life than in the control series from which meconium continued up to the fifth day. Pediatricians have often associated prolonged meconium stool elimination with periodicity of alimentary dis-turbances. The toxic symptoms which have been found to supervene have made it a practice amongst many to resort to castor oil. We have observed that such a procedure aggravated the dehydration even though it cleared the transient The newborns under observation disturbances. showed no such upsets and required no special alimentary therapy. Their temperatures were better stabilized in comparison with controls. In fact, the fluctuant temperature variation in the newborn has lead many to advance its cause on the basis of an immature temperature regulating mechanism. We have observed the least number of febrile infants throughout the year of this study and none, of course, with dehydration

Conclusions

1. Loss of weight in the newborn is sanctioned universally without physiologic foundation.

Discussion

Dr. E. A. Ricsenfeld, New York. At the Harlem Branch of Bellevue and Allied Hospitals in this city, on the service of Dr. Geo. Brodhead, observations were made for a period of one year on the temperature of the delivery room at the time of delivery. It was found to average 70 degrees F.

2. The newborn is markedly underdeveloped for the duration of human gestation and so requires continuous supervision for the prevention of potential pathology.

3. The neonatal growth gradient continues unaltered during the postnatal period according to analysis of the transitional growth trends of the body as a whole as well as of its tissues and organs; therefore the initial loss in weight is nec-

essarily extrinsic.

4. Postnatal loss of weight does not maintain in animals of all sizes, of varying gestation periods and of all scales in evolution according to a survey of observations of veterinarians, animal husbandmen and curators in experimental and zoological parks in this country and abroad.

- 5. The initial loss of weight in the newborn is the result of dehydration and semi-starvation, conditions unfavorable for nutritional, physical and environmental adjustments besetting the newborn.
- 6. Past therapeutic procedures for decreasing the loss of weight in the newborn have not been altogether effective because they were not based on the physiological needs of the newborn disturbed by birth shock.
- 7. The initial loss in weight in the newborn can be prevented by the administration of a solution consisting of 6 per cent gelatin (pH 6.2), 3 per cent dextrose and 0.5 per cent sodium chloride at two hour intervals throughout the 24 hour cycle immediately after birth. The gelatin hydrates blood and tissues; it raises body heat by virtue of its specific dynamic action; and reduces the clotting time. Dextrose brings the newborn hypoglycemia to normal. Sodium chloride raises the initial low blood chloride and favors hydration.
- 8. The average loss of weight in newborns receiving the hydrating solution was 1.7 per cent, the irreducible minimum in comparison with the average loss of 7 per cent.
- 9. The characteristic clinical picture of the newborn is a result of birth shock, more effectively combated by a hydrating solution than by milk mixtures the first two or three days of life.
- 10. Preventing the loss of weight in the newborn produces rapid disappearance of the so-called physiological apathy, somnolence and stupor in the newborn secondary to birth shock and the compensated acidosis universally present.

Accurate stop watch observations were made without the knowledge of the accoucheur, and it was found that an interval of about ten minutes elapsed from the moment of birth until the infant was eventually wrapped in blankets.

The body of the newborn infant is moist, frequently actually wet. It is covered with vernix casiosa, amniotic fluid and blood.

The child at birth is thus subjected to a temperature change of approximately 30 degrees, the difference between the temperature of the interus of the mother, 98.6 and 70 degrees the temperature of the atmosphere into which it is born. This chilling continues for about ten minutes with a moist or wet body surface. Budin was the first to call attention to the harmful effects of such chilling, particularly as it affected the premature child.

We felt that in this prolonged chilling, there might be a factor which influenced the amount of

weight loss sustained.

To control the chilling electric heating lamps were placed at a distance of 20 inches from the vulva of the mother. The infant would then be born into an atmosphere of 99 degrees, that of the uterus of the mother. The weight was determined at birth and at the end of 24 hours. As other important factors beyond our control

modify the weight thereafter, the loss of weight during the first 24 hours alone was considered.

It was found that infants protected by heat sustained a lessened weight loss when compared to a group of infants born at the same time at the Woman's Hospital in the city on the service of Dr. Studdiford and a control group of Harlem Hospital.

In all children protected by heat there was an average actual loss of 3.4 ounces or 3.2 per cent as compared to the loss sustained by infants born under the usual circumstances of an average actual weight loss of 4.6 ounces and a percentage loss

of 4.6.

In those children under 5 pounds however, it was found that the heat protected children suffered a loss of 2 ounces averagely or a 2.9 per cent loss compared to the control group of infants under 5 lbs. who sustained an average actual loss of 5.1 ounces or 8 per cent.

THE TREATMENT OF COMMON FORMS OF DROPSY*

By NELLIS B. FOSTER, M.D., NEW YORK, N. Y.

T is recounted that in his experiments with digitalis Withering was disappointed that this drug produced no alleviation of the dropsy of ovarian cyst, or of hydrocephalus. Looking back from a future century some of our efforts today may seem quite as lacking in understanding of the complex problem of edema. For today, despite notable increases in our knowledge of some of the factors involved, it would be a simple problem indeed when a clinician might feel assurance that he could predict the effect of a chosen measure for relief in a specific instance. And while our reasoning today rests upon a broader and more tangible body of facts that it did, even a decade or two ago, we are often confused by the complexity of physiological relations and must at times resort to an unreasoned trial-anderror method of therapy.

Until the nineteenth century dropsy was considered a clinical entity; there are exigencies when because of its severity and immediate danger we have to act as though it were so regarded even today. But generally it

is a symptom.

In a way which is doubtless crude, the causes for edema may be grouped and their general nature indicated. Excluding for lack of time those edemas which seem to be due in large part to injuries in the lymphatic system, (e.g., elephantiasis), edemas are referable either to changes in the capillary endothelium or to changes in the body fluids. The capil-

laries may sustain organic lesions as in acute inflammations, or poisoning, or functional changes due to deficient oxygen, or to nerve influences. The body fluids may be altered by disease in respect to their content of electrolites or colloids.

Swelling is one of the clinical signs of in-flammation. The principle concerned in its production is an increased permeability of the capillaries; in familiar terminology there is exudation. The tissue fluids in these edemas contain more serum proteins than is the ease with what we call transudates. There has been but slight dissent to the idea that edemas adjacent to areas of infection are directly referable to capillary lesions, and the principle of mechanical drainage has been accepted as the proper therapeutic principle when the fluid collection delays repair, whether the tissues implicated be fascia, pleura, or peritoneum. But when the idea of capillary injury is extended to explain the quickly developing edema associated with acute Bright's disease, we feel possibly the need of specific new evidence. This evidence in the main consists of the accumulated facts indicating that the disease, acute Bright's disease or glomerular nephritis, is not restricted to the kidney, but involves the vascular system generally to such an extent that the name capillaritis has been suggested.1, 2, 8 Also the edema fluids in this disease by their richness in protein suggest that they belong to the old class of exudates. A critical study of all the available facts indicates that while the capillaries are affected in

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acute Bright's disease there may well be some other unknown principle operative. At present it is not entirely clear whether the oliguria of nephritis is a result of the lesion in the glomerulus, per se, or whether it is due to the withdrawal of water from the blood as edema fluid. In either case the essential disturbance of water balance is not accessible to any known therapeutic control and as a matter of experience the edema of acute Bright's disease is but seldom a dominant symptom and hardly ever requires especial attention.

In contrast to edemas believed to be caused by lesions of the capillaries are those due to some sort of functional change in the capillary wall; a change which permits the passage of water and electrolites from the blood into the tissues but does not allow an escape of considerable amounts of plasma proteins. This condition conforms to the older definition of a transudate and this type of edema occurs commonly along with disorders of the circulation, whether due primarily to heart disease, or to such slowing of normal blood flow as may result from occlusion of blood vessels. In this sense the edema of heart disease and the ascites of cirrhosis of the liver are alike in their mode of production. Until quite recently it was believed that this transudation of water through the capillary walls was dependent chiefly on an increase of pressure within the This hypothesis seemed to fit the capillaries. conditions of cardiac, edema especially; but Landis has thrown some doubts upon the pure filtration theory of Krogh in showing that the capillary endothelium is peculiarly sensitive to deprivation of oxygen and even slight anoxemia induces a prompt increase of capillary permeability. Because theories applicable to clinical medicine are based largely on indirect evidence and analogy it seems to me probable that both factors, anoxemia and hydrostatic pressure, play a part in "stasis" edema, and even the integrity of the capillary endothelium may well be questioned. The fluid in this type of edema is not free of serum protein, though commonly it is less than with the inflammatory type, every clinician has been impressed by the severity of albuminuria which may accompany cardiac insufficiency in children and the promptness of its subsidence when heart function improves. Both of these facts suggest a degree of permeability of capillaries approaching that found in inflammation. Then there is the influence of electrolites which will be discussed later.

Even this brief summary of some of the known factors in the causation of cardiac edema is sufficient to indicate the complexity of the problem. And stasis edema would seem a relatively simple type. So it is to be ex-

pected that while therapeutic effort may be, in a general way, intelligent and rational, there remain always problems which are more or less solved by trial-and-error and the reason for success is as obscure as for failure. While rest or rest and digitalis is adequate in some cases, in others the amount of liquid in the pleural cavity requires prompt mechanical relief by aspiration not only to relieve distress but to remove a mechanical burden from the heart. Primarily, treatment is directed to aid the function of a diseased heart and it is sometimes overlooked that edema is in itself a burden to a laboring heart; and palpable edema is not a valid guide in estimating tissue edema since some six to eight pounds of fluid may accumulate in the tissues before palpable edema is evident. Possibly this may be the reason why a diuretic produces such prompt improvement in some cases of cardiac incompetence when rest and digitalis alone have not availed. It is not then in neglect of the primary disease if particular attention be given to stubborn edema in cases of congestive heart failure. Quite the contrary.

In spite of the bewildering array of drugs which are vaunted as especially adapted to meet the need in cardiac dropsy, experience as well as tradition suggests that the first choice be a mercurial. Paracelsus used mercury for dropsy; in various forms it was held in high regard by Morgagni, Stokes and Graves, and Guy's pill under various names held its place until recently overshadowed by organic mercurials such as mersalyl (Salyrgan). Nor is the effective use of these organic mercurials limited to cardiac disease. They are useful even in nephrotic edemas to which I shall revert later on.

It is, I think, a just criticism of our present theories of the causes of edema that none of the hypotheses helps very much in understanding how diuretic drugs free the tissues of excesses of water. There is some evidence that mercurial salts decrease the resorption of water by the renal tubules, an idea consonant with present theories of renal function, and with the fact that excretion of water and sodium chlorid are particularly affected in diuresis induced by mercury. But we have only a superficial understanding of the mode of diuresis caused by caffein, for example, or by potassium salts, or by the salts which induce an acid shift in body fluids, e.g., ammonium nitrate.

Before leaving this topic of mercurial diuretics and mersalyl in particular, I wish to call attention to an erroneous conception concerning their use. The error is based on the fear of mercury poisoning if a mercury salt be repeatedly and at relatively short intervals injected into the blood stream Lyperience indicates that the hazard must be trivial. The intravenous use of one or two cc of mersalyl every four or five days for as long as three years leads to no detectable damage. In a high percentage of cases a diuresis of 3000—4500 cc may be expected. The sole contra indication is hematuria.

While conceptions of the relation of sodium chlorid to edema formation have changed, this change in theory has not affected the therapeutic indication for salt restriction in edemas and dropsies generally Widal's theory that chlorids can not be excreted by a diseased kidney, and that this failure causes an accumulation in the tissues with the holding back of water to maintain isotonicity, has to be con siderably changed to accord with present knowledge There can be no failure of chlorid excretion in view of the diuretic effect of acid salts such as calcium chlorid. It appears to be a matter more concerned with sodium since sodium salts appear to increase edema in contrast to potassium salts which often cause edema to decrease. And it is to be noted that the kidney is no longer held primarily at fault Whatever retention we may speak of, whether of salt, sodium, or water, is in the tissues soon as the tissues release excess water and salt to the blood, excretion promptly occurs, and while sodium salts are not primarily responsible for edematous states they are of great secondary importance since they determine so largely by their presence the degree of water retention in tissues predisposed to edema by other conditions Despite changes in theory then it is generally believed that a restriction of salt is a useful method in the control of edema whether of cardiac or renal

The Karell duet made popular by the approval of Yon Noorden is in fact a restriction of salt and water. The basic idea in this "cure" was advocated by Serre and it is referred to by Cruchet. La cur doignon dans oedema et le regime sec. (Jour de Med de Bordaux, 12 fevrier, 104 1911). The regimen was abstention from fluids and as the only food, three milk soups per day, each meal ending with a piece of bread and a raw onton

But we cannot dismiss the subject of the relation of sodium chlorid to edema with a merc mention of salt restriction as a therapeutic measure. That potassium salts act as diuretics has long been known, saltpeter is one of the oldest. Their use displaced in changing modes seems revived and put on a more systematic basis. Baker has recently shown that a diet may be arranged to furnish an excess of potassium over sodium and that such a potassium rich diet is remarkably effective in some cases of edema due to cardio-vascular disease. It is interesting, in passing, to note that while sodium is the predominating ele

meut in intercellular fluids, blood and lymph, potassium predominates within the cell Here is a subtle relation not clearly understood as yet and of considerable significance, I suspect, in the problem of edema. When there is an indication for the restriction of sodium chlorid in the food, it is worth trial to substitute potassium chlorid for table salt,-about five grams daily is adequate Potassium in large amounts is a cellular poison and the sort of treatment described cannot be continued in-The peculiar virtue claimed for the definitely Osman method of treating edema is possibly duc to the potassium in his alkaline mixture Osman believes that the liberal use of alkalies is the best way to combat the edema of Bright's disease An alkaline urine is the guide attain this a mixture of equal amounts of sodium citrate and bicarbonate, potassium citrate and bicarbonate are given in amounts up to a thousand grains daily In sharp contrast with Osman's ideas are the prevailing practices in this country today. We depend more upon acid salts and strive for a state tending towards acidosis This is the effect produced by such salts as calcium chlorid and ammonium nitrate

Thus far we have mentioned those types of edema which seem to depend in large measure on permeability of the capillary vascular system. In contrast to this group is edema induced by changes in the colloids of the blood. This change in blood colloids is responsible for the edema of maintion, of some anemias, of the so called nephrotic type of Bright's disease, and not seldom it is a factor in cardiac edemas as well

In the capillaries there are two opposing forces, hydrostatic pressure which tends to drive fluid through the capillary wall into the intercellular spaces, and the proteins of the blood which, as colloids, tend to draw fluid from the tissues into the blood. According to the Starling theory, the interplay of these two forces determines fluid exchange between the blood and tissues.

A lowering of the serum proteins from any cause whatsoever would tend to disturb the physico chemical balance and, unless in some way compensated, would lead to edema Marked decreases in serum albumen concentration have been found in nephrosis and in manition, and this lowered serum albumen is generally believed to be one of the chief agents in the production of the edema in those states This type of edema has been reproduced, cyperimentally in animals by plasmaphoresis, and by low protein dietss, so that our understanding of the physico chemical processes involved is somewhat better than with edemas of a different character While it would be unwarranted to leave the impression that colloid osmotic pressure is the sole factor involved

in nephrotic edemas, that this is an important factor seems to be demonstrated by the effect of intravenous injections of acacia on diuresis Hartmann¹⁰ treated a series of and edema. cases of nephrotic edema by repeated injections of acacia into the blood stream. The amounts of acacia used varied but were sufficient to raise the colloidal pressure of the blood plasma above the critical edema level. The results on the whole are remarkable, not only on account of the therapeutic value of the method, but also because of the support which this method gives to the basic theory. Normal serum has a colloidal osmotic pressure of 30-40 cm. of water. When the albumen content of serum is reduced, (as in nephrosis and inanition especially), the osmotic pres-In hydropigenous nephritis sure also falls. the osmotic pressure is often below 20 and may be down to 10 cm. of water: edema is then a probable consequence. A high protein diet designed to replenish serum protein, as first advocated by Epstein,11 is now accepted as rational and scientific in the treatment of nephrosis. But the earlier conception, that any form of Bright's disease was an indication for restriction of protein in the food, is hard to displace. Also it is not generally appreciated that depletion of serum protein may occur in any form of chronic Bright's disease, and in chronic cardio-vascular disease as well, and edema develop as a consequence. In fact, there has been something of a revolution in our ideas concerning the dangers of protein foods in renal disease. It might best express not only the present knowledge, but also the present mood, to assert that the dangers of protein restriction are feared more than the dangers from overburdened kidneys. In brief, the most effective method of treating hydropigenous Bright's disease and cardio-vascular edemas includes a liberal protein ration. Restriction of salt and an adequate protein ration are basic indications in renal dropsies and they are useful measures in some cases of edema due to cardiac disease as well.

The reaction against the low protein diets of a decade ago has been complete. Even in hemorrhagic Bright's disease there is evidence not only that the patient improves on diets containing normal protein rations but also that kidney function is better. McCann, J. Clin. Investg. 11:973, 1932.) (Kautmann &

My discussion has been limited to the immediate physiological processes concerned in edema formation. The ultimate control of the water exchange in the body, whether dependent on central nervous system or endocrines. is not sufficiently understood to permit the practical application of theories to treatment. Eppinger believes that thyroid function influences the permeability of membranes and there are observations on record suggesting that occasionally parathyroid extract as well as thyroid acts as a diuretic. The relation of the hypophysis to diabetes insipidus indicates a remote control of water metabolism, the immediate mechanism being still largely unknown. There are in this realm some facts. many assumptions and hypotheses, but hardly anything we can turn to practical advantage at present.

Two methods of relieving edema, (popular until recently and still used somewhat), have fallen into disrepute and I mention them only to condemn them; -sweating and purging. While it is true that water may be removed from the body in these ways, the loss is relatively inconsiderable; while the exhaustion and weakness prevent any systematic continued use of. these forms of treatment.

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THE PRACTICAL APPLICATION OF RADIOSENSITIVITY AND TUMOR GRADING*

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TUMOR pathologists have for many years recognized distinct histological variations between tumors of the same group-

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among others, variations in the degree of cellular differentiation. During the past few years this has been popularized under the cap-tion of "tumor grading." Covering about the same period of time, studies of tumor tissues

relative to their response to irradiation have thrown light on many factors which influence a tworable reaction to the physicial agents

There is a relationship between timor grading and relative radioscusitivity. Unfortunitely, it has been assumed by many that the response to irradiation is in parallel with the histological grade of the tumor. Such is not the ease.

the fully differentiated growth is more te sistant to a given quantity of radiation than is the undifferentiated or anaplastic growth of the same tumor group. In so far, there is a parallel between relative radiosensitivity and tumor grade from I to III or IV, depending on which numerical basis grading is being cinployed There is a distinct variation, however, between different cancer groups Beyond this point there are many factors, both within and without the histologie field, which have a distinct bearing on the relative response of a given tumor to irradiation. The elimician will do well to study those factors of recognized influence and match them with the histology before airiving at an appraisal of the probable degree of response to a given type and inten-sity of irradiation. The astute tumor path ologist will refrain from more than a tentative opinion of radiosensitivity, based on the study of the slide alone Hc will require very conplete clinical data before expressing his final opinion

Grading is a problem of histology alone Classification of relative radiosensitivity is a matching of histological and clinical pictures Grading is influenced by the personal equation of the individual tumor pathologist

Determination of probable response to irradiation is based on a much broader back ground. Once the necessary data are available the appraisal is likely to be more uniform. There is no comparison in radiosensitivity, histologically between the different major groups of tumors. This is a matter determined on the basis of chinical experience only.

There are few cases of cancer m which all three of the recognized therapeutic methods or agents—i e surgery radium and yray—do not play a part to advantage at some stage in the care of the case. It is a matter of deciding the relative position of each in the individual case. The practical value of a radiosensitivity appraisal is its application in the making of this decision. It is here that tumor grade may be taken too literally as a measure of the relative radiosensitivity of the growth.

The fully differentiated, or grade I tumor is usually the more radioresistant. It is in general, slower in rate of growth, and tending toward some degree of localization. Its metastases are later in the course of the disease and

tend to be localized to adjacent lymplinode neas, rather than to widespread dissemination

Anaplastic, or grade IV timors, metastasize early and widely They may extend through the blood stream as well as through the lym Their tumor emboli may pass by regional lymphnode areas and lodge in those of distant parts of the body The rate of growth of metastases may out-do the punnary by many times, so that the latter becomes entirely obscured in the clinical picture. These undifferentiated growths are obviously not adapted to surgical extirpation which even in its most radical form, is a local measure While the tumor is being surgically removed at one point it is appearing at another It is the opinion of some workers that partial removal of a tumor lends growth stimulus to the remaining portion Fortunately, the anaplastic growths are very sensitive in their response to irradiation

If there were but two groups with which to deal, the problem would be simple. The fully differentiated eaneer would be handled surgically, the totally undifferentiated by tradiation, and the histological picture, or tumoi grade, would define the two groups. However all tumors are neither fully differentiated nor entirely anaplastic—hence the four grades in the average scheme of tumor grading. Furthermore, factors, other than cellular differentiation have an influence on the relative position of a given tumor in the scale of radio response.

Some tumors have a much more delicite blood-vascular apparatus than others, so that with such, a partially differentiated growth (grade II or III) may respond to irradiation more promptly and more completely than a totally anaplastic tumor of the same group, but lacking in such a highly specialized capillary circulation. The infiltrative character of the cells of a malignant growth, or the lack of reaction on the part of surrounding tissues to this invasive characteristic, may after the response to irradiation, although it does not change the histological grade.

Recurrent growths are for the most part more radioresistant than their primary—even though unchanged in grade. This is reasonably understandable of the original growth was treated by one of the physical agents. It would not be expected theoretically following some form of surgical removal since recurrences following such tend to show histological evidence of a loss of growth restraint—a tendency towards anaplasia. The alteration in the tumor bed of the recurrence suggests at least one factor of influence. The extra scar tissue and grossalteration in blood supply are sufficient to discount what might be termed an otherwise

normal response to irradiation, for that type of tumor tissue. This observation may have a bearing on the much debated question of the relative merits of pre- and post-operative irradiation. Scar tissue and the resultant decrease in blood supply regularly reduces the response to irradiation, whether such process be in the tumor bed or within the tumor bearing area itself. The recurrent growth furnishes an example of the former. Fibrosis and capillary impairment is seen in the cases of luetic glossitis. Cancer in this type of tongue is less radiosensitive, per given histologic grade, than in an otherwise normal tongue.

The anatomical location of a growth has a bearing on radiosensitivity. Again the tongue may be cited as an example. Epidermoid carcinoma, of whatever grade, involving the base of the tongue, will almost invariably respond to a lesser quantity of radiation than a similar growth, of comparable grade, involving that portion of the tongue within the oral cavity proper. The normal histology of the tissue of origin is undoubtedly one of the factors entering into an explanation of this peculiar reac-The base of the tongue is technically more difficult to approach from a surgical standpoint. This alone, however, does not explain the almost total tack of cures, of cancer at the base of the tongue, by surgery. Most cancers in this location show some lack of differentiation. The obvious lesson is that undifferentiated growths are non-surgical.

Those who believe that tumor bed, as well as tumor tissue, enters into the vital favorable reaction to irradiation, may explain some failures to respond on the basis of anatomical location. The osteogenic tumors of bone, with one exception, are highly radioresistant. The tumor bed of the bone tumor has less to offer by way of response to irradiation than probably any other tissue in the body. Some of the resistance and failures in breast cancer may be, at least partially, explained on the same basis. The diffuse infiltration in fat tissue is less responsive to irradiation than in the absence of that fat tissue. The practical point therefore is to lean more heavily on surgery in the . fection of tumor and tumor bed, irradiation is fat cancer breast.

The degree of local advancement of growth discounts its relative radiosensitivity. histology does not change appreciably in a primary uncomplicated growth, as it progresses. Yet, with age of tumor process and gradual increase in size, it responds less to a given quantity or radiation. Usually the ratio between the tumor bed and tumor becomes The blood supply is frequently altered so that peripheral or central necrosis, depending upon whether it be a flat ulcerating growth, or a bulky more or less spherical, non-ulcerating one, occurs.

Secondary involvements at distance—metastases—are usually less radiosensitive than the primary growth. Once the disease has become generalized it is much less responsive. It may even change from a relatively radiosensitive to a frankly radioresistant process. This change is frequently, in far advanced and widely disseminated cancer, out of proportion to the recognized factors of influence. It suggests an underlying constitutional influence, such as possibly a profound disturbance in the secretion of hormones. There can be no doubt but that the age or duration of a growth, whether it be primary, metastatic or recurrent, within tissues, enhances its local stability and its resistance to external influences, irradiation included. Early diagnosis and prompt treatment, whether by surgery or irradiation, has therefore more to commend it than simply the danger of local growth advancement and secondary dissemination.

Whether metastasis has taken place by blood-stream or lymphatics is of importance from the radiosensitivity standpoint. Tumor emboli carried through the lymphatics are usually lodged in a lymphnode where the normal growth-restraining influence of lymphoid tissue makes its impression, even though that reaction is not sufficient to completely restrain Blood-stream tumor emboli are usually caught in fine capillary vessels, principally of the lung, where the implant is well nourished, and where there is little chance of an inhibitory influence of tumor bed. For any given tumor, blood-borne metastases are more radioresistant than are those dissemi-

nated through the lymphatics. Probably no single factor alters the relative radiosensitivity of a tumor more than infec-Infection is invariably present on the surface of an ulcerating growth and it frequently finds its way into the liquefied debris of tumors showing central necrosis from interference with blood-supply. Uncontrolled infection on the surface of ulcerating cancer soon penetrates, and permeates the entire growth. In the presence of acute and uncontrolled inwell nigh useless, even though the histological picture suggests otherwise. If the growth be assumed anaplastic, this might be taken as an extreme example of the divergence between tumor grade and radiosensitivity.

Passing from strictly local factors, there are various constitutional influences having a bearing on the irradiation response of cancer, and altering it from the optimum response to be expected, from the grade of the tumor alone. The age of the patient, and complicating general medical conditions, have an adverse influence. The retarded threshold of tissue metabolism affects tumor tissue as well as

Reparative processes cannot be expected to be as clastic. The normal slowing down of body metabolism with age is intensified in the presence of anaemia. While anaemia is a part of the advanced-enner picture it may be present and quite apart from the neoplastic process Under either eircumstance it reduces the response to irradiation. A tumor judged histologically to be radiosensitive, may in the presence of a profound anaemia, be unresponsive to the point of seeming resistance. Correction of the annemia will go far toward restoring its latent and favorable reaction Transfusion, liver extract, and iron, play a real and necessary part, along with the physical agents, in the treatment of eaneer in the anaemie

The manner in which irradiation is employed has substantial bearing on the ultimate result of treatment, and regardless of the grade or relative radiosensitivity of the tumor fact that a tumor is judged histologically to be anaplastic and radiosensitive, with no ad verse complicating factors does not mean that it will resolve under simple or indifferent irradiation. It would perhaps be better if we thought in terms of radioresistance rather than radiosensitivity Whatever the technical type of irradiation decided upon, external or implantation, the minimum quantity to be employed with safety is usually the maximum of that type, consistent with the safety of the surrounding normal tissues A tumor which will respond completely to a given amount of irradiation over a period of a month will probably not be eradicated if the same quantity of irradiation is spread over a six-months' period No single tumor mass remains even relatively radiosensitive for more than a brief period once radio therapy has been directed to it If the object of treatment be cure, rather than palliation then the radio therapist has but one chance for success. If adequate intensity of irradiation is not employed in the first complete treatment period, the chance of overcoming the handicap, by further indifferent treatment is slight indeed

A study of the relative radiosensitivity of

a given tumor, based on histological, and the associated clinical evidence, will give a fairly shrewd insight into its probable response to irradiation. It will indicate those extremely anaplastic, undifferentiated, growths in which surgery is contra indicated, and which will probably respond to external irradiation alone. It must not be assumed, however that since they are highly radiosensitive, and disappear locally under external irradiation only, that they are therefore readily curable. Their liability to widespread dissemination seriously discounts their local response, from a practical standpoint.

A large group of moderately radiosensitive growths may be completely destroyed locally by intensive external irradiation, in the present stage of development of this type of radiation. The group embraces chiefly, but not entirely nor of necessity grade II and III tumors. They can scarcely be trusted, however, to external treatment. It is safer to follow the external irradiation by implantation of radium or radon. In general surgery, except for exposure to facilitate implantation, is apt to

accomplish little in this group

The fact that a enneer is classified as radioresistant does not mean that it is of necessity incurable or that irradiation is contra-indicated. It does mean that if irradiation is employed it must be of maximum intensity, both external and by implantation. It signifies also the group in which surgery is safer and more apt to be successful than in the moderately or extremely radiosensitive classes. A good local result in a tumor rated as radioresistant carries a far better prognosis, with either surgery or irradiation, than does any in the radiosensitive groups.

If the radiosensitivity data now available are practically applied, we shall no longer sce resistant growths treated by external radiation alone, when other methods might be added Surgical removal of embryonal and anaplastic tumors will cease. Efforts at irradiation, by whatever means, will not be carried on without proper attention to the general medical

and constitutional care of the patient

RAT-BITE FEVER IN CHILDREN

A Clinical Case

By FRANK VAN DER BOGERT, MD, SCHENECTADY, NY

OMPARATIVELY rare at any age else where than in Japan where, according to Jordan¹ three percent of the house rats have shown spirochate rat bite fever his been believed to be less frequently encountered in cluldren than in adults. A greater incidence

in later life would naturally be expected since the consideration of an occupational factor seems justified. Except in those cases where the bite has occured while playing with pets, children are presumably only in danger from aggressive animals impelled by hunger. Rueben and Steffen² in July, 1924 found among 47 cases in which the age was stated, only 11 under 15 years; and Dembos in reporting a case in an infant aged 7 months suggests that since most of the cases described have occured in adults, this should be of especial interest to the pediatrician. Recently, however, a list of cases reported between the years 1839 and 1930, compiled by Bayne Jones, apparently shows that children are not less susceptible to the disease. In a group of 75 instances of the infection, the reports of which were carefully studied to eliminate doubtful cases, the age was given as 15 or under in 35. Inasmuch as in 21 the age was noted as questionable it would appear that the disease is no rarer in children than in adults.

In American pediatric literature of the last twelve years, I have found but six cases under 2 years of age, with scattered cases in infants

appearing elsewhere from time to time.

The disease is usually occasioned by the bite of a rat either through deliberate attack or while playing with a pet animal; there are, however, several instances on record following bites of other animals: cat, wild mouse, weasel, the dog, and even the pig.4 A few cases have apparently been caused by the bite of the white rat.

The accepted criteria for diagnosis include a definite history of the bite, local inflamation at the site of injury following a variable incubation period, a bluish red macular eruption and a remittent type of fever. The original wound heals and after a period which may be extended to several weeks (10 to 28 days) becomes inflamed and edematous; lymphangitis and adenitis may follow.

Elevation of temperature is accompanied by the characteristic rash, described as consisting of bluish red, edematous, marginated macules which may measure as many as 10 c.m. in diameter, and may be preceded by a chill, apparently not constant. The time of appearance of the rash in relation to the temperature varies. In one reported case2 it did not occur until several days after admission to hospital and in another5 was coincident with the second febrile attack. A few days of fever is followed by fall to normal, not always by crisis in children at least, with another rise after a period of a few days during which the patient is symptom free.

By no means all of the reported cases have been confirmed by finding of the organism which is now pretty generally conceded to be a spirochate. Of the seven infantile cases studied, including my own, in only one was the organism found, diagnosis being based upon the history and accepted syndrome and supported by the therapeutic test of recovery under treatment with arsphenamin.

The prognosis is good, the mortality probably far below the ten percent usually attributed to it. Apparently most of those dying from the infection have been of advanced age and there seems little cause for anxiety as to the outcome in the young and physically fit when the disease is recognized and treated. None of the seven cases referred to were fatal; I have however, found reference to an infant of three months who died from "an attack with unusual complications."6

The disease is said to be preventable by prompt cauterization of the wound by carbolic or nitric acid.7 Fuming nitric acid as applied to dog bites in the prevention of Rabies

is suggested.

Spontaneous recovery may occur. muscular injection of sulpharsphenamin given at the onset of the paroxysms produces most favorable results.

Case Report

On June 3, 1933, at 4 A.M., an infant of 21/2 years awoke with several punetured wounds on his left foot and a good deal of blood on the sheets. A rat had been seen in the bathroom an hour before the injury was diseovered and three rats were caught in the house during the following week.

The patient was brought to the Emergency Department of the Ellis Hospital at 9:30 on the same day, and the wounds were eauterized. Apparent healing followed until about 10 days later when the foot became swollen, looked as if about to break down, and a red streak was noted running up the ankle. There was a story of apparent fever, on and off, from the beginning, which increased when the wound swelled. No history of a chill was obtained.

The child was admitted to the Pediatric Service on June 30, 1933, with rectal temperature of 101.4° and a very definite skin eruption appearing in plaques of a purplish hue, and distributed over lower limbs, trunk and face. The lesions were far more pronounced upon the left leg and the area about the original injuries was purple and inflammatory in appearance. The size of the individual lesions varied from small maeules to some which measured several c.m. in diameter, and, during the period of hospitalization, it was noted that pain and swelling of the injured foot occurred just prior to or simultaneous with rise in temperature. The inguinal glands, though not greatly enlarged, were distinctly pal-pable. There was no evidence of abnormality elsewhere upon physical examination.

Upon admission the temperature curve declined for a few days, rose again on the 4th, reaching 104.4° within 24 hours and declined again slowly to normal on the 7th day with a slight exacerbation on the 9th and 10th. Following seven days of normal temperature a second remission occurred followed by a third on the 32nd day in hospital. During the first remission the color of the rash deepened and there was complaint of soreness all over the body. The third remission was much more prolonged and was accompanied by profuse diarrhea and at this time bacillus dysenteriae was isolated from the stools. Whether the last atack was due to the original infection or to the complicating dysentery is problematie; there were two other cases of dysentery on service at the time. After the 46th day the temperature remained normal and the patient was discharged on September 8 apparently recovered.

Laboratory findings included a negative x-ray of the feet. Red eell counts ranged from 3,500,000 to 4,180,000 and white counts from 20,000 with 91% polynuclears, to

HOSPITAL DAYS



Chart showing relapses of temperature and days upon which treatment was given

8,500 with 69% polynuclears during the last elevation of temperature. The lowest haemoglobin reading was 57% (Neimyer) on July 5th; the blood Wassermann was Dark field examination of the blood from incised skin lesions and from the neighborhood of the wound, taken at the time of the 2nd and 3rd exacerbations, failed to show the spirachete, nor did guinea pigs inoculated with blood from skin incision or mice with venous blood show any abnormality.

The patient was treated in accord with the present accepted method, with the object of destroying the spirochete. Three intranssesslar injections of sulpharsphenamin were given, the first, 0.1 gm. at the end of the first rise in temperature occurring after admission, when the diagnosis was made.

Inasmuch as one never knows how many doses will be required to effect a cure, it seemed wise to defer the second dose until another exacerbation occurred when 0.13 gm, were given. A third injection of 0.1 gm, during the third paroxysm was followed by recovery.

Dosage can be based upon body weight: 0.01 gm. per

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MEASLES IN FOUR CENTRAL NEW YORK COUNTIES FOR 1932* By FREDERICK W. SEARS, M.D., SYRACUSE, N. Y.

7 O attempt to prevent measles except in baby institutions and among other children under ithe age of three years is a waste of time and energy. The only way in which active immunity can be secured for measles, at the present time, is through the individual having the disease. Until we are able to produce artificial active immunity against measles our efforts should be devoted to preventing the serious results which frequently occur in neglected eases.

Measles in itself rarely ever causes death, yet in the State of New York hundreds of children die yearly from this disease. During the last seven or eight years in the State of New York, less attention has been given to the prevention of measles, and more attention given to the actual care of the cases. This has resulted in a considerable lowering of the death rate.

Our efforts at the present time should be exerted in utilizing all methods tending to lessen the complications and the prevention of fatal results. To get all cases of measles reported is the first essential object to be obtained, and every means to this end should be utilized. Educational methods will bring the best results. Perhaps the best publicity is through the daily press when

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properly presented in a plain manner to the people, Personal contact by nurses and physicians is better than pamphlets, although pamphlets properly distributed and explained by them do much toward instructing the parents.

In a fairly recent outbreak we sent a mimeographed letter to all parents in the city who were known to have children under the age of three years. There were no deaths during that outbreak. Placarding of houses tends toward concealment of the cases, and rarely does any permanent good. Among certain foreign communities the placards serve more as an invitation than as a warning as many of these people believe in exposing their children at an early age to this disease.

Publicity to be effective must be as far as possible in advance of the outbreak. Therefore, we should so far as in our power anticipate outbreaks of measles in order to warn parents against its dangers.

Early in the year 1932 it became evident to us that measles was about to occur to a considerable extent in the central New York district of which I have charge. In each threatened community it was my purpose to call on the health officer and discuss with him the best possible means of meeting the situation in his particular district, and in

most cases newspaper editors were only too glad to cooperate with us, and give us considerable

space for this purpose.

Early in March we held a conference of the health officers of my district at which conference the sole subject for discussion was that of measles; and splendid papers were prepared on the various phases of its control. This, we believe, did much toward preventing serious complications from this disease. At this meeting the subject of immune serum, parental blood and publicity were thoroughly discussed. Parents were to be urged to prevent exposure of children under three years of age, and in the event that measles did occur among any of their children, the child should be put to bed, isolated in a room by itself, visitors excluded, in order to prevent intercurrent infection.

Measles like many other respiratory diseases renders the patient very susceptible to intercurrent infection. The nasal cavities become blocked, the delicate columnar cilliated epithelial cells lining, the lower border of the larynx and the trachea become paralyzed. These delicate cillia can no longer inhibit bacterial infection, and an open road is left for infection to enter the deeper respiratory structures. Furthermore, in children under three years of age the protective glandular structures are poorly developed.

Owing to the fact that the very early stage of measles is the most contagious, little value by quarantine or isolation is obtained for the purpose of preventing others in the family from contracting the disease. It should be emphasized on the part of the parents that the isolation in a room by themselves with the exclusion of visitors is solely for the protection of the individual. It would be rare indeed for a person so isolated from the very beginning of the febrile condition to develop any serious complications. Proper home care is to be preferred to hospitalization except in cases where the complications have already occurred.

Early in the outbreak in my district we had an unusual opportunity to secure human immune serum of a very potent type. In the town of Seneca Falls ten young men between the ages of eighteen and twenty-two developed measles, and I was able to secure from them on a specified date, sufficient blood to yield 1215 cc. of excellent serum. This serum was freely used for delicate children under three years of age as early after exposure as possible in order to postpone the attack to a later period of life. Forty-three children were given this serum, and of these forty-three in thirty-five cases the measles did not develop. In seven in whom measles did develop five cases were mild and two classified as moderate. State Laboratory reports that the percentage of those completely protected was distinctly higher than the average for the State, due probably to

its early administration and the potency of the serum.

Another very excellent therapeutic measure used was the administration of parental blood to older children as nearly as possible on the 5th or 6th day after exposure, for the purpose not of preventing the disease but to so modify it as to allow them to obtain their immunity without risk of life or complications.

The line of procedure above stated was carried out very thoroughly throughout the entire district with the result we believe that nearly all of the cases were reported, many of the mothers reporting directly to the health officer when their children were taken ill, even though they had no physician. We were thus able to instruct these mothers as to the best procedure to follow; which instruction was greatly appreciated.

There were reported in the district during the year 1932, principally in the first eight months of the year, 10,544 cases of measles, with only nineteen deaths, a rate of 1.8 percent per one thousand cases. This, we believe, to be a much lower death rate than has been previously reported for this number of cases. The lowest previous rate for the State as a whole, outside of New York City, was 3.1 per thousand cases in 1931.

Perhaps the greatest factor in securing this low mortality was the absence of outbreaks in baby institutions. Due to the excellent work of Dr. Godfrey, during the past seven or eight years, our institutions have been wonderfully protected. In one of these institutions in Syracuse, which formerly furnished our largest percent of deaths from measles, not only were there no deaths, but no cases occurred in the general institution, although one family of children developed measles after its arrival in the quarantine room but so excellently was the quarantine maintained, that not a single individual in the main building was exposed to this disease.

The Syracuse Health Department has been doing excellent work in the control of the complications of measles for several years past which has resulted in an exceedingly low death rate.

Another feature which I believe is of great importance was the fact that very early in the outbreak we started a pin map, using different colored pins for the different months. This pin map was checked up daily and gave us valuable information where the disease was prevalent. On this pin map, which I will show on the slide, it was shown that we could practically anticipate the length of time the outbreak would continue in a community of a given size.

In villages of five or six thousand inhabitants the outbreak covered a period of ten weeks. In villages of slightly less population, nine weeks. In small villages and townships practically the entire susceptible population developed the disease

In the City of within a period of five weeks Syracuse, which has the largest population in my district, the disease practically ran its course in five months, reaching its highest activity about the third month

The development of the centralized school system with its numerous buses has idded very greatly to the danger of exposure of these highly communicable diseases

In one small township in which twelve small schools lind been consolidated into one central school, at the opening of this school in September one of the children who rides in one of the buses was in the early stage of measles, and within five weeks, not only the non-immune school population but practically every susceptible person in this township developed measles. No complications occurred among these cases as the human immune serum was freely used for all delicate babies under three years of age and excellent care was munitained in the other cases. In this township. having a population of 1252, 126 cases occurred within a period of five weeks from the time of the first exposure. These cases were of all ages including adults, preschool and school children

It might be interesting to analyze the cause of deaths among the ninetcen who did not recover

Nine of these cases were under one year of age

1 R B, nine months old, ill six days-no adequate

care family mentally defective

2 L. W, eight months colored illiterate no care

3 Q T, 113/2 months old lack of medical care until

too late, too poor to have a physician—pneumoma
4 F B, ten months clean home, mother ignorant of proper eare

5 R S eight months died of convulsions due to in testinal trouble—measles diagnosis hearsay
6 I V, under one year Doctor not called until day

of death-died of pneumonia

7 A S, three weeks old poor home low intelligence 8 R P under one year died in Crouse Irving Hos pital pneumonia, only lived a few hours after entering the hospital

9 E. P under one year, died in Syracuse Hospital, poor care previous to entering hospital diagnosis doubt

Of the ten one or over

1 E B, six years old, elcan home middle ear dis

arge meningitis one week later 2 C O, ten years old eongenital idiot, feeble

minded family, poor care broncho pneumonia
3 R H twelve years old mental defective, bronchopneumonia, had measles six years previous

4 B C twenty months child not isolated poor care,

taken out during illness-developed pneumonia

5 M P four years old-ignorant Polish family, re

fused cooperation of doctor 6 M C three years old-child not put to bed, in adequate care, broneho pneumonia

7 A C., twenty months old, care not good before entering hospital, mother on welfare work, broncho-

8 P W, fifteen years of age developed meningitis, good home care, severe type of disease

9 E M, ten years old, delicate child severe measles discharging car, mastoditis and meningitis 10 C B ten years old measles fourteen days mastoditis cerebral spinal meningitis good eare family well-

to-do It is apparent from the above cases that only two of the nineteen children who died received anything like adequate earc

From the above our conclusions are as follows

First Intelligent care and nursing in the home probably afford our best method of treatment

Second The use of human immune serum to postpone the attack in delicate babies under three years of age is of great importance

Third The use of human parental blood should be encouraged and should be used in all severe types of measles for the purpose of lessening the severity of the attack and yet allow the patient to acquire imminity

Fourth Placards tend to discourage reporting and therefore should not be used excepting among

people who will not cooperate

Fifth Early publicity, both by newspapers pamphlets and home visits, are of great importance in the prevention of complications in measles

Sixth All baby institutions should be carefully guarded against exposure to measles and should the disease occur, human immune serum should be given freely to all delicate babies

HYPO- AND HYPER-DYNAMIC HEARTS

By ALLEN W HOLMES, MD, WATKINS GLEN, N Y

TUCH has justly been written about the size and outline of the heart We feel that too little attention has been given to the fundamental force of the contractions Their evaluation necessitates closer cooperation with the cardiologist for, if we are to get most out of our study we must have first some idea as to the basic information he de-Sires In other words what is it the clinician

*Read at the Annual Meeting of the Med cal Soc ety of the State of New York at New York N Y on April 4 1933

Fluoroscopically, we have a means of, literally, holding the heart in our hand to study the amplitude, and character of the contractions of the various chambers This information should be weighed and recorded on the orthodiographic sheet in a manner to make it available for the cardiologist, as well as for our future comparison during the course, and treatment of heart disease This can be done under the captions of hypo- and

hyperdynamic chambers, qualified by the numer

wishes to know, and how far can we help him

als 0 to 4, just as we do for the peristalsis of the stomach. The purpose is to correlate the dynamic character, its force or its inefficiency with the size, rate, and clinical picture.

It means that the roentgenologist and cardiologist must meet, on a common ground, to study the pathological physiology of the heart. And it means that the radiologist must be familiar with the abnormalities, and their interpretation.

To begin with, the commonest heart problem is that of hypertensive diseases. Increased periphereal resistance in the arteries, arterioles, and capillaries produce a slight myocardial dilatation. This stretching of the muscle fibres of the heart causes them to contract more strongly. The result is an increase in the size of the individual bundles, or hypertrophy. The outstanding example of this is essential hypertension. Radioscopically, the left ventricle, and to a lesser degree, the entire heart action, would be hyperdynamic.

As the process advances, and these small dilatations and hypertrophies increase with the load, a corresponding increased hyperdynamic action would be expected. More character, vigor, and amplitude belong to good compensation. However, after the maximum has been reached, the myocardium begins to be embarrassed by its load. We find it making more frantic efforts to do its job. Its action then becomes more jerky, radioscopically. This may be magnified and made more apparent by slight exertions. With the advent of dilatation and myocardial weakening, the contractions become more and more hypodynamic, inefficient, and characterless. Finally, with more complete dilatation or failure, they become almost imperceptible. Fluoroscopically, then, the difference between a well-compensated hypertrophied heart, and a dilated and failing myocardium, is the difference between a hyperdynamic and a hypodynamic action.

Between this essential hypertension condition and arteriosclerosis, there is a more or less arbitrary transition. In the latter, there is a gradual increase in the periphereal resistance due to a general hardening and tortuousness of the vessels. The aorta becomes dense, atheromatous, wide, and inelastic with a prominent knob. The heart, especially the left ventricle, adapts itself by a moderate hyperthrophy and increased dynamic action. The amplitude of the contractions is fairly normal for the degree of aortic changes.

Usually, over a period of many years, these changes carry on with more or less hypertrophy, and a fairly marked hyperdynamic heart. The development of lagging undulations of the ventricle, would make us more careful of our prognosis and recomendations for treatments. Very often the decrease in the functional energy of the heart is disclosed by a feeble action developing along the ventricle. It contrasts with the previous hyperdynamic contractions just as the tired

punch of a boxer becomes apparent. They may be the forerunner, and accompany, myocardial incompetency.

Let us suppose, however, that the coronary vessels become prematurely and excessively sclerosed. This causes an ischemia with degeneration, and atrophy of the muscle fibers. There is a fibroid replacement with contraction of the scar tissue. The result of this coronary sclerosis is an absence of the hyperdynamic hyperthrophy. Rather, we get a small hypodynamic inelastic heart from this lack of oxygen, nutrition, and poor musclature.

Willius has, very recently, called attention to the fairly close paralellism between the degree of coronary, and of aortic sclerosis in a large series of postmortems. It is also recognized, that the peripheral vascular changes bear an accompanying relation to coronary sclerosis. We feel that a fairly definite entity exists where these distal vessels show changes—where we have a dense inelastic sclerosed aorta, and where we have a small hypodynamic heart with the x-ray. This, occurring between 40 and 55, would be strong presumptive evidence of coronary disease, and would suggest excessive coronary sclerosis in elderly people.

But, very often, excessive coronary sclerosis does not set in until after some degree of hypertrophy has developed. Then the size of the left ventricle and heart will depend upon the degree of dilatation, and hypertrophy present when the excessive myocardial damage becomes manifest. The coronary sclerosis, and its accompanying heart changes, would result in the contractions becoming more hypodynamic than they previously had been. The presence of considerable, fairly healthy, hypertrophied muscle would in turn make the contractions more dynamic.

The commonest location for a coronary occlusion to occur is in the anterior descending branch of the left coronary, towards the apex. After the slump which accompanies the infarct, the myocardial recovery can be observed to improve. An intracardiac thrombus would be a handicap to the cardiac amplitude. So too, would any effusion in the pericardium. Later, the area of infarct may be such an impediment to the ventricular action, that the remaining heart muscle, if fairly healthy, becomes more dynamic in its effort to compensate for the damage. If the infarct area bulges with an annerism formation, it will be expansil. Or, if the heart dilates, its low-cred amplitude will be featured.

An inflammation of the aorta also gives us an inelastic, dense, and wide aortic shadow. However, with aortitis, there is an absence of the hypodynamic left ventricle, as seen in excessive coronary changes. Syphalitic aortic encroachment on the coronary openings could produce a hypodynamic left ventricle, were it not for its accompanying aortic regurgitation and aortic changes. Valvular defects produce their individual or combination changes. Beginning for example, with aortic stenosis, we find the left ventricle contractions showing a slowly rising and falling, powerful, bent. It is an example of Inpertrophy resulting from an increased load. It contrasts with aortic regurgitation which lars a sort of Waterhammer action. With the latter, the aorta is very expansil, and the left ventrick has an extreme change in systole and diastole. Its amplitude contrasts with the slow power of the former. The dynamics, in these conditions are going to vary with the duration and degree of involvement, and the condition of the myocardium.

Hyperthyroidism may resemble aortic regirgatation. While its contractions are expansil they may not be as extreme in their systolic and diastolic change. The rate of the heart with hyperthyroidism is apt to be more rapid. Less aortic manifestations are found and it affects both sides of the heart instead of involving clinely the left ventricle, as nortic reguigitation does with its hy-

perdynamic action

In mitral stenosis when we have a fairly pure stricture the diminished amount of blood entering the left ventricle results in a small chamber The muscle fibers are not stretched and less ef fort is required to force it on. There is no increase in the periphere il resistance, hence the left ven tricle is not very dynamic. The left auricle early shows an increase in its contractions with stretch ing and thickening hypertrophy \n intra auricular thrombus might lessen its dynamics Finally, with flutter or fibrilation, its contractions may be more or less imperceptible. The right ventriele shows hypertrophy and increased dynamics due to its increased load linless late, when it may be failing and weak

The myocardial damine which is so important in all rheumitic conditions must be considered. The clouds swelling, Aschoffs' bodies and later fibrosis tend to lessen the dynamics of the muscle Generally speaking a rapid heart action causes a lessened inflow by shortening diastole and a lessened output results. This produces a smaller systole and diastole excursion.

The frequent pericardial involvement with fluid in rheumatic carditis coronary occlusion and tuberculosis, will produce a sort of billotment impulse. If great in amount the beat may be practically invisible. Obstructive adhesions may give rise to a marked condition of dilutation and hyper.

trophy In fact, these may cause some of our largest hearts, which during their development, have hyperdynamic contractions. Where there are adhesions between the two layers of the pericardium, a tugging of adjacent structures, which become accentiated by changes of respiration or position may be noted. Pericardial fibrosis, with restriction and limitation of the heart action, becomes of especial importance with the advent of surgery for its release. Definite in-tugging of the ribs and interspaces may necessitate release.

Fatty hearts due to their myocardial adipose infiltration, and pericardial fat especially, about the apex later with degeneration, are hypodynamic. This is also true of toxic degenerations, as after acute infections like diptheria and influenza. The peristrilic punch of the myocardium is definitely subnormal. In the various aenemias we may also get a late degenerative myocardium, resulting in sluggish contractions. Earlier, the heart action may be above normal as it makes desperate efforts to pump the blood around fast enough to compensate for the diminished quality.

and quantity of the blood

From this somewhat abbreviated review of the dynamics involved in certain heart evaluations, it is apparent that it is a many sided problem. We try to be of greater assistance in our Roentgen examinations. Our efforts to estimate the efficiency of the contractions have been rewarded by sufficient results to warrant their continuance. We believe that more frequent and careful fluoro scopy will add much valuable information for the cardiologist in his care of the heart problems of

DISCUSSION

Dr Loun Laugeres Bishop, Ir—All of uwho do cardiac fluoroscopy have constantly wondered whether it were possible to gauge functional efficiency of a given myocardium from watching the degree of excursion of the chambers of the heart under fluoroscopy

There is one condition where the heart excursion is definitely diminished and that is in percardial efficient. Here the contraction of the heart are usually small and hardly noticeable

One can often gain some useful information concerning the rhythm in studying a given heart

by fluoroscopy

today

The terminology—hypodynamic and hyperdynamic contractions—which Dr Holmes has given us is certainly a useful one

GRANULOPENIA

A Case Report

By THOMAS H ARGUE, M D, and RUDOLPH J SHAFER, M D, CORNING, N Y

HULTZ¹ first described the disease known as agranulocytosis in 1922 Since then many cases have been reported and various

names have been suggested as it has been found that this nomenclature is inaccurate Schilling² suggested the term malignant neutropema One

that seems satisfactory is granulopenia, introduced by Kracke.8

Granulopenia is an acute or chronic disease in which the granulocytes are decreased or are entirely absent in the peripheral blood stream.

In normal healthy adults the leucocytes number from 6,000 to 8,000 to the cu.mm. of blood. Schilling⁴ has classified the leucocytes into three groups, granulated leucocytes or granulocytes, lymphocytes and monocytes. The granulocytes are subdivided into (a) basophilic leucocytes, which form 0.5 per cent of the cells; (b) eosinophilic leucocytes, 3 per cent; and (c) neutrophilic leucocytes, 67 per cent. The lymphocytes form on the average 23 per cent of the leucocytes. The monocytes are the large mononuclear and transitional forms, and are present to about 4 to 8 per cent.

In acute cases of granulopenia the count may fall to 100 leucocytes per cu.mm. The differential count shows a marked decrease or total absence of granulocytes. The hemoglobin and red cell count rarely show any change.

The etiology of the condition is unknown. Kracke⁵ believes that it is primarly a dysfunction of the bone marrow produced by some toxic agent associated with the benzene ring. Radium, x-ray, and arsphenamine may also produce acute granulopenia. Sepsis does not seem to be a causative factor, but rather secondary to the granulopenia.

The age incidence is about forty to fifty years, and is more frequent in women than men. It seems to occur in all classes of life and occupation.

In acute granulopenia the onset is usually preceded by vague symptoms of fatigue and weakness, followed by chills, fever, and sore throat. Many of the cases reported show ulcers in the anus or vagina. In the throat the ulceration usually attacks the tonsils, and a membrane may form in which Vincent's bacilli and spirilla are found.

Various forms of therapy have been advocated but all have seemed to be of little value. The use of pentucleotide (nucleotide K-96) first prepared and used by Jackson, Parker, Rhinehart and Taylor, seems to accomplish most. Blood transfusions and irradiation are recommended.

CASE REPORT

Mrs. Ida F., age 61, first seen at her home on July 13, 1933. She complained of pain in the left side and a rash in the same radius

in the same region.

The present illness began three days previous, with fever, constipation, malaise and pain around left lower ribs. The past history included the usual diseases of childhood and for the past few months slight dyspnoea and precordial pain on exertion. Family history negative except that several members of her family had had herpes zoster, one brother and sister died of angina pectoris. Her husband and four sisters were living and well.

The patient was well developed and nourished. Scalp, eyes, ears, nose, and tongue were negative. The teeth and gums were negative except for a slight inflammation of the gum around one tooth, which had a gold cap. The heart sounds were a little faint, otherwise the heart was normal. The lungs and abdomen were normal. Pelvis and rectal examinations were negative except for a few small hemorrhoidal tabs. Beginning about one inch to the left of the spine and involving eighth and ninth dorsal segments were the typical lesions of herpes zoster. Her temperature was 100.6°, pulse 90. Urinalysis negative. Under treatment with calamine lotion and amidopyrine this condition gradually cleared up.

Four weeks later she was taken suddenly with severe precordial pain, labored respirations and marked cyanosis of all mucous membranes. The temperature was 98.6°, pulse 116. Her heart was fibrillating, and there was distension of the abdomen. She was admitted to Corning Hospital. The blood showed hemoglobin 98%; erythrocytes, 5,250,000 per cu. mm.; leucocytes, 8,100; polyneutropliiles, 54%; transitionals, 3%; lymphocytes, 43%. Urine was normal. An electrocardiogram showed a typical curve of eoronary occlusion. She improved daily under treatment but one week later was suddenly taken with a sharp pain under the left shoulder blade accompanied by a harsh dry cough. Next morning a circumscribed area of impaired resonance and bronchial breatling was found, and her temperature was 102.4°, pulse 116, respiration 32. The cough produced a small amount of sputum, flecked with blood. Later, a pleural friction rub could be heard. Blood showed hemoglobin, 50%; erythrocytes 3,970,000; leucocytes 18,000; polyneutrophiles 93%; transitionals 2%; lymphocytes 5%.

During the next five days the symptoms and signs of pulmonary infarct cleared up. At noon on August 26th, her temperature rose suddenly to 100.4° though her only complaint was slight soreness in the rectum, which she ascribed to enemata. About 3:00 P.M. she began to complain of a severe sore throat, and she became drowsy and cyanotic. Temperature rose gradually to 105°. Next morning in addition to the sore throat she was nauscated and complained of soreness in the rectum. There was a marked injection of the blood vessels and generalized swelling of the tissues around the pharynx. Rectal examination showed several small ulcerated areas just inside the anal margin. Blood examination at 4:00 P.M. showed a leucocyte count of 1200 per cu. mm. One hour later complete blood examination showed hemoglobin 70%; erythrocytes 4,130,000; leucocytes 875 per cu. mm. and 100% lymphocytes. Platelets seemed to be increased. A diagnosis of granulopenia was made and confirmed by Dr. S. E. Conklin of the Robert Packer Hospital, Sayre, Pennsylvania. Following the intravenous administration of neo-arsphenamine 0.6 gm., the temperature dropped to 103°, but during the night it rose to 106°. Early the next morning the blood showed hemoglobin 54%; erythrocytes 5,150,000; leucocytes 550 per cu. mm.; lymphocytes 100%. Following a transfusion of 500 cc. whole blood, her general condition seemed better. Temperature remained at 106° however. Pulse varied from 100 to 108. She became restless and had several involuntary bowel movements. Death occurred about 4:00 P.M. Autopsy could not be obtained.

Comment

This was an unusual case of a woman, who had always enjoyed good health, taken suddenly with a mild attack of herpes zoster from which she made an uneventful recovery, only to have successive attacks of corgnary occlusion and a pulmonary infarct which she survived; and then died from an acute, granulopenia.

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HEARING IMPAIRMENT IN SCHOOL CHILDREN

By R. BEATRICE ROSSELL, M.D., BUFFALO, N. Y.

ECENTLY our attention lias been focused on the child with a hearing difficulty, not sufficient to be classified among the deaf, but with an impairment sufficient to affect its present and future welfare.

Early recognition of children so handicapped has been very difficult, in public schools. The watch tick test, the tuning fork, and the whisper tests were not practical enough to be employed in the examination of a large number of children. Besides, the many variations and inaccuracies rendered them useless for comparative purposes. Consequently these tests were employed only for examination of cases referred because of a suspected hearing loss, and not for the purpose of detecting a hearing loss not yet discernible in ordinary conversation. Slight impairments are not recognized by either the child, teacher or parent. Often a child is condemned as listless, inattentive, troublesome and dumb because the teacher fails to recognize that the child is a problem only insofar as his hearing is concerned.

With the use of the 4-A Audiometer as recommended by Dr. E. P. Fowler and Harvey Fletcher of the Bell Telephone Laboratories, the problem of early detection of hearing impairment in school children has been greatly simplified and unified. As many as forty children can be examined together in a period of fifteen to twenty minutes. This method is now employed both here and ahroad with satisfactory results.

During the fall of 1931-32, with the co-operation of the Educational and Health Departments, a survey was made of ten public schools of Buffalo, N. Y. These ten schools consisting of 6,781 children from the 2nd half of the second grade to the eighth grade were

chosen as representative of the various social and racial groups of the population of Buffalo.

The incidence of impairment of hearing has been reported to be less in the economic independent and educated classes than in the less fortunate and foreign classes. This, perhaps, is due to better and more specialized care during the first seven or eight years of life. In private schools an incidence of 3% or less has been reported. In public schools the average is from 7 to 15%.

The various localities differ. Table I illustrates the wide variations.

TABLE I	
Percentage of Incidence	
Ann Arbor	10-20% 8 00 13.00 1.33 17.00 1 00 14 40
New 10fk. Rhode Island St. Louis San Francisco Tennessee Worcester	2.50 4 50 6.00 2-3 0 3.50 2.70

In Buffalo the local variations were: (Table II.)

In schools where the economic conditions are poor, where there is little or no medical care, we have an incidence of 5-9% hearing impairment. In schools of mixed classes we have an incidence of 3-5% H. I. In schools in communities where medical care is no worry and adequate we find an incidence of 2.5-3%.

The average incidence is 5.84% with a hearing impairment of 12% or above hearing loss. 5.78% have a hearing loss of 9% (borderline

		TABLE	EII						
Perc	ENTAGE OF INC	CIDENCE 1	N THE	Varidus	Schoo	LS			
School No No. Tested No.: No. No. Per Communication	765 617 74 29 77 31	29 675 31 20 4.3%	42 943 57 73 5.8%	51 647 28 14 4.3%	58 845 75 79 9.3%	62 773 23 24 2.9%	63 607 15 4 2.5%	75 675 53 63 8.8%	50 234 14 3 5.98%

cases) 11.62% of the 6,781 cases examined show a hearing loss of 9% or over.

The 4-A Audiometer is not an instrument of precision for the diagnosis of ear conditions, but an instrument which facilitates the tabulation of the hearing capacity of the individuals examined. From the individual records the normals can be separated from those showing defective hearing or those in need of further check-up and otological examination. The 4-A Audiometer is also useful in determining the effects of treatment and for checking up gradual changes in progressive deafness, when a large number of school children are to be examined.

Any degree of loss is of educational as well as of medical importance. However, in this survey only the cases showing a loss of 12% or above received a complete otological examination. We considered a careful history of the case and a complete ear, nose and throat examination essential to determine the nature of the difficulty, before a prognosis and a disposition of the case was made.

In the history, the question of earache, aural discharge, head colds, sore throats, and infectious diseases was especially noted. Earache was not a common or persistent symptom accompanying ear disease. A history of earache was obtained in 138 cases of the 399 cases showing unquestionable involvement. A history of head colds was obtained in 236 and sore throat in 164 of the 399 cases of affected hearing. (Table III.)

otitis. One case developed after a skull injury. Two cases were diagnosed Otosclerosis, one Tuberculosis of middle ear and two cases were recommended for Wassermann test. Two hundred and nineteen recommendations were made for removal of tonsils and adenoids and 95 had had their tonsils and adenoids removed thru the recommendation of the family physician or ear specialist. There was a prevalence of hypertrophied or diseased tonsils and adenoids among the children showing defective hearing. One active case of mastoiditis was discovered and one acute otitis media; both were referred for immediate treatment.

Briefly, the disposition of the cases included a program of educational guidance and advice to the parents.

The educational advice was based on the extent of impairment and the progressive tendency of the lesson. Children with only a slight degree of loss are assisted in the regular class room by being placed in a front seat either to the right or the left of the teacher depending on the ear involved or in the center of the room when both ears are involved. The teacher is advised to face the light when speaking to the class so that her lips are clearly visible. These children soon acquire the habit of watching the speaker's lips and thereby assist their ears with their eyes. Others are in need of further assistance in special classes and in a certain percentage lip-reading instruction becomes absolutely necessary.

TABLE III											
History of Previous	EARACHE	, Colds,	Sore	THROATS	AND	EXAN	ГНЕМАТА				
School No	3 1 74 2		42 57	51 28	58 75	62 23	63 15	75 53	50 14	Total 399	
Earache	26 1 17 45 1	7 7	20 6 33	17 3 23	24 10	7 10	3 8	18 7	6 9	138 84	
Head Colds	45 1 29 1 68 2	7 19	23 21	12 28	28 23 36	19 7 20	3 12	29 38	12 4	236 164 281	

otolaryngological examination sisted of the examination of the auricle for deformities; the external canal for foreign bodies, cerumen, discharge, polipy or granulations; the drum for color, retraction, motility, scars, calcium deposits, perforations; the mastoid process for tenderness or scars of previous operations. Tuning fork tests were made when indicated. The naso-pharynx was examined for the presence of obstruction, secretions, presence or absence of tonsils and adenoids and their condition. The sinuses where trans-illuminated and the Eustachean Tube ostia examined when indicated. (Table IV.)

Of the 399 cases of 12% or over hearing loss 65% were due to catarrhal or non-suppurative conditions and 26% due to suppurative

In some cities a loss of 9 to 12% is referred for special care by the teacher. A 12-15% loss calls for regular lip reading and regular class work and a 15-20% for special training.

It is difficult to say just how many sensational units of loss establishes a need for lip reading. Each child must be given individual consideration. The history of the case, the progressive character of the lesion, the conditions of the other ear and its chances of involvement and many other factors must be taken into consideration. When, after analysis of the case the prognosis is poor the child should be fortified with lip reading immaterial of the degree of loss.

In this group it was found that lip-reading instruction was essential in 22 cases or 6.59%.

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C	TO-LARYNGOLOGICAL	FINDIN	GS IN	CASES	OF 12	% OR	ABOVE	HEARI	NC LOS	5		
School No		3	17	29	42	51	58	62	63	75	50	Total
Wax and For Bod		5	8	10	8	11	9	6	1	8	5	69
Discharge		17	7	7	6	3	10	10	8	7	9	84
Drum Defect		22	13	7	12	5	15	6	6	19	2	107
OMS Acute										1		i
OMS Chronic		22	13	7	12	5	15	7	6	18	2	107
OMNS Chronic		41	20	16	41	23	42	13	9	34	10	250
Traumatic Otitis				1								1
Mastoiditis		3		1			1				1	6
Mastoid Scar		1		2				3		2	-	
Tonsils and Adenoid	5											
Hypertrophied of	or Diseased	38	11	18	39	19	31	15	5	36	7	219
Nasal or Para masal	Inf	16	8	4		1	20	9	5	18	Ś	86

Another group of 26 or 745% would be greatly benefited in keeping up with their class work, if assisted with instructions in lip reading 1 total of 48 or 14% were recommended for lip reading instructions

Recommendations for otological care were referred to the parents and the school nurse who follows up the case by home calls if neces sary, to advise the parents and assist in pro curing medical care, when parents are unable, thru the dispensaries

Children with perforations of the drum membrane were advised against swimming or div

A number of children were recommended for examination with the 2-A Audiometer

SUMMARY

1 The difficulties heretofore encountered in the examination of school children for defec tive hearing have been eradicated by the 4-A Audiometer now generally employed

2 Early medical treatment and care during the early years of life reduce the incidence of hearing defect. In public schools the figures run higher than in private schools centage of incidence in the various cities employing this method ranges from 1-20% Buffalo the percentage is 578% borderline and 5 84% for 12% or above hearing loss

3 All cases showing a defect of 12% loss or over received a complete oto laryngological examination

4 This group examined were classified ac cording to percentage of hearing loss, medical

and educational history and their physical defects

5 Lip reading was considered essential for 659% of the children examined group of 26 cases or 7.45% of the total number of children examined, were recommended for lip reading as a special fortification against further loss

RECOMMENDATIONS

1 An Audiometer Reading of the hearing of every school child is a helpful record in de-

termining educational progress

2 All children who have been absent from school because of ear, nose and throat conditions or infectious disease such as scarlet fever especially should be referred for otologieal evainination and Audiometer reading. Also all repeaters, cases of apparent stupidity, mattention, all faulty speech cases and problem children should be referred for examination

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TABLE III										
HISTORY OF PREVIOUS School No No. Def. Hear Earache Discharge Head Colds Sore Throat.		Colds, 29 31 5 11 7		THROATS 51 28 17 3 23 12	AND 58 75 24 10 28 23	62 23 7 10 19	THEMATA 63 15 3 8 8	75 53 18 7 34 29	50 14 6 9 7	Total 399 138 84 236 164
Exanthemata	68 24		21	28	36	20	12	38	4	281

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TABLE IV

Oto-Laryngological	FINDIN	CS 1N	CASES	OF 12	% OR	ABOVE	HEARI	NG LOS	SS		
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Discharge	17	7	7	6	3	10	10	8	7	9	84
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O.M.S. Acute									1		1
O.M.S. Chronic	22	13	7	12	5	15	7	6	18	2	107
O.M.N.S. Chronic	41	20	16	41	23	42	13	9	34	10	250
Traumatic Otitis			1								1
Mastoiditis	3		1			1				1	6
Mastoid Scar	t		2		٠.		3		2		
Tonsils and Adenoids:											
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4. This group examined were classified according to percentage of hearing loss, medical and educational history and their physical defects.

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RENAL MANIFESTATIONS OF HYDATID DISEASE

Report of a Case

By JAMES H. BORRELL, M.D., and JOHN M. BARNES, M.D., BUFFALO, N.Y.

From the Departments of Urology and Roentgenology, Millard Fillmore Hospital, Buffalo, New York.

YDATID disease is that condition in which the intermediate developmental stage of the dog tape-worm, Taenia Echinococcus. involves the tissues of man or The adult worm measuring food animals. approximately one-eighth inch in diameter selects as its host members of the dog family: the wolf, fox, jackal and domesticated dog. A heavily infested host may harbor many thousands of worms in its intestinal tract; and since each worm is capable of producing thousands of ova, the feces of these infected animals even in minute amounts, may be highly infectious. Man and food animals. particularly sheep, act as the intermediate hosts. Upon the ingestion of ova, either directly by way of contaminated food or more rarely through dust inhalation, the intermediate developmental stage of the parasite is The ova pass into the stomach instituted. where their outer covering is softened or partly destroyed by the gastric juice. Doubtless many ova are either destroyed or rendered non-viable in this process. Those escaping to the alkaline small bowel liberate embryos which invade the intestinal wall to reach the portal or more rarely the vena cava radicles.

In this manner the embryos gain access to the circulation and, from this point on, chance and vascular anatomy decide the tissue or organ involved. No definite tissue selectivity seems to characterize this parasite. The high frequency of liver and lung involvement seems to depend entirely on the former's intimate relation with the portal circulation and the well recognized filter action of the latter.

Where the embryos settle out of or are blocked in the circulation, they shed their original hooklets and develop into a vesicular worm.

De Tarnowski's¹ description of this phase of the parasite's development is quite concise. "On reaching its ultimate destination, the six original hooklets disappear and a vesicular worm develops surrounded by a pericystic membrane which represents the normal reaction of inflammation of the organ in which the parasite is cradled. It is therefore correct to speak of the invading host as having two surrounding layers, a capsule and an endocyst. This constitutes the second or encysted stage of the echinococcus. In the primary or mother vesicle, daughter vesicles or cysts de-

velop. Between the lamellae of the cyst wall of the mother vesicle there is produced an accumulation of granules that is surrounded by a cuticle and this becomes the center of a new system of stratification. While the number of strata increases, the cavity enlarges and the liquid content becomes clarified. If the daughter cysts grow, the wall of the mother cyst is distended by means of herniated sacs until it bursts and its contents are freed."

Regarding the formation of daughter cysts, Brailsford² says, "It is now generally believed that the formation of daughter cysts is related to the trauma of the parent cyst, for where the parent cyst is protected, as in the bony thorax or the skull, it is frequently single."

The rate of cyst growth varies considerably, depending on the host and site of implantation. In silent areas ten to fifteen years may elapse between the time of infestation and the occurrence of clinical symptoms. The growth is slow and relentless, and in the majority of cases leads to a fatal termination. Occasionally, spontaneous cure occurs. This is particularly seen in those cases which communicate externally following rupture into a bronchus, the renal pelvis or the urinary bladder. The cure in these cases appears to result not alone from evacuation of cyst contents, but from the destructive effects of superimposed infection.

When food animals develop the disease, they frequently come to slaughter before sufficient time has elapsed for a fatal termination. Under such circumstances, if the cysts are ingested by any of the dog family, the developmental cycle of the worm is completed. Brailsford describes this phase of the cycle as follows, "The parasitic cysts being common in food animals and not affecting the sale of the meat of the animal, odd cysts are cut off and thrown on the floor by the butcher, while trimming the viscera for sale. thinks no more of the cyst than he would of a clot of blood or other waste fragment. Further, sheep's lung which one has sometimes seen so extensively packed with cysts that little normal tissue remains, is not sold for human food. They are put on one side as food for cats and dogs. Again slaughterhouse refuse is sometimes used for manure, being spread over fields, to the joy of all the dogs of the neighborhood. Upon ingestion of

cyst material, the contained seolices become attached to the intestinal wall and develop into the mature worm discharging its myriads of ova for further reproduction of the cycle."

American eases of hydatid disease are in the great majority of cases imported. They occur for the most part in foreign born southern Europeans. Fortunately the incidence of the disease in North America has remained quite low. In this connection, however, it is well to take eognizance of a statement of Craig and Lee-Brown,3 "If the encouragement of wool-growing in the United States of America and Canada continues, we feel sure that the next generation of surgeons in these two great countries will have more opportunities of studying the manifestations of hydatid disease than their predecessors had."

Throughout the world the organ incidence of hydatid disease appears to be about the same, liver 70%, lungs 10%, spleen 2.5%, kidney 2.5%, other abdominal organs 5%, muscles and cellular tissues 5%, brain 5%, bone 1%.

The ease which we report showed involvement of both kidney and liver. The primary organ involvement cannot be surnised from the evidence at hand.

Present Illness

D. S., patient of Dr. John M. Mesmer, age 55, married, was admitted to the Millard Fillmore Hospital, November 30, 1930. He complained of pain in the upper right quadrant and right loin, which had been vaguely present for the past several years. During the past four to six months this pain had inereased in severity and had become more prominent in the back. At times this pain has been associated with gascous distress and nausea. There has never been any vomiting or radiation of the pain to other regions than those mentioned. One week before admission to the hospital, he passed a ropy looking. mucoid string about six inches long in the There was no further history of urine. urinary disturbance.

Past History

The patient was born in southern Italy where he lived intil about twenty years of age. During his youth in Italy, he worked as a goat herder. Since his arrival in the United States, he had always lived in or about Buffalo, N. Y. With the exception of pneumonia as a boy, and an occasional cold, he had not been subject to illness.

Physical Examination

The following positive findings were elicited. Patient was somewhat pale, showing slightly blanched mucous membranes. The abdomen appeared slightly distended with a definite fullness in the right upper quadrant. This was seen more clearly on expiration. On palpation a definite tender mass was noted in this region. It moved little if any with respiration and was situated below the liver in about the nipple line. It was not attached to the abdominal wall, but did appear to be fixed to the liver above. The mass was rough in outline, firm to touch and moderately tender. It could also be palpated in the right flank.

Rectal examination showed moderate enlargement of the lateral lobes of the prostate,

The day following admission to the hospital, an examination of the abdomen and gastrointestinal tract was performed. This examination revealed a homogeneous soft tissue density continuous with the liver density extending well down towards the right crest of the ilium. The pyloric portion of the stomach. the duodenal bulb and the hepatic flexure were displaced downward by this shadow which corresponded with the palpable mass in the right upper quadrant. X-ray examination of the chest showed a slight elevation of the right leaf of the diaphragm and a small pleural scar in the region of the seventh rib on the left side in the posterior axillary line

Laboratory Reports

Laboratory reports revealed a mild secondary anemia with a normal differential count-Blood examination showed the following:

Hemaglobin 70%: Red cells 4,120,000 White cells 8750: Neutrophiles 72%: Lymphocytes 27%: Eosinophiles 1%. Urinalysis revealed the following: Sp.Gr. 1022, alkaline reaction, trace of albumin, indican 2+, occasional leucocytes, occasional red blood cells, occasional crystals and amorphous salts, otherwise negative. Owing to the urinary findings, the patient was cystoscoped on December 8, 1930.

Cystoscopic Examination, 12/8/1930

No. 25 Brown-Buerger eystoscope used. Bladder negative for tumors, diverticula and stones. Both ureteral orifices were visualized and eatheterized with No. 6 X-ray eatheters. There was no drainage from the right side. Drainage from the left side showed a few pus cells and red blood cells and many round eells. From the bladder, the urine showed numerous pus cells and some crystals. Both ureteral eatheters were withdrawn and a No. 9 Garceau catheter inserted into the right ureter. A twenty minute P.S.P. renal function was done

and 15 cc. of drainage was recovered from the No dye was excreted from this right side. 210 cc. was obtained from the left side. kidney, accepting the bladder as left, and 20% of the dye was eliminated from this side. An attempt was made to do a right ureteropyelogram, but the dye seemed to meet with obstruction about halfway up the ureter and apparently none of the dye entered the kidney pelvis. A second attempt was made with the patient's head lowered. This time a small amount of dye could be seen permeating a large mass in the right side of the abdomen. The following day, December 9, 1930, the patient was given uroselectan intravenously. Fair visualization of the left pelvis, calices and ureter was obtained. No visualization occurred on the right. This was true in the 15, 45 and 75 minute plates.

From findings to date a pre-operative diagnosis of kidney tumor was made. The possibility of Hydatid disease of the right kidney was suggested.

The patient was operated upon December 20, 1930. The usual posterior incision extending from the lower border of the ribs to within one inch of the brim of the pelvis, was made. The right kidney was exposed and delivered and a large cyst of the upper pole was ruptured. Many daughter and grand-daughter cysts were expelled through the wound. The cyst was under such tension that various sized small cysts literally tumbled from the incision. Further investigation revealed a much larger cyst on the lower border of the liver, which seemed to be connected with the upper pole of the right kidney by extension. An attempt was made to evacuate the large mother cyst in the liver. A conservative estimate of the number of cysts of various sizes evacuated would be 500. An attempt to treat the cysts by marsupialization was made, but could not be completely achieved owing to the difficulty in reaching all sides of the cyst wall. A large drain was inserted into the fossa and the wound closed with through and through sutures.

The pathological report by Dr. Margaret Warwick Schley, Director of Pathology, Millard Fillmore Hospital, follows:

"The material removed consists of about a quart of thick, slimy, blood-tinged fluid in which are great numbers of ruptured cysts and a few which are unruptured. All of these evidently represent daughter cysts. The broken cysts show a collapsed wall which measures up to 1 mm in thickness and curls inward. The outer surface is thick, white and tough, while the inner is more delicate and glistening. Microscopic sections of these walls show them to consist of a pink-staining, formless laminated structure with parallel striae, but no cell detail or nuclei.

"In the mass of material removed are a few un-

ruptured cysts with thin intact walls which are slightly compressible against the contained fluid. Figure I. The thin walls are very tough and are broken with some difficulty. These cysts contain clear fluid in which are particles resembling granules of white sand. These quickly settle to the bottom when the fluid is brought to rest.

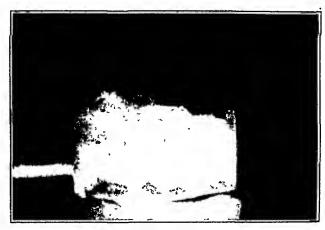


Figure 1
Cysts after Formaldchyde Fixation

"Under the microscope these particles prove to be tiny parasites with a contractile movement. Each consists of a rounded mass of protoplasm in which are great numbers of bright granules.

"At one side of the mass is a round projecting sucker surrounded by a collar or rostellum formed by a double row of tiny hooklets of two sizes. These are for the purpose of holding the sucker against the intestinal mucous membrane. The parasite has a movement which consists of a slight thrusting out and pulling in of the sucker with its bristling collar of hooklets. This movement persists for hours on a warm stage. In the free fluid are a few unattached hooklets, but these are very few because the parasites are yet alive with all of their hooklets attached."

Following operation the patient ran an intermittent septic type of temperature. Drainage from the incision was profuse and contained a large number of cysts. His appetite was poor, but the upper right quadrant pain was relieved and the mass became considerably smaller during the first few days after operation. One month following operation, the patient was discharged from the hospital. At this time, cysts were still being expelled from the sinus. He became progressively weaker at home, continuing to pass cysts from the wound and later the discharge became purulent. The patient died approximately three months after his discharge from the hospital.

Discussion

According to Kretschmer⁴ no characteristic pyelographic picture has been described in this condition. The cysts may become calcified and present as thin walled ring shadows of different

The renal pelvis may be deformed or not depending on the location of the cyst. In some instances a sub capsular cyst may mimie the



LIGURE 2 Retrograde Pselogrow The renal pelvis is displaced downward and toward the mid line. The calices are of literated and in their places.

are seen mony various sized ares apparently produced by rodude solution outlining part of the surfaces of spheres solitary renal cysts. With deep involvement of

the parenchyma pelvic deformity is an almost certain accompaniment. In the case reported, Figure 2, the renal pelvis is displaced downward

and toward the mid line. The calices are oblitcrated and in their places are seen many various sized arcs produced apparently by iodide solution outlining part of the surfaces of spheres

The difficulty in diagnosis in cases of hydatid disease vary considerably, depending on whether the case is 'open" or 'closed". In the former instance, the cyst communicates with the renal pelvis and discharges drughter cysts pieces of membrane or hooklets in the urine. In the case of passage of cysts or membrane the patients may give a history of passing grapes, grape skins or pieces of flesh in the urine. The hooklets would accessifily have to be identified micro scopically In our case the history of passing a six inch rope of mucous is quite suggestive However numerous urme examinations throughout the period of hospitalization, revealed none of the characteristic findings of hydatid disease In the closed type of the disease, no characteristic urmary findings occur. Here one must depend on a composite picture made up of nationality, history, symptomology blood findings and the various serological and skin tests

Most of the cases reported show a definite cosmophilia In our case, however, the admission and pre-operative counts showed only 1% eosmophiles

Most important in the diagnosis of this condition is the necessity of keeping its possibility in mind Finally, a word as to treatment. It is not our purpose to draw conclusions as to treatment from a single ease, but a review of the more recent articles on hydatid disease by Southern European and Australian writers would indicate that the type of treatment depends entirely upon whether one is dealing with the "open" or "closed" type Nephreetomy for the "open" and marsupialization for the "closed" types seem to be the treatment of choice

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DOCTORS' ADVERTISEMENTS

It takes two parties to run an advertisement in a periodical; an advertiser, and an editor of a journal. There have always been a few doctors who have violated the code of conduct of the medical profession, and have inserted paid advertisements in the newspapers proclaiming their great skill and love of suffering humanity. Such advertisements are seldom or never seen today, for the publishers of newspapers have raised their standards of advertising so that doctors who seek publicity cannot find an editor who will accept their paid advertisements.

The attitude of newspaper editors toward physicians forty years ago is shown in the following announcement which was printed ostensibly as a news item on August 13, 1893, in the New York Recorder, a morning daily:

"Doctors McCoy and Snow announce the greatest opportunity to the public that has ever been offered by any specialist in the medical world.

"This offer is in the form of a free test of their plan of treatment for the cure of catarrh and other curable chronic diseases,

"All who apply in person will be examined, prescribed for and treated upon their first visit free of all charge. In addition to this, thorough consultation and advice will be given to all who apply, without a penny to pay.

"This is a test which the patient can make use of without risking a single cent for examination, the first treatment, consultation, advice, or medicine.

"Doctors McCoy and Snow offer this free test to the public as the surest and fairest way of convincing everybody that their plan of treatment is the very best known to medical skill. It is an honest, straightforward way of becoming acquainted with the great number of persons who have blindly bought, and paid dearly for their experience."

HEALTH AND THE ECONOMIC DEPRESSION

There has been much discussion in periodicals, both medical and lay, regarding the effect of the economic depression on public health and death rates. The prevailing opinion seems to be that the rates for either sickness or death have not increased; or, if they have, the increase is regional and accidental. On the other hand, some studies have revealed an increase in the proportion of undernourished children discovered in public schools, and on this basis predictions of later ill health are made.

This general maintenance of a high standard of health during times of depression was unexpected, because poverty has previously been recognized as a leading cause of sickness, especially the more chronic forms such as tuberculosis. The reasons for the apparent anomaly are plain, and are a justification of the methods adopted throughout the nation for the distribution of medical services to all who need them.

Poverty is a potent cause of ill health because it prevents the very poor from obtaining those things which are essential for healthful living. It is highly to the credit of citizens generally that they have willingly supported public measures for providing the poor with necessities which they would not otherwise have obtained, and thereby they have neutralized the effects of poverty on health. Public officials and welfare organizations

have provided the hungry with not merely bread, but with milk and green vegetables which are essential for health, and which were formerly considered to be luxuries. No one in these modern days sees a child clothed in the rags which were the classic badge of poverty a half century ago; and no community tolerates tumble-down tenements, with their lack of sanitation. Finally there has come the realization that medical attention is as essential as food; and the services of a doctor with hospitalization and nursing, if necessary, are available at public expense. Medical service is available more readily and abundantly than ever before. Another factor is the activities of health departments both in carrying on their old lines of work and also in entering new fields, such as giving immunizations, child welfare, maternal health, and school examinations. Some public health nurses have been laid off, but the amount of preventive work done by departments of health has been increased during the depression. All these activities have had a sure effect in lessening morbidity and mortality.

What the future may bring forth is uncertain; but there is abundant evidence that the economic depression has stimulated all forms of health work to such an extent that living conditions for the poor are now guarded and controlled more carefully than ever before.



MEDICAL PROGRESS



Modern Methods in the Treatment of Nephritis .- Clifford Hoyle lists among recent additions to the treatment of nephritis modifications in diet, the use of large doses of alkalies, certain new diuretics, and methods for reducing intracranial tension in some of the acute cerebral at-Three important advances in the dietetic treatment of nephritis are: (1) Severe fluid and food restriction in acute glomerulo-nephritis, as advocated by Volhard; (2) the use of salt-restricted diets in edema; and (3) high protein diets, introduced by Epstein, for chronic nephrosis with edema. In acute nephritis the administration of fluids, and especially of milk, seems no longer to be a rational line of treatment, as the aim is to spare the kidney as far as possible. Protein and salt must be largely prohibited and the water intake should not be greater than the urinary output, but it is now recognized that restriction of protein is often harmful in chronic With the Epstein high protein diet nephrosis. patients regain strength, become less anemic and lose their edema, sometimes even completely. High protein diets should not be given when the renal activity is impaired. Intensive administration of alkalies for short periods is a valuable palliative measure for the relief of uremic dyspnea and restlessness. One or two drachms of sodium bicarbonate should be given every hour until there is relief. In an emergency it may be given intravenously as a 4 per cent solution. In acute nephritis the saline and purine diuretics are almost always useless, and mercurial diuretics are dangerous. Nevertheless, if heart failure supervenes, mercurial diuretics in certain cases are Diuretics are also useful in often beneficial. chronic nephrosis with edema. Urea, in doses of 300 to 600 grains daily for three to seven days, sometimes leads to a profound diuresis, but it is uncertain and causes intense thirst. Potassium salts may also be effective. Ammonium chloride and nitrate are often powerful diuretics, though they are ineffective when there is renal insufficiency. Calcium chloride is the least harmful and the most efficient diuretic in nephritis with edema. It may be given in doses up to 160 grains daily together with a diet poor in salt. The same diuresis may be obtained by using injections of parathyroid extract, 10 to 20 units at intervals of a week or so. The greatest advance in the field of diuretics has been the introduction of salyrgan and neptal. With these drugs good results have been obtained in chronic nephrosis; they should not be used in acute or chronic glomerulo-neph-The diuresis from a single injection may be as great as 10 liters in a previously waterlogged patient. Bismuth sodium tartrate has re-

cently been shown to have a powerful diuretic action when given intramuscularly. For the reduction of intracranial pressure in hypertensive encephalopathy, lumbar puncture, the administration of intravenous salines, and venesection are indicated.—*Practitioner*, October, 1933, cxxxi, 4.

Syncopal Attacks as a Symptom of Intussusception.—Richard W. B. Ellis, writing in The Lancet, September 23, 1933, ccxxv, 5743, states that the occurrence of sudden pallor during the attacks of pain in cases of intussusception is observed so frequently that it is perhaps surprising that the possibility of actual syncope is not mentioned in any of the standard text-books. He cites two examples of the occurrence of this symtom as a complication of intussusception. A child of 9 months, who had previously been well, was admitted to the hospital with the history that three hours previously he had suddenly screamed, fell forward, and appeared lifeless. During the next twenty-four hours he had repeated attacks of unconsciousness which came without warning and lasted for several minutes. There were no convulsive movements and the bowels were always flaccid when examined. Between attacks the child was of normal color and showed very little evidence of shock. On the day following admission he passed a copious fluid stool containing much dark blood and mucus. No tumor could He recovered entirely and was discharged on the fifth day. The diagnosis in this case presented a problem until about a month later when the following case came under observation. A 16 months' old infant was admitted with a history of vomiting and attacks of unconsciousness almost identical with those in the first case. With the child under an anesthetic a tumor could be palpated under the costal margin. A laparotomy was performed and the appendix was found to be much injected. The enterocolic intussusception reduced itself under the surgeon's fingers. Further exploration revealed several enlarged mesenteric glands and four small intussusceptions, which were readily reduced. Recovery was uneventful. True attacks of syncope are exceedingly rare in infancy. These two cases are, therefore, of interest as exemplifying the rôle that intense pain may play in the causation of syncope in infancy. In the first case there was no vomiting and the intussusception seems to have reduced itself spontaneously. While it might be said that the diagnosis was not proven, the association of intense, spasmodic abdominal pain and the passage of a melena stool hardly admit of any other interpretation, except possibly that of recurrent volvulus.

Endoerine Associations.-In discussing the complexities of diagnostic problems that involve the interaction of the endocrine glands and their influence on metabolic levels and on the functions of the nervous system, Allan Winter Rowe says we must never fail to recognize that while established hasic principles are applicable to the predication of group behavior, the convenient artefact of the average cannot be too straightly applied to the individual component. Each member of the community is an entity, combining the subtle forces of heredity, of environment, both external and internal, and of nutrition, of growth, of development, and such others as may be regarded as intrinsic in the stuff of which we are compounded. As illustrating the association of endocrine influences with other conditions, without implication, postulating and causal-resultant Rowe cites a diagnostic study of individuals with otosclerosis, or better with progressive deafness. In such a group nearly 65 per cent gave objective evidence of endocrinopathy; the remainder were completely free from any suggestion of endocrine gland involvement, although all showed depar-tures from the normal. The endocrine group showed the pituitary at fault in 35 per cent, the thyroid in 11 per cent, the ovary in 14 per cent, while unclassified endocrine cases added 5 per cent to the total. In this group the restoration of a normal level of glandular function by the use of appropriate opotherapy has coincided with the arrest of the progress of the ear condition in a very appreciable number, while a significant fraetion has shown and maintained a demonstrable improvement. In a substantially consecutive scries of infertile couples, endocrine conditions were shown by 61 per cent, of which the pituitary was responsible for more than half (36 per cent), while the thyroid (15 per cent) and the ovary (9 per cent) follow in the order named. In these cases constitutional factors were always present. In the treated cases slightly more than 50 per cent yielded successful results. The correction of an associated cudocrine factor coincided, in a striking manner, with a correction of the basic condition in one-half of the patients treated. In the author's study of a group of children who presented behavior problems, 51 per cent showed pituitary dyscrasias, and 13 per cent were thyroid cases. In a consecutive series of psychotics and psychoneurotics, 76 per cent gave evidence of associated endocrine malfunction-41 per cent showed pituitary dysfunction, 12 per cent were thyroid dyscrasias, while 22 per cent were patients with ovarian failure. An adequate interpretation of these associations is impossible on the basis of the imperfect knowledge of today.-Endocrinology, September-October, 1933, xvii, 5.

Neurasthenia: Toxic and Traumatic.—H. V. Dick, writing in *The Lancet*, September 23, 1933, ccxxv. 5743, urges that it be more generally recog-

nized that "neurasthenia" is an obsolete term, expressing an obsolete theory completely obscuring the nature of the condition it is intended to describe, and is typical of the still prevalent lack of understanding of psychogenic illness or psychological theory. The neurological approach to psychopathology has had a paralyzing effect upon medicine in general, because so long as we followed it we remained outside the world of the patient's mind, moving on a plane which has no understanding of his personality as a whole. The term neurasthenia should be discarded, or used as an equivalent merely of "abnormal subjective fatigability without obvious organic cause." Dick cites two cases of so-called neurasthenia which illustrate the following generalizations: The symptoms of the so-called "neurasthenic state" a syndrome rather than a disease-are manifold, but reducible to the effects of long-continued unconscious fear or anxiety via the sympathetic system and its physiological connections, if, indeed, they have other than a subjective existence. Neurasthenic symptoms are, therefore, secondary to psychological conflict, and on the psychic side expressive of unconscious fcar, autoerotism, and the craving for protection and sympathy, in the service of the primitive urge to self-preservation.

Spontaneous Hyperventilation Tetany .-- J. W. Scott and M. M. Cantor state that the cause of tetany is generally accepted as an alkalosis resulting from the loss of carbon dioxide from the blood. With this depletion a preponderance of basic substances accumulates in the blood. These substances are excreted by the kidney and the urine becomes less acid. The authors report the case of a woman 21 years of age, a medical student, who was seen about an hour after she had first noticed that her wrists were getting numb and stiff. A diagnosis of spontaneous hyperventilation tetany was made. The patient was taken to the hospital and given a 5 per cent mixture of carbon doixide in oxygen. Within two or three minutes her hands began to relax, the respiratory rate, which had been 82 per minute, gradually slowed, and the spasm dimin-She was quite relaxed and comfortable eight minutes after the beginning of the administration of gas. She stated that four days before admission she had suffered from nausea and The latter readily responded to bismuth, but the nausea persisted, and she thought this might have been a factor in inducing deep breathing. Two days after admission, voluntary forced breathing produced tetany in three minutes, and at the end of ten minutes the blood showed a decrease in plasma bicarbonate, an increase in hydrogenion concentration with a slight rise in calcium and chlorides. The urine showed an increase in hydrogenion concentration and marked ketonuria. This case is of interest in that the spontaneous hyperventilation developed

in association with nausea, rapidly followed by the onset of tetany and the production of marked The rapid onset of tetany following increased breathing suggests that the patient may be peculiarly susceptible to carbon dioxide deficit. In considering the mechanism underlying this susceptibility to hyperventilation tetany, Essen has suggested that the bicarbonate deficiency is compensated for by an increase in the plasma chlorides. When this protective mechanism is impaired, as might be the case where the amount of blood chloride is less than usual, as where vomiting is a symptom, milder degrees of overbreathing may be quite sufficient to cause alkalosis and tetany. Experimentally it has been found that in the absence of organic nervous disease, signs of tetany rarely develop before ten to thirty minutes of forced breathing.—American Journal of the Medical Sciences, October, 1933, clxxxvi, 4.

Symptomatology of Aneurysms of the Innominate Artery.—On the basis of a case observed in a man of 35, F. Ferranti and G. Nizzinuti discuss the more important points in the symptomatology of aneurysms of the innominate artery. Frequently the first symptoms complained of are more or less acute pains, continuous or intermittent, in the right shoulder, radiating to the arm on the same side and often also to the right half of the cranium. In other cases the first signs consist of a sense of obstruction of the jugular vein, or attacks of dry, irritating coughing which does not yield to ordinary measures and which as a rule is regarded as an indication of bronchitis. The objective symptomatology will vary according to the location of the aneurysm: for example, if it is intrathoracic, it will affect the respiratory tract; if extrathoracic, that is, in the distal part of the artery, it will cause irritation of the right recurrent nerve or the brachial plexus. frequently the entire trunk of the innominate artery participates in the dilatation caused by the aneurysm, with its consequent symptomatology. Sometimes the onset is much more dramatic, and consists of symptoms not of compression but of cerebral anemia. In the later course of the affection, especially when it is intrathoracic, the patient suffers with increasing dyspnea, requiring him to remain almost immobile; respiration becomes stertorous and the dry cough may be accompanied by more or less extensive hemoptysis. The most frequent cause of death is rupture of the aneurysm into the trachea. The presence of a luetic infection is of importance for diagnosis. The most pathognomonic sign is the presence of a deeply pulsating swelling in the right supraclavicular fossa, simultaneously with stasis in the upper arm on the opposite side and in the left half of the face and head. The skin covering the swelling is sometimes normal, but often tense and characterized by the presence of dilated veins. If the aneurysm is exclusively intrathoracic, inspection may reveal a pulsation corresponding to the 1st and 2nd right intercostal spaces, with dulness on percussion; rarely is there a systolic murmur or a souffle, but heart tones are always heard as clearly as over the cardiac area itself. Other characteristic symptoms are injected conjunctivae, cyanotic lips, paralysis of the right vocal cord, and a difference between the radial and the carotid pulse, through retardation, slenderness or even complete absence of pulsations in the right Finally, the fluoroscopic and roentgenographic findings, taken together with the frequent finding of a positive Wassermann reaction, are decisive in diagnosis, in view of the frequency of a luetic history in such cases.—Riforma medica, August 19, 1933.

Paralysis of Upper Plexuses after Prophylactic Injection of Serum.—To the cases of Katz and Schilling of paralysis of the upper extremity after prophylactic injection of tetanus serum, H. Demme adds a third. Six days after the injection of the serum into the gluteal muscle for a lacerated wound of the thumb, a typical serum exanthem appeared with other characteristic signs of reaction. Three days later a very painful paralysis of the upper parts of both brachial plexuses set in, beginning with hypesthesia in the neighborhood of the nervi cutanei antibrachii laterales. After about 10 days came the actual plexus paralysis, which at first exhibited a progressive character, then came to a standstill, after which the acute symptoms abated, the pareses gradually regressing; months later, however, a weakness of the shoulder and upper arm musculature could still be observed, with atrophy and degeneration in the muscles chiefly affected. The question arose whether the bilateral shoulder and arm paralysis was attributable to the wound or to the serum injection. A study of the literature left no doubt that the injection must be held responsible, but that the antitoxin itself was not, as such, the injurious substance. It must, rather, be assumed that the paralysis was a kind of anaphylactic phenomenon, appearing as a reaction to the parenteral incorporation of the foreign body serum. This view receives support from the fact that a typical serum exanthem nearly always precedes the neuritic phenomena, as it did in this case. Clearly an anaphylactic edema may produce slow, lingering disturbances in nerve tissue much more easily than in the skin. It is also a striking circumstance that, independently of the site of the injury and of the infection, the paralysis in the great majority of cases affects the shoulder and arm musculature. In the present case the sensory disturbance was of a purely peripheral character, and even in the acute stage no meningismus was observed, so that it may be assumed that it was a case of brachial plexus paralysis. The prognosis in such paralysis is generally good, and in Demme's case most of the disturbances have already regressed. These cases of paralysis, however, constitute no contraindication to the use of tetanus or diphtheria serum.—Munchener medisinische Wocheuschrift, September 29, 1933.

Early Diagnosis, Clinical Course and Serum Therapy of Epidemie Poliomyelitis .- M. Gross and E. Glanzmann, writing in the Schweizerische medizinische Wochensherift of September 30, 1933, make a report on the basis of 23 cases of epidemie poliomyelitis which they treated during the epidemic of 1932. The course of the disease may be divided into the following stages: (1) An incubation stage of 6-18 days. (2) A stage of general infection of 1-3 days, characterized variously by fever, angina, eoughing or hoarseness, vomiting, headache or pain in the nape, constipation or diarrhea,-the clinical picture thus being not at all a characteristic one beyond the general infection of the upper respiratory tract, with intestinal symptoms, appendicitis-like pains, and frequently sweating. (3) A latent period of 1-6 days, in which the children often return to school. (4) The invasion of the nervous system, with a preparalytic stage of 1-6 days. (5) The paralytic stage, of indefinite duration. (6) Convalescence. In diagnosis, the so-ealled "spinal sign" in the preparalytic stage is of great value. The child is placed in a sitting position and asked to kiss his knee. If he is in the preparalytic stage he cannot do this, since it causes very severe pain along the entire back. Another very characteristic sign is the stiffness of the neck, which resists flexion in a forward direction; this was never absent in the authors' eases. The "Amoss sign" is also an aid in diagnosis: the child has an inclination, in a sitting position, to lean upon his two hands to hold his back upright, in hyperextension, like a severely rachitic child; if asked to cross his arms, he makes an effort to do so, but quickly resumes his former position. In about 10 per cent of cases a child goes to bed in good health, and awakens the next morning in a state of paralysis. Of the authors' 23 cases, 13 were treated with specific serum and 10 without. Almost the same results were observed in the two series of cases. It must, unfortunately, be admitted that in fulminant cases where the need is most urgent, serum fails. Thus in a seven-yearold boy whose history already placed him in this class, 20 c. c. antipoliomyelitis serum given intralumbally and 20 c. c. intramuscularly on the second day of the disease proved useless and the child died on the third day with paralysis of the diaphragm. On the other hand a case that is almost decisive for the good results of serum therapy was that of a three-year-old child in whom double pneumonia developed on the tweIfth day of the poliomyelitis, and who nevertheless pulled through and made a perfect recovery from paralysis, in the face of what semed desperate conditions. In nine other serum cases the paralysis was overeome in greater or less degree. Of those not treated with serum, three died, three were completely cured, and two were considerably improved. The cases so treated were as a rule the ones with the most severe infection.

Anaphylaetie Manifestations from Insulin .--According to Salvatore Fiandaca, some of the first observers of anaphylactic shock during the course of an insulin treatment believed the phenomena to be due to protein impurities in the insulin. But when this view was refuted by the appearance of the same symptoms after use of an aqueous solution of erystalized insulin, demonstrably free from protein, the suspicion arose that insulin might, of itself, constitute a specific antigen, capable of sensitizing the organism. Fiandaca, after treating over 400 patients with insulin, has recently had a unique case that confirms this idea. woman of 52, who had been receiving 20 units of insulin per day for about 10 days without any special incident, felt so much better that she gave up the treatment and was not seen again for about 8 months. She then returned with all her old diabetic symptomatology, and in addition a troublesome pruritus vulvac, for which no gynecological grounds could be discovered. About 30 minutes after her first injection of 10 units of insulin, she had a profound sense of illness, with tachycardia, vertigo, and dyspnea. The same symptoms followed the second and third injections, very intense after the third, when there also appeared simultaneously a number of large, elevated, erythematous spots in the right supramammary region, but none at the site of injection. This phenomenon lasted about three days, despite suspension of treatment. Blood examination confirmed the existence of a hemoclastie shock. Two more injections of 10 units each, given on the fourth and sixth days after this crisis, with a view to proving the etiology of the eruption, were followed by further anaphylactic manifestations, the eruption now covering the entire body except the palmar and plantar regions; on the last occasion a different brand of insulin was used, with the same results. No disturbance, however, followed an injection of extract of suprarenal cortex. Twelve healthy subjects were then injected intradermally with the patient's serum, followed 24 hours later by a few drops of antigen (insulin), three different preparations being used. In every case a painful, pruriginous wheal 1 cm. in diameter appeared at the site of injection, 30 minutes later. On the other hand, administration of pancreatin per os gave a negative result, proving that the sensibilization was not due to the presence of panereatic proteins.-Riforma medica, September 23, 1933.



LEGAL



PERSONAL INJURY ACTION-LIABILITY OF GOLF PLAYER

By LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York.

A large number of physicians are devoted followers of the royal and ancient game of golf. A recent case for personal injuries, involving the liability of both player and golf club, was the subject of decision by one of the judges of our lower courts in this State.

In the case under consideration the plaintiff, a young woman, was being driven by a friend of hers in an automobile. The car was going east upon Union Turnpike in Jamaica. The defendant golf club was located to the right of the car in the direction in which it was proceding. Union Turnpike runs east to west, and the southerly edge of the course abuts the Turnpike and is lined by a wire fence about six feet high, located about twenty-five feet south of the roadway. The first hole of the course adjoins the Turnpike, and the tee of the first hole is so situated, in relation to the green, that one driving from it will drive a ball in a westerly direction, almost parallel to the highway.

The defendant golf player was playing with three other club members. He teed off, and the ball traveled westerly about two hundred yards, fell short of the hole, but remained upon the fairway. His next stroke carried the ball to the right over the fence, on to the roadway and struck the windshield of the car in which the plaintiff was traveling, shattering it and causing injuries to her. Subsequently she commenced this action to recover damages against both the player and the golf club, on the theory of negligence and nuisance.

On the trial the defendant player disclaimed negligence on two theories: First, that he struck the ball intending and believing that it would travel along the proper path, and therefore, he should not be held liable for a mere error of judg-Secondly, that the ball was caught in a tail or cross wind, or some other atmospheric condition which he could not foresee, which rendered the occurrence an "act of God." The player submitted that he did everything that a reasonably prudent man would have done under the circumstances; that he exercised due care in playing the ball, that he looked around, shouted "fore," and then struck the ball, intending it to travel in the proper direction; and that the fact that the ball veered to the right and struck the car could not have been reasonably anticipated.

The defendant golf club maintained on the trial that no negligence could be imputed to it, for the

reason that there was nothing in the evidence tending to show anw breach of duty on its part; that there was no proof that any balls had been previously hit over the fence or that the club had any notice of such previous occurrence; that the club could not be required to anticipate danger from the source in question, and that therefore it could not be guilty of negligence in failing to guard against such happening.

The action was tried by the court without a jury, and the facts were not substantially disputed. As the court said:

"I am satisfied from the evidence that the ball was 'sliced' by X; that is, he hit it with a cut across it, so that it flew with a curve to the right. It is a matter of common knowledge that such a thing will happen to the most experienced player. That he intended to drive the ball correctly is unquestioned, but his liability or freedom therefrom can only be determined in terms of law."

The court then pointed out the paucity of legal precedent involving the facts in the case at bar, stating that only one case had been found in point, and that was decided in England, in which case the driver of a cab in proximity to a golf course was permitted to recover. The English case was decided on the theory that the player was negligent in striking the ball while there was someone upon the adjoining roadway who might be injured by a misdirected ball, and that the golf club was also liable on the theory that the particular portion of the grounds was a public nuisance under the conditions and in the place where it was situated. The English court held that the club was under a duty to obviate the danger to persons upon the highway, and that this could be done in several ways, as by having a lesser number of holes, or omitting the objectionable hole, or playing it in a different way.

In the instant case the court paid a high tribute to the game of golf in this language:

"The ancient game of golf had its origin in Scotland. It was formerly indulged in by only kings and the nobility. It furnishes a healthy means of exercise and relaxation, and is a sport of the first order. In more modern times the game spread to England, and its popularity has so increased that the game is now extensively in vogue in this and other countries among all classes of people.

"A golf ball in i self is an innocent, lawful article, and so is the club which drives it. The game itself, being fundamentally honorable and sportsmanlike, suggests nothing imminently unlawful or hazardous about it."

The court then went on to apply established legal principles to the facts in the case, and said:

"But when driven, though in full compliance with the rules of the game, the ball attains great speed, and may thus become a dangcrous and destructive object, and may strike with great violence and lorce, not unlike a projectile which is propelled from a weapon by whatever power it be actuated, or a stone thrown by a catapult or by the hand. In a recent case, Judge H, himself an accomplished player, in holding a golf player liable for the injury of a caddy by a ball, writing for a unanimous court, says: "It must be conceded that although golf may not be deemed a hazardous game, a driven golf ball is a very dangerous missile, and that its flight and direction cannot always be controlled by the player. That uncertainty is a part of the game. The ball when struck is liable to go on down the fairway or fly off to the right or left at almost any angle."

angle."
"The element of danger, therefore, though not intrinsie
in the game itself, is nevertheless present, according to
a given set of circumstances. The situation is not changed
by the fact that the act of propelling the ball is in itself
not wrongful and is for a lawful purpose, that is, to play

the game.

"The presence of the risk imports liability. As was stated by Judge Cardozo in one case: 'The risk reasonably to be perceived defines the duty to be obeyed, and risk imports relation; it is risk to another or to others within the range of apprehension (citing authorities). This does not mean, of course, that one who launches a destructive force is always relieved of liability if the force, though known to be destructive, pursues an unexpected path. "It was not necessary that the defendant should have had notice of the particular method in which an accident would occur it the possibility of an accident was clear to the ordinarily prudent eye" (citing authorities)."

"If there be a possibility of danger, and if the doing

"It there be a possibility of danger, and it the doing of a lawful act may naturally and probably result in harm, though unintended, in relation to plaintiff, there is an actionable wrong (citing cases). The plaintiff here had a right of bodily security, and she was entitled to be protected against being struck by the ball, and if that right has hen violated slie may recover, although, as just stated, the interference with her right did not result from the knowing and willful conduct of delendants, so long as the striking of the ball and the causing of harm to her

was within the range of natural probability.

"Like baseball, the golf game is not a nuisance per se. Both games involve the same element, i.e., striking the ball with an instrument with lorce so as to send it spinning into the air. If, however, the ball playing is attended with a reasonable degree of danger as to make it likely that it would 'work hurt' upon the traveler in the street, a question of fact is presented, and if it be decided adversely to the parties who are responsible for, or who participated in, or who authorized, the setting of the ball in motion, liability will attach on the theory that the playing was a muisance (citing cases). In the first two cases (cited) the plaintiff was struck by a ball batted upon premises adjoining the highway while plaintiff was upon it; and in the third case plaintiff was upon private premises abouting the playground. In all of said cases the doctrine was applied

"This plaintiff had a right to be traveling in the automobile upon the highway. The ball hit the windshield suddenly. She could not be expected to watch out for deflected golf balls in the path of the car, and, even if she were, there is nothing to indicate that she could have reasonably done anything to avert the accident. For aught that appears, she did not know that the golf course was there or that a golf game was in progress at the time. The roadway itself was safe, the car was being carefully driven, and the conditions were such that no one on the highway—certainly not a person sitting in a passing carcould be reasonably required to anticipate that a ball might fly against the car any moment. Plaintiff was in substance and effect in the same position as any other traveler or pedestrian who, without warning, is struck

by an object falling from a structure. In one case it is said: 'The primary purpose of highways is use by the public for travel and transportation, and the general rule is that anyone who interferes with such use commits a nuisance.'

"The rights of the public to a free and unmolested use of the highway are paramount (citing cases)."

In rendering the verdict in favor of the plaintiff and against both player and golf club, thus following the ruling in the English case to which reference has already been made, the court said:

"Applying the principles enunciated by the above authorities, no reasonable distinction can be apprehended between the case of a traveler upon a public street being struck by a falling building or falling into an excavation adjoining the roadway upon private property, or being injured by a missil set in motion from private adjacent premises. And, if the owner of land contiguous to the highway is liable to a traveler who falls into an excavation on the land, upon the ground that the owner has not provided a means whereby harm might be reasonably averted to one having no cause to expect danger, then, by analogous reasoning, the converse situation must also determine liability—that the owner of such premises who creates a condition upon his land, or who maintains such a condition in a manner imputing presumptive knowledge thereof, whereby an ohject from the land injures a lawful traveler upon the roadway, is in duty bound to take appropriate means to ward off the danger.

"Whether this may be done by any method, or by a given means, is forcign to the issue. It is regrettable that this accident has happened, and that the defendants must be held liable in terms of law. Even if such an accident had never happened before, that fact would not be enough-to avert liability. Only if such an accident were unlikely in the highest degree, in the minds of reasonable men, would there be basis for exoneration (citing cases). In the development of civilization and social relations, the law has been moulded to meet ever-changing conditions, and has been adapted to them without revolutionary effect, but on the contrary, with beneficial results to society at large. Witness the application and expansion of established rules of law to hitherto virgin domains, such as radio and aviation. So must i' be with accidents and a variety of other circumstances which are bound to arise in their own appointed time. As was said in one case, in which a boy was struck on the head by an abandoned insulator containing a projecting screw which caused severe injuries. 'This occurrence of the accident in question was of such an extraordinary character that perhaps the defendant might not be chargeable with the duty to anticipate just such a completed happening as this, but the precise character of the accident is not a matter of controlling importance, for so many strange things happen in life that if we were in be exonerated from liability for our acts because of the novelty of the result, the measure of liability would be very largely restricted. What was strange was not that the insulator should fall, but that it What was should fall in such manner as to strike with the screw."

"So, here. The rare thing was that the ball, although played by an experienced sportsman, should veer off, go over a 6-foot fence, and strike the car on the turnpike. That, and the proximity of the course and its particular lole to the highway, are the two proximate, concurring causes of the accident, and cach is an efficient cause. Resipsa loquivir. The player's liability rests in negligence for failure to use the degree of care required in the particular circumstance, he being accountable for the natural and probable consequences of his act in propelling the ball, and the club is answerable for creating and permitting the condition to exist, as well as for failure to use reasonable care to prevent injury to a person lawfully upon the highway, such as the plaintiff. .The accident could not have happened without the concurrence and co-

operation of both causes. Under such circumstances, both are jointly and severally liable, even if the liability of each is grounded upon an independent theory (citing case), and plaintiff is not required to elect whether to proceed on the theory of nuisance or negligence as against each; a recovery on one or both theories being permissible (citing cases). It is not likely that the conclusion I have

reached will work undue hardship upon any golf club,

since the risk may be readily insured against for a premi-

um which in the nature of things will be quite small.'

As many of our golf courses have holes border-

ing on the public highway, and it is an established fact that many of us are prone at times to wild hooking and slicing, it will be interesting to follow the progress of this case in the event of an appeal. While, of course, sympathy for the injured person makes it difficult to quarel with the decision rendered, the incident which forms the subject-matter of this case seems to be one of those accidents for which neither golf player nor golf club is really responsible.

CLAIMED NEGLIGENT DIAGNOSIS AND TREATMENT OF RIGHT LEG AND SHOULDER

A general practitioner received a phone call to come to the home of a man who was injured. Upon arrival he found the patient was a man about thirty-nine years of age, conscious and sitting in a chair. He gave a history of having been on a ladder about two stories high; the ladder tipping and he falling to the ground, striking his right elbow, right side and right foot. He complained of pain in his elbow and lameness in his side. There was no history of unconsciousness and no other complaints were made. Examination ·disclosed the right elbow badly swollen all around, discolored, bruised and motion greatly limited. The doctor immediately advised an x-ray and communicated with an x-ray specialist and arranged an appointment immediately. His arm was put in a sling and the patient taken to the office of the x-ray specialist. X-rays were taken, which were fracture. The ligaments negative as to around the elbow were markedly and extensively lacerated. The patient was informed that there would probably be a very slow recovery and there was some possibility of permanent damage to the elbow. The x-ray doctor who specialized in surgery concurred in this diagnosis. There were no other complaints made at any time and on manipulation the shoulder was apparently normal. Dressing was applied to the elbow and the arm left in a sling. The patient went home and on the following day the doctor again visited him. At this time the patient complained of pain in the foot. Examination revealed the right foot badly swollen but no evidence of any fracture. No x-ray was taken of the foot. Examination of the arm showed it to be tender, ecchymotic, very much swollen, hematoma on the outer side below the elbow. The arm was lame and all motions of the elbow were very limited. The doctor saw him daily after that, the swelling of the arm was still present and motion had not improved at the elbow. The patient called at the doctor's office daily to receive

infra red and diathermy treatments to the elbow and at various times his foot was strapped. Gradually the swelling in the elbow subsided, the discoloration disappeared but the motion did not improve. The foot in the meantime improved and required little attention. After about a month another x-ray showed no evidence of fracture. The doctors in consultation decided that the elbow was bound down by adhesions and under an anesthesia a forced manipulation was done to break up these adhesions. Thereafter the diathermy and infra red treatments were continued. After treating this patient for about six weeks, one day the patient did not appear. The patient called the doctor and made another appointment and again disappointed the doctor. This was done several times and finally the doctor called at the patient's home to find out how he was getting along. The patient stated that he had been advised by someone to go to a chiropractor: that he had consulted a chiropractor and had been advised by him to go to a physician. He refused to disclose the name of the physician but stated that this physician had advised him that his elbow was shattered and that an x-ray of his shoulder showed a fracture. The doctor upon hearing this asked the patient to permit him to take an additional x-ray of his arm and shoulder, which was refused by the patient. The patient stated that he did not wish to be treated any further.

About two months later the doctor was sued for malpractice. The claim was negligent diagnosis and treatment of the right arm and negligent diagnosis of the condition of the broken shoulder. The answer of the doctor denied all allegations of negligence.

The case came on for trial before a Judge and Jury and at the close of the plaintiff's case a motion was made to dismiss the complaint upon the ground that the plaintiff had not proved a cause of action set forth therein; and said motion was granted, thus terminating the matter in favor of the defendant,



NEWS NOTES



THE SECOND DISTRICT BRANCH

The Twenty-seventh Annual Meeting of the Second District Branch of the Medical Society of the State of New York was held in the afternoon and evening of Thursday, November 16, 1933, in the Garden City Hotel, Nassau County, with an attendance of well over 200. The District comprises the four counties of Kings, Queens, Nassan and Suffolk, which includes the whole area of Long Island. Every phase of the program had a distinct objective for the good of the Branch. The afternoon was devoted to three events:

A bridge party,
 An airplane ride.

3. A scientifie program.

The bridge party was designed for the instruction as well as the entertainment of the ladies, and was under the direction of Mrs. Janet A. Krantz, an expert teacher of contract bridge.

Garden City is near a great aviation center and free airplane trips were provided by Mr. Harry F. Wanvig, for the pleasure of the doctors and their wives. About forty guests took the ride covering a part of New York City.

The scientific session was on the subject of "The Acute Abdomen," with an all-Long Island program. Practical talks were given from the standpoint of the:

Surgeon: John E. Jennings, Brooklyn; and J. Wesley Bulmer, Glen Cove.

Internist: Carl Boettiger, Flushing; and Irv-

ing Gray, Brooklyn.

Gynceologist: Charles A. Gordon, Brooklyn.

Urologist: James W. McChesney, Baldwin. Neurologist: Orman C. Perkins, Brooklyn. Pediatrician: Miner C. Hill, Oyster Bay.

The talks were discussed by doctors from the four counties on Long Island, Doctors John M. Scannell, Queens; Charles C. Murphy, Suffolk; Joseph S. Thomas, Queens; Louis H. Bauer, Nassau; John B. Healy, Suffolk; Francis G. Riley, Queens; Augustus Harris, Kings; Irving J. Sands, Kings; Charles W. Martin, Queens; Louis A. Van Kleeck, Nassau, and Lewis A. Koch, Kings.

Ninety doctors were present and showed their interest by remaining throughout the session.

The evening session began with a banquet with an attendance of 183, including the wives of the doctors. The President, Dr. Louis A. Van Kleeck, presided, and many of the more active doctors, guests, and ladies enjoyed dancing between the courses and after the dinner.

Dr. Alee N. Thomson, secretary of the Branch,

gave a report of the peculiar activities of the These activities had been conducted under the initiative and direction of an Executive Committee composed of the officers of the Branch and delegates of each county society. The committee had held regular meetings and outlined plans which were to be followed by the constituent societies as well as the Branch. Its major project was the development of a plan to coordinate all of the agencies engaged in public health work on Long Island. This plan has been approved by the four county societies of the Branch, and will be put in operation as soon as the means for doing so can be secured. Long Island is peculiarly well situated for the demonstration, for it contains 1,000 square miles, and 4,000 doctors, and a population of 4,000,000 who live under conditions varying from the congested urban area of Brooklyn, and shading away to the strictly rural sections of the eastern end of the Island. The Executive Committee was authorized to devise means for raising funds to conduct the demonstration.

A revised constitution was adopted giving formal authorization to the formation of the executive committee, thereby enabling the Branch to function actively throughout the year.

Secretary Thomson also reported on the work of the Women's Auxiliary which had been formed by the Queens County Medical Society—the first auxiliary in New York State.

Dr. Frederick H. Flaherty, President of the Medical Society of the State of New York, brought the greetings of the parent society, and complimented the Branch for its varied activities and the unique work done by the executive committee in making the Branch an active entity.

Dr. Samuel Kopetzky, Speaker of the House of Delegates of the State Society, spoke on the opportunity for the physicans to control their own destinies after years of being controlled by their environment. He urged the county societies to choose nen of vision and leadership as their representatives to the House of Delegates.

Dr. Frederick E. Sondern explained the group plan of insurance against malpractice that has been adopted by the State Society, giving facts and statistics that are not generally known among physicians. He demonstrated that a young physician cannot afford to neglect to protect himself by taking out a malpractice insurance policy, since the most skilled doctors are as susceptible to law suits as are their less prominent brethren.

Dr. Sondern also reminded the doctors that they





should take out liability insurance against ordinary accidents to which their patients are liable in their offices, such as slipping on floors and falling down

Dr. Harry Aranow, chairman of the Committee on Legislation, spoke of the importance of the legislative work in protecting physicians in their practice. But still more important is the protection of the public. The newer method of promoting effective legislation is to get the people themselves to influence their legislators in the interest of scientific medicine.

Mrs. H. Roy Van Ness, Organization Chairman, Eastern District of the Woman's Auxiliary of the American Medical Association, gave an address on the reason for the Woman's Auxiliary. She emphasized the opportunity of the doctors' wives to promote public health and to influence the public to support the movements by which medical services are given. She particularly urged that all the county societies of the Island form auxiliaries, following the example of Queens. Dr. W. W. Bauer, Director of the Bureau of

Public Health and Instruction of the American

Medical Association, read a paper on "The Health of the School Child." The doctor outlined the principles which he believed to be fundamental in the maintenance of the health of school children. He started out by saying that a basic principle of health work among school children is to return them to their homes in as healthy a state as they were when they came. This principle includes sanitation, protection against communicable diseases, and guarding against bad health habits.

Doctor Bauer also went into the subject of the physical examination of the children by private practitioners, and their relations to the school authorities in the correction of defects. He emphasized the great importance of influencing the parents in this regard, and clearly differentiated the duties of school medical advisers, and the responsibility of the family physician. The Bureau of Public Health and instruction of the A. M. A. has studied the subject under all the varied conditions that prevail throughout the United States, and Dr. Bauer therefore speaks with authority regarding measures for promoting the health of school children.

GRADUATE EDUCATION COURSES

The Committee on Public Health and Medical Education announces that a course on Heart Disease for the Madison County Medical Society has been arranged by Dr. John Wyckoff, New York City, in the Oneida Hotel, Oneida, N. Y. The program is as follows:

November 9, 1933—

Cardiac Structure and Its Disorders, Dr. Clarence E. de La Chapelle, 140 East 54th Street, New York City.

November 16, 1933—

Cardiac Functions and Their Disorders, Dr. A. C. DeGraff, 75 East 55th Street, New York City.

November 23, 1933—

Rheumatic Fever and Rheumatic Heart Disease, Dr. Currier McEwen, 477 First Avenue, New York City.

December 7, 1933—

Hypertension and Hypertensive Heart Disease, Dr. William Goldring, 470 Park Avenue, New York City.

December 14, 1933—

Syphilitic and Arterio-sclerotic Heart Disease, Dr. John Wyckoff, 75 East 55th Street, New York City.

The Committee also arranged an afternoon of medical and surgical clinics for Wednesday, November 22, in the Ithaca Memorial Hospital, under the joint auspices of the medical societies of Cortland and Tompkins Counties. Dr. Russell L. Cecil and Dr. Russell H. Patterson, both of New York City, will conduct the clinics. These clinicians will also give lectures at an evening session.

The following course on Physical Therapy has just been arranged for the Bronx County Medical Society by the Committee on Public Health and Medical Education of the Medical Society of the State of New York:

External Heat Measures, Including Hydrotherapy—Dr. Heinrich F. Wolf.

Medical Diathermy—Dr. Richard Kovacs. Surgical Diathermy—Dr. William Bierman. Massage and Exercise—Dr. Heinrich F. Wolf. Low Frequency Currents and Electrodiagnosis -Dr. Richard Kovacs.

Ultraviolet Radiations—Dr. Richard Kovacs. Place: Fordham Hospital, Bronx, New York. Time: Monday and Friday, 4 P.M., begin-

ning January 8, 1934.

It is planned to furnish a short synopsis of each lecture which will be distributed to those attending the lecture, before the date of the lec-

THOMAS P. FARMER, Chairman.

FRANKLIN COUNTY

The regular annual meeting of the Medical Society of the County of Franklin was held in the Nurses' lecture room of the Alice Hyde Memorial Hospital, Malone, N. Y., October 30, 1933, with the President, Dr. J. W. Kissam, in the chair, and 19 members present.

The following officers were elected for the

year 1934:

President, Dr. G. C. de Grandpre, Tupper

Vice-President, Dr. R. G. Perkins, Malone.

Secretary-Treasurer, Dr. G. F. Zimmerman, Malone.

Censor for three years, Dr. W. W. Woodruff,

Saranac Lake.

Delegate to State Medical Society, Dr. C. C. Trembley, Saranac Lake.

Alternate, Dr. J. E. White, Malone.

Drs. Reta E. H. Morse, and Dr. Carter R. Morse, both of Tupper Lake, were received into membership by transfer from the St. Lawrence County Medical Society.

Dr. Perkins reported a conference which he

held with the Presidents of the counties composing the Fourth District Branch, with a view to securing uniform action in the matter of fee

An Auditing Committee was appointed to meet once in three months with the County Welfare Commissioner to audit and adjust any bills for county work that may be in dispute.

The following papers were read during the

scientific session:

"Abscess of Brain-Diagnosis, Pathology and Treatment," Dr. W. V. Cone, Assistant Professor of Neurological Surgery, McGill University.

"The Prostate-Its Pathological Aspects and Newer Forms of Treatment," Dr. David W. McKenzie, Clinical Professor of Urology, Mc-Gill University.

"Psychoneurosis," Dr. Harold W. Berman, Acting Director of Clinical Psychiatry, Lawrence State Hospital, Ogdensburg, N. Y.

The papers were of special value to general practitioners and were enlivened by clinical re-

G. F. ZIMMERMAN, Secretary

BRONX COUNTY

The first Stated meeting of the Bronx County Medical Society under the administration of Dr. M. O. Magid, was held on October 18, 1933, at 8:45 P.M. An unusually large audience attended the meeting which was held at the Concourse Plaza Hotel.

The President's inaugural address, followed by timely and pertinent remarks of Drs. T. Townsend, David Kaliski and J. Masterson, was universally approved by the audience, especially the nine-point plan suggested in the course of the talk.

Among other constructive measures advo-

cated by the Society were the following: A motion was made, seconded and carried that a letter of protest be sent to Dr. Shirley Wynne, Dr. R. S. Copeland in connection with their radio broadcasting; and also that letters of a similar nature be sent to each of the five

county societies, urging them to send letters of protest to these doctors.

The following resolution was adopted by the Society:

"Whereas, The ambulance surgeons who answer emergency calls to the bedside, are expected to perform services which the medical profession thinks they are not qualified to per-

"Resolved, That the Bronx County Medical Society recommend to the proper authorities, the Mayor, the Health Commissioner, and the Commissioner of Hospitals, that the post of ambulance surgeon be a civil service position to be filled by one who has had a hospital training and that the young interne merely assist this ambulance surgeon on his calls."

I. J. LANDSMAN, Secretary.

GENESEE COUNTY

The annual meeting of the Genesee County Medical Society was held in East Pembroke on November 2, 1933, with the Vice-President, Dr. R. B. Smallman presiding, and seventeen members present.

The following officers were elected for the year 1934:

President, Ralph B. Smallman, Corfu. Vice-President, C. D. Graney, Le Roy. Secretary and Treasurer, P. J. Di Natale. Delegate to the State Society, P. J. Di Natale. Chairmen of Committees were announced as

follows: Economics, S. R. Hare; Public Relations, G. H. Knoll; Public Health, H. M. Spofford; Legislative, P. J. Di Natale; Physio Therapy, I. M. Steele; Membership, I. A. Cole; Program, P. J. Di Natale.

Dr. Earl D. Osborne, of Buffalo, gave an illustrated talk on "Some Common Skin Diseases." P. J. DI NATALE, Secretary.

DUTCHESS-PUTNAM COUNTY SOCIETY

A regular meeting of the Dutchess-Putnam Medical Society was held Wednesday, November 8, 1933, at 8:45 P.M., at the Chimney Corner, 29 Market Street, Poughkeepsie, N. Y., with the President, Dr. S. E. Appel, in the chair and 42 members present.

Dr. Alice D. Watts, Poughkeepsie, N. Y., and Dr. Morris J. Frank, Beacon, N. Y., were elected to membership.

An invitation from the Columbia Medical Society to attend the graduate course of lectures at the Hudson City Hospital was read.

The President appointed Drs. Deyo, Krieger and Meyer as a nominating committee.

SCIENTIFIC PROGRAM

Dr. Louis C. Kress, Assistant Director, New York State Division of Cancer Control, gave a paper on "Five Year Cancer Cures," illustrated with lantern slides. The paper was discussed by Drs. Davison, Harrington, Breed, Thomson, Baldwin, and Krieger.

The meeting adjourned at 10:30 P.M. for refreshments. H. P. CARPENTER, Secretary.

JEFFERSON COUNTY

The annual meeting of the Medical Society of Jefferson County was held at Watertown, on November 9, 1933. with Dr. Walter S. Atkinson, President, in the chair.

The following officers were elected for the

year:

President, Dr. E. E. Babcock of Adams Center.

Vice President, Dr. David G. Gregor of Watertown.

Secretary, Dr. Charles A. Prudhon of Watertown.

Treasurer, Dr. Walter F. Smith of Water-

Censors, Drs. W. S. Atkinson, H. G. Farmer, S. C. Hollis, H. L. Gokey and G. E. Sylvester.

The scientific program consisted of a symposium on neurology by doctors from Syracuse University Medical College:

Anatomy, by Dr. Eugene Boudreau. Pathology, by Dr. Wardner D. Ayer. Clinical Manifestations, by Dr. Albert Siewers.

Dr. A. M. Judd of Adams Center discussed an obstetrical film shown at the October meet-

ing in a short talk entitled "The Challenge of the Last Reel."

The work of the Tumor Conference during the past year, of the plans for the coming year were described by Dr. J. R. Pawling.

The following resolution was offered by Dr. Norman L. Hawkins and passed by the society:

"Whereas, there is an agitation to change the code in relation to the grade of milk, and

"Whereas, we feel that there are producers who are producing a natural or raw milk of the highest grade and safest quality, and

"Whereas, there is sold some pasteurized milk which we feel does not safeguard the consumer,

"Therefore, be it resolved that we favor and recommend the continuation of the sale of natural milk from cattle which are tested for tuberculosis, and blood-tested for B. abortus, and produced in a cleanly way; and that this resolution be sent to other county societies through the State Journal."

C. A. PRUDHON, Secretary.

DR. JOHN H. JEWETT

Dr. John H. Jewett, who had practiced medicine in Canandaigua, Ontario County, for fifty-four years, died on October 14, 1933, aged 79 years. He was the son of Dr. Harvey Jewett who was president of the Medical Society of the State of New York in 1883; and he leaves a son, Dr. C. Harvey Jewett, who is now prac-

ticing in his home town. A line of three generations of physicians in a family is worthy of note. An address by Dr. J. N. Vander Veer in appreciation of Dr. J. H. Jewett's half century membership in the Ontario County Medical Society appeared in this Journal of November 15, 1929, page 1394.



BOOK REVIEWS



NEUROPATHOLOGY. The Anatomical Foundation of Nervous Discases. By WALTER FRIEMAN, M.D. Octavo of 349 pages, illustrated. Philadelphia, W. B. Saunders Company, 1933. Cloth, \$4.00

Up to the present time the subject of Neuropathology has been conducted by lectures in the majority of Medical Schools. It has been the desire of every teacher of this subject to have a text for this course as it has been separated from the general course of Pathology. We not only find an excellent piece of bookmaking but also an author well recognized in his field of work Dr. Freeman has covered the entire subject in a simple but complete manner. We would certainly recommend this book to every practitioner of medicine as il deals with the most up-to-date interpretations of pathology of the central nervous system.

O. C. Ferkins.

Obstetrics and Gynecology. Edited by Arthur H. Curtis, M.D. Volume 1. Octavo of 1165 pages, illustrated. Philadelphia, W. B. Saunders & Company, 1933. (To be published in three volumes and a separate desk index.) Cloth, \$35 00 for the set.

Onstetrics and Gynrcology, Vol. 2, Pathology of Labor and of the Puerperium, Operative Obstetries, Infectious Processes and Tumors, Edited by Arrilla H. Curtis, M.D. (Published in three volumes and a separate desk index.) Octavo of 1135 pages, illustrated. Philadelphia, W. B. Saunders Company, 1933. Cloth, \$35.00 for the set.

These volumes are presented by the heads of departments and other prominent teachers in the leading medical schools of America. The authors were chosen from a complete list of specialists in Obstetries and Gymecology, and eminent teachers in allied fields. Dr. Curtis says: "It is planned to publish a new edition every five to eight years, the work of former authors being reedited by them, or by some worthy successor. A new editor is to be chosen from time to time to carry on the work."

The books will become an encyclopedia of obstetrics and gynecology, and will have a place, not only in the library of every progressive practitioner in this specialty, but also in every reference library of medicine.

library of every progressive practitioner in this specialty, but also in every reference library of medicine.

These volumes will be of interest and great profit to every obstetrician and gynecolgist, a model for teachers, and a wonderful textbook for advanced students. All of the many subjects presented are of interest, and a few of the chapters are all absorbing. For instance, the Historical Chapter in the beginning of volume I, and the chapters on Pubert, and The Menopause.

In volume II, one's attention is immediately focused on the chapter on the History of American Gynecology, and the entire section on Infectious Processes.

It is impossible in a short review to do justice to this nonumental work, but the great value of these books is at once apparent when it is realized that each chapter has been written by an author who is an outstanding authority on that particular subject. W. S. Suith

A LABORATORY MANUAL OF NEURO-ANATOMY. By C. L. DAVIS, M.D., and H. S. RUBINSTEIN, M.D. Part 2, Stereographic Plates. Octavo. 30 plates. Baltimore, William Wood & Company, 1933. \$300.

This manual comprises a series of stereograms, originally made for the purpose of teaching neuro-anatomy to medical students. It is designed for the purpose of replacing actual specimens of brain sections

whenever they are not available for the student. The collection of charts of photographs and drawings are neell selected, and well put inp technically, and they afford a really valuable adjuvant in the study of neuro-anatomy not only to students but to physicians as well. To the teacher of neuro-anatomy, the manual should prove of inestimable value in brushing up on various topics before meeting the class. The manual should fill a want in medical literature.

IRVING J. SANDS.

THE BIOCHEMISTRY OF MEDICINE. By A. T. CAMERON, M. A. & C. R. GILMOUR, M.D. Octavo of 506 pages. Baltimore, William Wood & Company, 1933. Cloth \$7.25.

The authors attempt to lead us into the inner complexities of Biological Chemistry. The reviewer intost impressed by their assiduous use of guide lines throughout the work, such as their labeling the radical components of organic compounds. The material is well chosen, and thought inducing. The book is replete with clinical, chemical and laboratory information; yet, there is no attempt at padding. This reviewer found the volume of a nature to be "read," not alone consulted as a manual, written in a style both appealing and instructive, and a valuable addition to any clinical library.

Samuel Duborr.

URINE AND URINALYSIS By LOUIS GERSHENFELD, Ph.M. 12mo. of 272 pages, illustrated. Philadelphia, Lea & Febiger, 1933. Cloth, \$2.75.

This volume is an up-to-date monograph on urinalysis. The author has had a very extensive practical and teaching experience in the subject. The urine is considered from all its aspects. The laboratory methods of examination, the nature of cases in which abnormal findings prevail and the aid that may be reasonably expected to be forthcoming from such examinations are suggested. The data are presented concisely, There is a brief historical review describing the examination of the urine from the earliest to the present era. There are chapters describing the structure and functions of the kidneys, the physical and chemical characteristics of the urine, and abnormal constituents. Then the various qualitative and quantitative tests are described, The most frequently used kidney function tests are given as well as tests for the detection of metallic poisons in the urine. There is also a description of the urine pregnancy tests. In the appendix are brief descriptions of colorimetry, nephelometry, scopometry, and spectroscopy as used occasionally in urinalysis. The common reagents used in urinalysis are also given in the appendix.

THE SCIENCE OF HUMAN REPRODUCTION. Biological Aspects of Sex. By H. M.:Parshley, Sc.D. Octavo of 319 pages, illustrated New York, W. W. Norton & Company, Inc., [c. 1933]. Cloth, \$350

This book presents in simple but adequate fashion the important data concerning the anatomy and physical control of the interesting subject the first the no the interesting subject the state of the st

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chromosomes and sex determination are presented. The anatomy of the normal reproductive organs, the changes produced during pregnancy, the life of the embryo, and the role the various endocrine glands play in reproduction and in the sexual and physical development of the female are all dscussed and elaborated upon. The concluding chapter is taken up with a rather philosophic dissertation on the biology of sex behavior, including such subjects as the biologic urge, monogamy, eelibaey and sublimation.

David I. Abramson.

A Companion to Manuals of Practical Anatomy. By E. B. Jamieson, M.D. Third Edition. 16 mo. of 654 pages. New York, Oxford University Press, 1932. Cloth, \$5.00.

This is a 3rd edition of a manual that first appeared about 20 years ago. This work is a small and compact volume and although the type is fine in the descriptive parts, it is nevertheless clear, concise and readable. The B. N. A. classification is used throughout—except the joints which have the revised classification.

Much of the text has been entirely changed from the two previous editions, and almost 100 pages have been added. There has been marked improvement in the description of the nervous system, also the liver, heart, and perineum.

This book is an excellent ready reference to practical anatomy and although it is essentially for the student of anatomy, it can serve the practitioner of medicine and surgery at all times.

H. T. WIKLE.

SURGICAL PATHOLOGY. By WILLIAM BOYD, M.D. Third Edition. Octavo of 866 pages, illustrated. Philadelphia, W. B. Saunders Company, 1933. Cloth, \$10.00.

That the surgeon may properly evaluate the various surgical conditions that come under his observation, a knowledge of their underlying pathology is highly essential. In this book the author presents very clearly the gross and microscopie appearanees of the diseased organs as encountered in surgery. Equipped with a knowledge of these the surgeon may visualize the disease process and institute proper measures for its control. The text contains only essential features and is devoid of anything superfluous. In this third edition the author has incorporated new material such as sections on the metabolism, etiology and action of radium on tumors, chronic follicular gastritis, lesions of the appendices epiploicae, etiology of cholecystitis, cholecystitis glandularis proliferans, and cholesterolosis of the gall bladder. There are also new chapters on the thyroid, and the goitrigenous action of cabbage, autolytic peritonitis, high temperature death following cholecystectomy, obstruction of the common bile duct and many others. There is also a chapter dealing with bacteriology and laboratory procedure insofar as these are rleated to surgery. The text is amply illustrated and contains several colored plates. It is printed in an easily readable type and should prove interesting to anyone interested in medicine or surgery.

E. H. Nidish.

MINOR MALADIES AND THEIR TREATMENT. By LEONARD WILLIAMS, M.D. Sixth Edition. 12mo. of 420 pages. Baltimore, William Wood & Company, 1933. Cloth, \$3.75.

This book on minor maladies is already well established in England where it is now enjoying its sixth edition. The remedies the author recommends may be well recognized on the other side but to an American they appear novel. For example, in foggy weather and in times of epidemics he advises that the inside of the nostrils should be washed twice daily with soap and water. Gargling with soap and water is also mentioned. From the standpoint of germicidal effect it is probably true that soap is more efficacious than

any of the so-called antiseptics now in use. In certain ways this book is of value especially for the general practitioner. It is extremely personal in its approach and reminds one of the household medical guide except that this one is written for the family doctor. And if we should take issue with certain of the things he has to say let us admit that we are often blind to the fallacies of our own teachings,

There are a number of old-fashioned "gun-shot" prescriptions. The writer also gives generous publicity to various patent medicines. And as distance lends charm we cannot help but forgive the author for what on this side of the ocean would be regarded as a lack of propriety. He has so many remedies to offer for any symptom that the physician may turn to any page while his patient is not looking and hit upon something which may make of him a "great physician."

The information is choppy and there is a smattering of diagnosis here and there but the main thing is to give the doctor a remedy and while a number of them are no doubt in accord with our methods of procedure others are in the nature of "fillers," something to give an air of distinction to the book. The occasional case-reports are so fragmentary as to remind one of the drug-concerns which have their fill of case histories to boost their products.

All in all, we would say that this book has some good points although they are few. It reminds one of the good-hearted family doctor who is willing to pour his heart forth with his goodness to tell you everything he knows and does not know.

EMANUEL KRIMSKY.

HISTOPATHOLOGY OF THE PERIPHERAL AND CENTRAL NERvous Systems.. By George B. Hassin, M.D. Octavo of 491 pages, illustrated. Baltimore, William Wood & Company, 1933. Cloth, \$6.00.

In the last decade neurology has developed from a science based upon faets of elinical observations to one built upon pathological investigations. Unfortunately, the reports of the various pathological studies have been published in highly technical journals that are not always accessible even to neurologists. For some time there has existed a need for an authoritative book on neuropathology that should be within reach of every physician.

The book that Dr. Hassin has written, admirably supplies this want. The author has been an active worker in neuropathology and a leader in this field for many years. His pupils are to be found in every part of this country and also in forcign countries. He has earned a well merited reputation as a neuropathologist of the highest type, and as a teacher who gives freely and willingly of his time and knowledge. The book that he has written is one that should take its place amongst the classics in medicine. The text is clear and well presented. The two hundred and twenty nine illustrations are most illuminating and well printed. Technically it is of the finest character.

There are four parts to the book; the first deals with the diseases of the peripheral nerves, the second with the diseases of the spinal cord, the third with the diseases of the brain, and the fourth contains the various staining methods utilized in neuropathology. In all there are twenty-nine chapters, at the end of each there is a bibliography containing a selected group of references not only to works of American authors, but to numerous foreign works.

Those who are familiar with Dr. Hassin's work, will welcome the book most cheerfully. To every worker in medicine the book will appeal very strongly. To the medical student it will be an indispensable textbook. To neurologists it will prove most valuable. In brief, the book is a milestone not only in neurology but in medicine as well.

IRVING J. SANDS.

ARTERIOSCLEROSIS: A Survey of the Problem. A publication of the Josiah Macy, Jr. Foundation. Edited by EDMUND V. COWDRY. Octavo of 617 pages, illustrated. New York, The Macmillan Company, 1933. Cloth, \$5,00.

The Josiah Macy, Jr. Foundation has collected under the able editorship of Dr. Cowdry, a series of nicely interrelated papers on various aspects of our present knowledge of arteriosclerosis. The authors should he listed in any review of this book. They are:

N. Anitschkow
Ludwig Aschoff
E. T. Bell George R. Minot
Daniel Blain William Ophnls
Crighton Branswell
Stanley Cobb
Alfred E. Cohn
E. V. Cowdry
Herbert Fox
Herbert Fox
Jonas S. FriedenwaldGeorge Dee Williams
Howard T. Karsner
Fritz Lange

The work contains a vast amount of information, and perhaps an even more striking compilation of things we do not know about arteriosclerosis. This challenge to the investigator is perhaps the primary object of the work, but there is so much of positive value that it should be in the hands of every student of the subject. The bibliography refers to over 800 authors.

TASKER HOWARD.

THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Series 1932. Chicago, The Year Book Publishers, [c. 1933]. Derinatology and Syphilology, edited By Fred Wise, M.D., and Markon B. Sulzerger, M. D. 12 mo. of 471 pages, illustrated. Cloth, \$2.25.

This is the first time that this Year Book has been published without including, also, the year's review in Urology. The editors are to be congratulated for making the suggestion, and the publishers are to be eomended for seeing the advisability of following the suggestion.

The articles reviewed have been well chosen from American and foreign literature, and the reviews have been very carefully and efficiently done. The grouping of the reviews under the several headings for different types, or classifications, of skin diseases is quite satisfactory and makes for facility in getting at the information desired.

There are approximately 450 pages of text, nearly 100 of which are devoted to Syphilis and its therapy. In attempting to review it one finds so many interesting items that he wants to read it page for page—whether because it is a review of a foreign article not previously seen, or for refreshing his memory on the high spots of a familiar article read during the past year.

seen, or for receiving his memory on the high spots of a familiar article read during the past year.

This is by far the best Year Book on Dermatology in the series.

E. Almore Gauvain.

THE Mode of Action of Drugs on Cells. By A. J. Clark, M.D. Octavo of 298 pages. Baltimore, The Williams & Wilkins Company, 1933. Cloth, \$6.25.

When a physician prescribes a drug for a patient, he usually thinks in terms of Qualitative Pharmacology. He knows that cocaine is a local amoesthetic or that morphine is a central depressant. How these drugs act on the cells of the hody does not command his attention. This book, which is essentially a monograph on Quantitative Pharmacology, attempts to elucidate the mechanism and manner of aclion of drugs on cells. The author tries to discover the laws of combinations formed between drugs and cells, and

seeks the application of laws of physical chemistry. He compares eells with charcoal and studies adsorptive properties. He parallels observations on permeability of non-living membranes with that of the membrane of living cells. He concludes that the reactions between drugs and eells represent a far more complex phenomenon than laws of physical chemistry can explain. He is very conservative and very critical in his interpretation of the literature on the subject.

He presents the living cell as a physico-chemical system and uses free-living cells or unicellular organisms such as sea-urchin eggs, bacteria and red blood cells as examples. He shows the difference in size between the surface of a cell and the molecular size of drugs. He points ont that the most potent drugs can affect cells in such remarkably minimal quantities as 1 part in 1,00,000,000 for calciferol (crystalline vitamin D). Under such circumstances then it appears that only 10 molecules of these substances are enough to act on cell membranes. He shows that cell membranes are made of "patches" which are localized spots on the membrane laving a selective or vital affinity for certain drugs and that the entire cell does not play a part in drug actions. He concludes therefore that it is not necessary to consider laws of physics and chemistry as applying to these drugs in their action on cells.

The author presents a chapter on various theories regarding drug action and includes the Potential Theory of Straub, the Arndt-Schulz Law and the Weber-Feelmer Law. He presents the last law as the most promising theory. There is also included a chapter on the mode of action of hormones and vitamins on cells. Here he reviews the literature dealing with the more intimate relationship between cells and these substances and discusses their inechanism of action,

It is an important book and illustrates the future trends in studies and interpretations of the action of drugs on cells.

WILLIAM S. COLLENS.

The Joy of Living. An Autobiography. By Franklin H. Martin, M.D. Two volumes. Octavo of 1017 pages, illustrated. Doran & Company, 1933. Cloth, \$7.00.

Dr. Martin has written his autobiography in two fine volumes. The second is devoted almost entirely to his reminiscences of the World War, and his experiences in Washington during the mobilization of the American Medical profession for overseas service. The story of his work on the Advisory Commission of the Council of National Defense is well told. We all owe him a great debt of gratitude, for it was largely through his vision, courage, leadership, and executive genius that the medical profession took its proper place in the great conflict.

The first volume is even more interesting. His picture of his boyhood in the Wisconsin wilderness is stirring. Schoolmaster, farm hand, brickmaker and carpenter, he was never afraid of work, and received very little for it. His student days at Chicago Médical College, in two rooms for which he and his room mate paid four dollars a month should be an inspiration to every boy studying medicine,—the finest chapter in the book.

The detailed record of his greatest work, the organization of the American College of Surgeons, should be read by all who are familiar with the aims and achievements of the College, yet the reviewer can not help but wonder if he has told us all.

Most astonishing of all, he was born in 1857, yet he is still in the prime of life. Surgeon, dreamer worker and peerless executive, his life is a great record of achievement. It is good that his autobiography has been written.

CHARLES A. GORDON.



OUR NEIGHBORS



HUMAN STERILIZATION IN CALIFORNIA

The September number of California and Western Medicine has a comprehensive account of the working of the human sterilization law which was enacted by the Legislature of California in 1909, and has been extensively applied to mental defectives since 1918. The article is a study of 2,264 cases of sterilization which have been done in the Sonoma State Home (for the insane). This is slightly over one half of those discharged from the institution. Over two thirds of those discharged had made a satisfactory adjustment to social conditions. Commenting on

the results, the article says:

"Of the above number discharged, a large proportion are successfully married, the majority with our permission and with the policy of being married for approximately two years before being discharged. Of this number of marriages. their success as to married life, being measured by the number of annulments and divorces, compares favorably with normal individuals. Marriages assist materially in stabilizing the defectives, and we credit considerable of their successful adjustment to successful marriage and we believe they should have this privilege in that they are unable to propagate, owing to the operation before leaving the institution. Some of the higher type have been permitted to have one or more of their children, which were born before admission. It makes for a very happy home, although they are not able to have additional children. The vast majority, however, do appreciate and are glad they cannot have more children, realizing their inability to properly care for them. The great majority of the mentally deficient do well to support themselves, even under guidance, without the added responsibilities of having children to

The article closes with a report of a pamphlet on "Human Sterilization," published by The Humane Betterment Foundation, suite 321, Pacific Southwest Building, Pasadena, California. This pamphlet explains the results of the appli-

cation of the law and says-

"At the present time there are twenty-five states and four foreign countries with sterilization on their statutes. We are glad to report, however, that other states and countries are giving the matter very serious consideration. By the material aid of organizations, such as the Human Betterment Foundation of Pasadena, headed by E. S. Gosney, philanthropist and founder, we are hopeful that such laws will get on the books of the remaining twenty-three states of the Union and all the civilized countries in the world. From our actual experience over many years, it would seem that everything points in favor of giving these individuals this protection against parenthood, and the longer we are in this work the more we advocate eugenical sterilization for the protection of society and the furtherance of human betterment.

"The patients sterilized in the California institutions were found in six cases out of every seven to be satisfied with the operation and the results. The exceptions were only such as would be expected in a group of persons who had gone

through severe mental illness.

"In no case has the operation broken up a home or disturbed a family relationship. On the contrary, case after case might be cited in which sterilization has been responsible for keeping a family together and allowing the patient to remain in his own home instead of spending the

rest of his life in an institution.

"A canvass of the medical officers, probation officers, parol authorities, and social workers of the state who have had close observation of the workings of California's eugenic sterilization law disclosed that they are virtually unanimous in its support, holding it to be desirable in principle and satisfactory in practice. The criticism most frequently voiced by them is that it is not applied more widely. While nearly all of the feebleminded are sterilized before released from state institutions in California, only one in twelve of the insane has been sterilized during the life of this law."

COUNTY SOCIETY NEWS IN MISSISSIPPI

The Mississippi State Medical Association has a system of county editors for reporting local medical items to the New Orleans Medical and Surgical Journal. The Journal for November contains the following excellent report from Dr. G. S. Bryan of Monroe County:

"Whew! Wasn't September a scorcher?

But October, I hope will be better. At least, it has opened up nice and cool.

"All my doctors are in good health, but they are pretty busy, I think. It is evident that we are having more malaria to deal with than we have had for several years. However, we do

(Continued on page 1412-adv. xii)

Lest we forget Dentria 47 Afaitoso
No.1 Maltose 51%. Dentria 47%. NaCl 2%. H2O 5%.
No.2 Maltose 52% Dentria 43%. H2O 5%.
No.3 Maltose 51%. Dentria 41% KCO, 3%. H2O 5%.
No.3 Maltose 51%. Dentria 41% KCO, 3%. H2O 5%.
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"The dextrin-maltose preparations possess certain advantages. When they are added to cow's milk mixtures, we have a combination of three forms of carbohydrates, lactose, dextrin and maltose, all having different reactions in the intestinal tract and different absorption rates. Because of the relatively slower conversion of dextrins to maltose and then to dextrose, fermentative processes are less likely to develop. Those preparations containing relatively more maltose are more laxative than those containing a higher percentage of dextrin (unless alkali salts such as potassium salts are added). It is common experience clinically that larger amounts of dextrin-maltose preparations may be fed as compared with the simple sugars. Obviously, when there is a lessened sugar tolerance such as occurs in many digestive disturbances, dextrin-maltose compounds may be used to advantage." (Queries and Minor Notes, J. A. M. A., 88:266)

POMEROY

POMEROY specializes in Elastic Stockings. Elastic Stockings for varicose veins—and for swollen ankles and just "tired legs."

The "Master"—Hand-made

"For uniform support and durability— the finest type made."

The "Special"—Hand-made

"Correct for comfort . and fit."

The Seamless—Machine-made

The Lastex—Factory-made "Very light in weight."



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SURGICAL APPLIANCES

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NEW YORK

BROOKLYN NEWARK SPRINGFIELD WILKES-BARRE DETROI1
BOSTON

(Continued from page 1410)

not report nearly as much as formerly: for we have stopped calling everything we meet malaria. Our county laboratory has been worth untold sums to us and our people. The saving in quinine, alone, would pay the running expense of this laboratory. When I was acting county health officer, my doctors would report thousands of cases of malaria in a single month. I knew this was wrong. After I had succeeded in establishing this diagnostic laboratory the incidence of malaria crumpled at once. Now, our doctors rarely treat or report a case as malaria until the diagnosis is verified. We have a most efficient technician and the hardest worker I ever knew. She made and reported an examination for every seven minutes of her working hours in the month of September. These specimens—all kinds—are sent in to her and she phones reports to the doctor sending them immediately after examination. Our people are completely sold on the idea and appreciate the service more than they do any public service they get. This laboratory is not in competition with any commercial laboratory; for the people could not pay for this service. And the poorest people as well as the more well-to-do get the service, just the same. I am convinced that more of our recent graduates in medicine would locate in the rural districts if they knew they could get laboratory help in their work. I maintain that the country people are entitled to the best medical and hospital service that can be given any people. The county laboratory and community hospital is the solution of this crying need and perplexing question. Correct diagnosis is fundamental in scientific practice of medicine. And any other kind of medical practice is criminal. These last two statements lead me to wonder if we, doctors, keep our records and our consciences clear and clean in our dealings with the sick and near sick? I wonder if we do not encourage, and even, practice a little Voodooism? It is so easy to look at a tongue, insert a thermometer, write a prescription and charge two dollars (then collect it if we can)."

GRADUATE COURSES IN VIRGINIA

The annual report of the Department of Clinical Education of the Medical Society of Virginia is contained in the October issue of the Virginia Medical Monthly, which says:

"The duty of the Department of Clinical Education is to stimulate and assist in the holding of scientific programs by the component societies. Its appropriation, reduced this year to \$400, has been expended for defraying travelling expenses of clinicians and for announcements and notices concerning clinical meetings. The Clinch Valley

(Continued on page 1414-adv. xiv)



DURING PREGNANCY AND THE POSTPARTUM PERIOD

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(Continued from page 1412-adv. xii)

Medical Society has continued to arrange for invited speakers through the Department. such speakers went from Richmond to the meeting in October, two in April, and two more have been scheduled for the meeting this September. The Medical Society of Northern Virginia, the Danville-Pittsylvania Academy of Medicine and the Augusta County Society have secured speakers through the Department. The regular clinics held at the Medical College of Virginia and the University of Virginia Hospital are well received by the profession and are emphasized in notices and announcements of the Department.

"Besides the oversight of the program of instruction in prenatal and postnatal care, (a detailed report of which is attached,) the Department's major concern during the year has been the establishment of clinics in pediatrics, the subject chosen as the preferred study by the majority of members of the courses in prenatal and postnatal care. Dr. Frank D. Wilson and Dr. W. P. Tackson, chairmen of the child welfare committees of the Pediatric Society of Virginia and of the Medical Society of Virginia, requested the Department to institute a program of pediatric instruction in all parts of the state by means of classes arranged in circuits.

"At the time this report is drafted, the Joint Committee has completed one year and four months of the two-year program of intensive postgraduate instruction in prenatal and postnatal care first authorized by the Medical Society at its meeting in Roanoke in 1931 and unanimously approved at its Richmond meeting in 1932. On both occasions an annual appropriation of \$2,500 was voted to supplement the grants of the Commonwealth Fund.

"By the 15th of September Dr. Lapham, the Joint Committee's Field Clinician, will have completed thirty-three courses of twenty hours' instruction. Except for two short courses of two weeks each on the Eastern shore and in Bedford, the classes have been arranged in circuits so that the instructor spends one day each for ten weeks in the class center. Three hundred and twentyseven meetings have been held, each with an average of fourteen present. The physicians who are members of these classes—membership including those who signed the enrollment card and attended at least once and those who without the formality of enrolling attended at least four times -total 421. These members, on the average attended three-fourths of the meetings. In addition over 150 visitors were present, chiefly physicians but including internes, medical students and nurses not eligible to membership. In every case, in conformity with the instructions of the Medical Society at the inauguration of this program; the organization of a class has been under-

(Continued on page 1416—adv. xvi)

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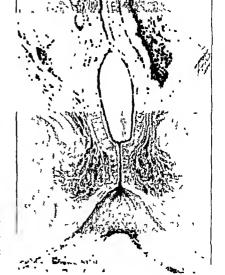
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(Continued from page 1414-adv. xiv)

taken only after it was approved by the local profession. Nearly forty societies have formally voted their endorsement of the course, every vote being unanimous except one. After approval for organization was given, every community to which Dr. Lapham's services were offered has carried through the formation of a class.

"The Field Clinician has reported the demonstration of 220 clinical subjects in classes, and the examination of 403 patients in educational consultations held at the request of individual physicians. The increasing emphasis upon the individual conferences is due to the desire of members to secure expert instruction in their own problems, and in part, the Field Clinician reports, to the fact that the chief handicap to the complete success of the work is the inability of the local groups to arrange for an adequate supply of clinical material.

"While the lack of clinics has been the one source of complaint about the program, the comments of the members themselves prove their high regard for the advantages of their study. In the written comments which each member is asked to furnish anonymously, 213 of 219 replies have rated the lectures as excellent or good, 100 of 189 replies consider the clinics either excellent or good, 204 of 210 replies consider the course worth the cost in time and money, and 200 of 206 desire further courses in other subjects. The subject most generally preferred is pediatrics with a vote of eighty-five."

The financial report of the work for the year ending April 30, 1933, is given as follows:

EXPENSES.

Travel and salary of Field Clinician \$	7,000.08
Instruction aids	447.37
	2,299.99
Travel for organizing classes	542.02
Supplies and communications	803.58
<u></u>	

\$11,093.04

RECEIPTS.

Commonwealth	Fund\$	7,500.00
Medical Society	of Virginia	2,500.00
Enrollment fees	at \$5 per member	1,590.00

\$11,590.00

Other abstracts of articles on the Graduate Courses in Virginia have appeared in the New York State Journal of Medicine during the past two years as follows:

April	1.	1933	page	481
Oct.	1.	1932		1158
Tuly	ī,	1932	14	837
May		1932	44	568
Jan.		1932	**	56
May			44	666
Feb.		1931	**	248
April		1930	**	486
Feb.		1930	"	248
Feb.		1930	**	188
n.	12,	1020	44	100



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GRADUATE INSTRUCTION IN MISSOURI

The November number of the Journal of the Missouri State Medical Association has the following editorial description of graduate instruction in the subject of cancer:

"At the Kansas City Session of the Missouri State Medical Association the Committee on Cancer presented a recommendation that an educational campaign on cancer for both lay and professional groups be inaugurated in conjunction with the Committee on Post-graduate Course and the state committee of the American Society for the Control of Cancer. The recommendation was approved by the House of Delegates and the program has been prepared and the work begun.

"The Committee on Cancer and the Committee on Post-graduate Course have formulated plans for one-day cancer programs wherever such programs would be effective. The State has been divided into five districts and teams have been organized in various centers of the State. These teams are composed of physicians qualified to speak before lay and professional audiences and to give dry clinics on cancer.

"Each program will include a large public meeting for lay education: a dry diagnostic clinic for the benefit of the local medical profession, and a scientific program in the evening for a joint meeting with the county medical societies.

"Cancer of the breast will be the topic of the

programs during this year.

"The State has been apportioned in groups

of Councilor Districts.

"The Woman's Auxiliary through Mrs. Floyd H. Spencer, St. Joseph, chairman of the Committee on Public Relations of the Auxiliary, has volunteered to assist at these meetings by using their influence in the counties where the lectures are given to encourage a large attendance of citizens at the public meetings.

ings

"Under the guidance of the Cancer Committee and the Post-graduate Committee with the State committee of the American Society for the Control of Cancer, this work is now well under way and promises to be a powerful influence in arousing an intelligent cooperation of the public with the medical profession to gain the first and the vital objective in the fight against this menace; namely, the early recognition of cancer.

"To the physician who sees few cases of cancer a knowledge of the early symptoms is absolutely essential. Therefore, he must be told

(Continued on page 1419-adv. xix)

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Sodium chloride 0.2830
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(Continued from page 1418-adv. aviii) and retold and told again in more technical fashion what the early symptoms are, why they point to cancer and what is the proper method of aborting or curing it.

"To the physician expert in the recognition and treatment of cancer these meetings should bring renewed enthusiasm in spreading the knowledge among his patients and among his confreres.

EMERGENCY MEDICAL RELIEF IN FLORIDA

The October issue of the Journal of the Florida Medical Association, Inc., contains an editorial comment on the work of the Medical Economics Committee of the State Association. describing a meeting of the Committee in October. the editorial says:

"Mr. Marcus C. Fagg, Florida Director of the Federal Emergency Relief Administration was present, by invitation, and assisted materially in clarifying certain phases of the Florida Physician-Federal Relief relationship. A considerable portion of the morning session was devoted to a discussion of this subject with particular reference to determining a satisfactory and fair fee basis for professional services to recipients of unemployment relief, it having been definitely stated by the Director that uniform fees must prevail for the entire State.

The Committee desires to submit the following recommendations':

"I. That each County Society seriously consider contracting with its various municipal and the county governments to furnish medical services to the indigents of these political units; that the County Society supervise the service rendered and that the funds received from such contracts be paid into the Society's treasury to be used for the scientific, economic and social interests of its members.

"II. That there be no free examination or vaccinations of children by County Society members. Those who are indigent should be provided for as suggested in the preceding paragraph. Those who can pay should secure the services from the family physician.

"III. We believe that it is impossible for any man, no matter how honest and conscientious he may be, who is serving as part-time employee of the county or city and part time in private prac-(Continued on page 1420-adv. xx).

(Continued from page 1419—adv. xix)

tice to be able to render adequate service when his private income is being neglected.

"We therefore recommend that county and city physicians be paid an adequate salary and that they not be allowed to do outside practice for which they expect to receive remuneration, and that these physicians be required to render their services only to such patients as have been investigated and found to be without the non-necessities. In this way those physicians who are now overburdened with charity work will receive ade-

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quate salaries, allowing them to devote their full time to it, and will relieve the private practitioner of such work as we now find it impossible for the county or city physicians to take care of.

"IV. That County Societies take under serious advisement at an early date the newspaper program suggested in the Committee's Preliminary

Report.

"V. That the County Societies consider the adoption of some such plan as that of the Philadelphia Medical Society, for guidance of its members in relation with insurance companies."

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SPEAKERS' BUREAU IN IOWA

Medical The Iowa State Society has an active "Speakers' Bureau," which reaches not only ay groups, but also medical societies. It assigns physicians to address lay groups such as women's clubs, parent-teachers associations, and high school classes, and pays the expenses of those who are sent out.

The Bureau also provides speakers for scientific groups, such as those of dentists, nurses and pharmacists, and demonstrators at medical clinics, and especially speakers for county society programs. The Bureau seems to have some difficulty with the question of publicity accruing to the speakers, for the October Journal of the Iowa State Medical Society announces that "every effort is made to avoid sending a doctor too far, yet at the same time far enough so that his talk may in no way be construed as an advertisement of his own medical services." The same issue of the Journal

also contains the following account of the graduate courses managed by the Bureau.

"Fall and the reopening of schools, colleges and universities have started the trend of students back to school and studies. Not to be outdone by the 'younger generation, Iowa physicians, about 300 strong, have enrolled for the fall postgraduate courses given by the faculty members of the College of Medicine, and sponsored by the Speakers' Bureau.

"The work being offered this fall consisits of two courses; one a combined course on obstetrics and pediatrics, given by Drs. E. D. Plass and P. C. Jeans; and the other course on diagnosis and treatment of common medical disorders, under the direction of Fred M. Smith, M. D. The courses began at Algona at 5 p.m. on Monday, September 26, where over 60 members have signed up for the work. The courses will continue for

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period of ten weeks on the same day for each center as the day on which it started. The other centers where the courses are being given are: Jefferson on Tuesday, where about 35 doctors have enrolled; on Wednesdays at Des Moines, where the courses have been made available to each member of the Des Moines Academy of Medicine and Polk County Medical Society; and on Thursdays at Marshalltown, where there is an enrollment of over 50.

"From reports made at a recent meeting of state medical society secretaries on postgraduate medical education, it is evident that Iowa is doing more work along this line than almost any other state. The interest in this type of work has grown by leaps and bounds since its inauguration in 1929. With the fall courses just under way, demands are already coming in from several centers for spring courses."
This Journal also describes

the "Mecting of Merit," by which title it honors the society which puts on the best meeting of the month. The report says:

"However, the meeting which has been awarded the distinction of "Meeting of Merit" for September is the meeting of the Tenth District Medical Society at Creston, on September 22. Doctors were present from every county in the district and great interest and enthusiasın were shown in meetings of this type. In the afternoon a chest clinic was held. After an enjoyable dinner and social hour. at which time short talks were given by officers of the State So. ciety, the following program was presented on the following suliects by local speakers:

Perineal Lacerations, Spinal Anesthesia, Endocrine Therapy of Menstrual Disorders, and Experiences in Vienna.

'The Bureau commends this type of program in particular because it is fulfilling the primary aim of a medical society, which is the development of its own mem-

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The prevalence of latent vitamin A deficiency diseases suggests to numerous investigators that modern diets do not contain enough carotene to fully satisfy the requirements of many individuals.

The fact that carotene is normally present in various parts of the body, blood, breast milk, etc., would seem to indicate that in addition to its activity as a vitamin, carotene itself meets other body requirements besides its conversion into the colorless product by the liver.

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NEW YORK STATE JOURNAL of MEDICINE

PUBLISHED BY THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

Vol. 33, No. 24

NEW YORK, N. Y.

December 15, 1933

THE DIAGNOSIS OF GLAUCOMA SIMPLEX

By S. B. MARLOW, M.D., SYRACUSE, N. Y.

Read at the Annual Meeting of the Medical Society of the State of New York, at New York City, April 4, 1933,

 LAUCOMA SIMPLEX has been called T posterior glaucoma in contrast with acute or chronic congestive, or anterior glaucoma. The relationship between these two types of discase is not definitely known. It has been suggested that simple glaueoma is a compensated form of the disease, the change from one form to the other having been observed not infrequently. Furthermore the differential diagnosis between the chronic congestive and the non-congestive form is sometimes difficult to make. In both instances the disease is bilateral although the eyes may be effected at different times. The fact that the ultimate termination is blindness if untreated, and unfortunately sometimes in spite of treatment, makes its recognition in the incipient stages of extreme importance.

Diagnosis, therefore, has two aims—(1) the determination of the presence or absence of the disease and (2) the recording of its progression.

Simple glaucoma is characterized by its insidious onset, its freedom from pain and the

slowly progressive loss of vision.

Because of the fact that central vision remains good until late in the course of the disease these patients too frequently do not come for examination until the characteristic triad of symptoms—increased tension, cupping of the dise, and changes in the visual field—is well established. The making of a diagnosis in the incipient stage will be dependent upon the keenness and thoroughness of the ophthalmologist in conducting his examinations.

The characteristic features and the important points in the diagnosis of this disease are well illustrated in a review of a series of 115 cases the majority of which have been observed by my father, Dr. F. W. Marlow.

Eighty-two cases presented a history from which it was possible to estimate the probable duration of the disease prior to its diagnosis. The average probable duration was found to be 2.8 years, the shortest 2 months, the longest 15 years but in this case there was a suggestion that the disease had been previously diagnosed. In 33 cases the

diagnosis was made before any suggestive symptoms were apparent to the patient. Some of these cases were old patients returning for refraction.

Fifty-four patients were male, 61 female. The average age was 59½ years. There were 48 cases under 59, 67 cases 59 or more. The youngest patient was 16, the oldest 86. While these figures indicate that the disease is more common after the age of 50, in agreement with other reports, they emphasize the necessity of constantly being on the lookout for its presence at an earlier age. 41.7% of the cases were below the average age of this series.

The commonest symptom which constituted the chief complaint was gradual failure of vision in 54 cases. Blurring or fogs came next in 27 cases. In 24 eases the patient came with complaints about their glasses, believing that a change was indicated. Ten complained of difficulty in reading. Seven patients had noticed halos but had had no pain and 6 had accidentally noticed the loss of vision of one eye. Headache was noted in five cases. Other symptoms included foreign body sensation, 4 cases, difficulty in the dark, 3 cases. Many other minor symptoms were present but these constitute the outstanding complaints. It is interesting that in 30% of the cases the chief complaint had some reference to glasses and the need of a change. In 3 cases there were notes of previous examinations by optometrists.

The relationship between glaucoma and the refraction of the eye is well known. In this series 75 cases were hyperopic, 21 myopic, 6 had mixed astigmatism and in 13 the refraction was not noted. The myopia was less than one diopter in 11 cases, from 1 to 3 diopters in 8 cases, 8 and 11 diopters in 1 case, 4 and 9 diopters in a second. Thus it appears that glaucoma is not common with high degrees of myopia.

Premature presbyopia has been described as an early or premonitory sign of glaucoma and is explained by pressure affecting the nerve supply of the ciliary muscle. In this series of eases this symptom has not been observed. On the other hand, premature presbyopia has not infrequently

been observed without the subsequent development of glaucoma. This leads us to suggest that premature presbyopia has been unduly emphasized as an early symptom of glaucoma simplex.

The insidious nature of simple glaucoma is strikingly illustrated by the tabulation of loss of vision present in this series when they were first examined. (Table 1.)

Vision of	THE	Worse	EYE	ΑT	THE	FIRST	Examination
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No Light Perception or Enucleated 6/60 or less. 6/24 or less. 6/12 or less.	31 Cases 24 " 14 " 10 "	26.9% 20.8% 12.1% 8.7%
6/12 or less	10 " 36 "	8.7% 31.3%

TABLE 1

A disease which results in considerable damage to the vision of one eye in nearly 70% of the cases before the patient is sufficiently aware of his condition to seek aid can truly be called an insidious disease. The insidious nature of the disease is undoubtedly responsible for this considerable loss of vision which may develop before some accidental or deliberate shutting of the better eye discloses it.

A further explanation is to be found in the tabulation of the remaining vision in the better eye as follows (Table 2):

6/ 5 6/ 6 6/ 9 6/12	37 " 20 " 14 "	10.4% 32.1% 16.5% 12.1% 27.8%
Worse than 6/12	32 "	27.8%

TABLE 2

Examination of this table shows in comparison with the first that whereas 70% of the cases have a considerable loss of vision in one eye only, 28% have a high degree of loss of vision in both eyes.

The tension was measured by the Schiotz tonometer (old model) in 72 cases. The remaining 43 cases were observed before the introduction of the tonometer for the most part. The average tension for 131 eyes was 36mm, the high-

est was 80mm, the lowest 12mm. In 82 eyes, or 63%, the tension was 36mm or less and in 49 eyes, or 37%, it was more than 36mm. The following table represents the relationship between the tension and the duration of the disease prior to observation in 52 cases. (Table 3.)

No. of Cases	Duration	Tension var- ied between	Average Tension
26	1 year or less 2 years 3 " 4 " 5 " 6 " 7 " 8 " 10 " 15 "	64-22 53-25 45-25 47-12 72-25 70-47 63 27 43 18 40	43 39 40 29 43 57 63 27 43 18 40

TABLE 3

The average tension from this table would appear to be about 40 mm. regardless of the duration of the disease.

The visual field was definitely recorded in 101 of the 115 cases. Of these 14, or 14%, were recorded as being normal. It is probable that some of them would have shown typical defects if they could have been studied by the more recent methods. One case, carefully followed for 10 years, did not begin to show definite defects in the field of the remaining eye until 4 years after the first examination at which time the tension was 70. In 11 cases the only field defect was a scotoma. In 3 cases scotomata were associated with peripheral changes. In 35 cases there was a beginning or moderate nasal defect and in 36 the nasal defect in the field was advanced. From this it is evident that in 86% of the cases there will be found to be changes in the field of vision when the patient is first examined. The following table seems to indicate that there is likely to be a marked loss even at the first examination and that apparently there is no definite relationship between the degrees of field defect and the duration of the trouble. (Table 4.)

	No Change	Scotoma Only	Scotoma + Peripheral	Beginning Nasal Defect	Advanced Changes
1 Year or less. 2 Years 3 " 4 " 5 " 6 " 7 " 8 " 10 " 12 "	6 5 1 	7 i i 	3 	21 4 1 2 2 2 2 2 	26 5 2 2 2

This may be due to the uncertainty with which the probability favors the idea that the disease had been present long before symptoms were apparent. It is possible that there may be some relationship between the rapidity of onset and the rapidity with which the eye adjusts itself to the increase of tension. In a smiller group selected from this series to be discussed later there seemed to be no definite relation between the degree of tension and the field defect. Seventy-one per cent of the 101 cases had marked field changes when first seen

Among the less frequently noted changes which may sometimes be helpful in the diagnosis is the state of the anterior chary veins. These were sufficiently striking to be especially mentioned in nine cases of this series, two of these occurring

with a low tension

In 69 cases the pupils were noted as normal in 27, sluggish in 22, large in 20. There were no strikingly abnormal changes in common with the usual description of the disease. In 56 cases the anterior chamber was described as normal in 35,

deep in 14, and shallow in 18

Cupping of the disc is one of the cardinal signs of simple glaucoma and very often the diagnosis is first made on its observation. In 99 cases of this series cupping was described as physiologic in 7, shallow in 8, deep in 13 and characteristic Cupping was doubtful or absent in 17 ın 54 cases In 5 cases the observation of an increase in the physiologic cupping led to taking the ten sion with the confirmation of the presence of When cupping of the optic dise is well established there is no doubt about the diag-The recognition of beginning changes in the disc is more difficult. It has been suggested that sketches depicting the relative size of physic logic cupping at successive examinations will show clearly a significant increase in the size of a Undoubtedly photographs of the disc would prove of even greater value but with this procedure the writer has had no experience. Treacher Collins calls attention as an early symptom to the displacement of the vessels to the nasal side in an eye which shows no other signs This he has ob served in cases where there is a definite glaucoma in one eye and in the other no marked symptoms Careful ophthalmoscopic examination in these early cases is essential for diagnosis

Arterial pulsation is described as a characteristic sign of increased tension in most text books According to Elliott undue emphasis has been placed on it for he has stated that he has never observed it in either simple glaucoma or chronic congestive glaucoma. When present it is a very valuable sign but it occurs much less frequently than the textbooks infer Venous pulsation is usually looked upon as physiologie and is much more commonly observed in young people. It is more marked in children, less so in elderly people According to Loring the venous pulse may be an expression of a disturbance in the equilibrium between the pressures within and without the vessel wall. Elhott believes that, when other features of a case point toward glaucoma, the pres ence of a marked venous pulsation in the retina is a suggestive piece of evidence. Further, the presence of such a marked venous pulsation, whenever it is detected should raise in the observor's mind the possibility of a threatening of glaucoma" This would seem especially true of patients at the glaucoma age-a time when this phenomena is less frequently observed. In this series vessel pulsation was present in 11 of 16 cases with notes. In seven of these it was spontaneous and in 4 appeared on pressure. In 5 cases pulsation was definitely noted as absent

The study of a group of 32 cases selected from these 115 cases on the basis of vision of 6/12 or better in both eyes presents a rather striking comparison with the figures for the whole group of cascs Whereas the average probable duration was 28 yrs for the whole series, in 17 of the selected cases no previous duration could be determined, in 12 cases the probable duration was one year or less, in 1 case 3 years and in two cases four years Thus the duration was longer than 1 year in only 1% In other words in these eases representing 28% of the whole series, the diagnosis was made early in the course of the disease The average tension for this group was 29 mm as compared to 36 mm for the whole series The average age was only slightly lower, being 578 years In this group there was considerable field loss in only 50% as compared to the 70% of the whole group Three cases had normal fields, in 9 cases a scotoma was the only change, and in 3 others scotomata were combined with other de fects. An attempt was made in this group to re-

	No Defect Scotoma Only		Scotoma c Peripheral Changes	Beginning Nasal Defect	Advanced Nasal Loss	
Tension under 30	2	6	1	5		
Tension 30-40	1	2	1	7	2	
Tension over 40		1	1	2	1	
	·	i		-	•	

N. Y. State J. M. December 15, 1933

late the changes in the field with the tension as shown in the following table. (Table 5.)

Analysis of this table shows no definite relationship between the extent of the field loss and the tension. It would seem to indicate that low tension is harmful in some cases and that in others high tension is not so harmful as might be expected for about the same degree of field defect can be present regardless of the tension of the eyeball.

The question arises as to what is the most reliable sign upon which an early diagnosis of chronic simple glaucoma can be based. Review of the symptoms recorded as the chief complaint in this series would indicate that there is no one which can be considered as characteristic except perhaps the history of gradual failure of vision. The great variation in the objective signs, unless the case is well established, renders it difficult to select any one procedure as entirely reliable for establishing a diagnosis.

In as much as all the essential symptoms of glaucoma can be accounted for as being the results of increased pressure (Fuchs) Haden believes that its discovery prior to the onset of symptoms should be the aim of all ophthalmologists and to this end he urges more routine tonometry especially in the age period in which the disease is likely to occur. Analysis of the tension found in the cases reported in this series seem to indicate that the state of the intra-ocular tension varies much less than any other symptom and tonometry, therefore, would appear at the present time to be one of the most reliable procedures in arriving at an early diagnosis. It should not be forgotten, however, that a low tension, well within the normal limits, is sometimes encountered in cases with other well-marked characteristic signs. While characteristic defects in the field of vision are among the earliest symptoms Traquair states that they are present only after the disease has become established. There are very few cases in this series in which the field failed to show changes. In one of the more recent cases, however, (already mentioned) careful examination with the tangent screen failed to show any defect although the intra-ocular tension was 70 mm.

The work of Derby and his collaborators has shown that the light minimum is increased in glaucoma. These workers believe this to be the earliest detectable sign of this disease. They have devised a portable apparatus with which the test can be made in the hope that this test may become more readily available for clinical use. Until its application is more generally understood its use will be restricted. The fact, however, that the light minimum is increased, that is that a greater amount of light is necessary for its perception by a glaucomatus eye, suggests the possibility of increasing the sensitivity of other clinical tests by

decreasing the amount of light ordinarily used for them. This principle can be easily employed by anyone who cares to develop standards of his own with which to compare observations made in suspected cases. It has been applied by the writer to the examination of the central portion of the field of vision with results which, from the evidence so far obtained, indicate that typical defects can be demonstrated much earlier than when full illumination is used.

The desire to make as early a diagnosis as possible has led to the development of many provocative tests. How frequently they are applied it is difficult to state. Probably the adrenalin test has been used more widely than any other because of its simplicity and relative safety. This test has been used with positive results in but three cases of this series so that our experience has been very We have had no experience with the homatropin test, the Seidel dark room test, the "coffee," "drinking" and "reading" tests, nor with jugular compression. Pressure curves following puncture of the anterior chamber according to Kronfeld have a form typical of glaucoma and are positive when all other tests fail. All these provocative tests depend upon tonometric observation.

The importance of the estimation of the intraocular tension with the tonometer, therefore, can not be urged too strongly as a more routine procedure in patients at the glaucoma age. It is more than likely that more of the cases in the series here reported might have been diagnosed at an earlier stage if this had been done. It is particularly true in a case of high myopia in which the significance of the symptoms was not appreciated until the tonometer demonstrated an elevated tension. A discussion of the proper teclinique for tonometry hardly seems necessary here. Suffice it to say that the patient should be in a reclining position, the lids held away from the globe and from contact with the tonometer and the base-plate of the tonometer applied squarely over the centre of the cornea in such a way that the instrument stands perpendicularly. Accurate readings can only be obtained if the instrument is applied in this manner. Moreover, the measurement should be made with the lightest weight which allows the needle to register between the third and fifth divisions on the scale. This applies especially to the Schiotz tonometer as we have had no experience with other models. further point has to do with the time of day at which the tension is taken. The tension normally is somewhat higher in the morning, the variations according to Gradle being not more than 6 mm. and never above the normal limits. In glaucoma the morning rise is considerable with a sharp fall towards noon, and a gradual decrease during the afternoon. Hagen, Oslo, Norway, suggests that the tension be estimated twice daily, at 9:00 A.M.

and 6 30 PM More frequent observations would, of course, produce a more clean cut curve

Such then are the main points in the establishment of a diagnosis Of no less importance are the methods to be used in watching the course of the disease. From this point of view the fields of vision assume preemmence. Altho successive ob servations may demonstrate no diminution in vis tral acuity, that the tension is being maintained at a satisfactory level, and that the patient is symp tom free, perimetry will demonstrate that the disease is progressing. Therefore, while defects in the field of vision are present only when the disease has become established, their investigation is the best criterion upon which to judge its prog ress and to make decisions in regard to treatment Contraction of the peripheral field and the development of scotonia or their further enlarge ment are definite indications that the treatment is Such field studies should be made under identical conditions. The observation of the tension is of almost equal importance. If the tension is not being properly controlled the treatment, whether medical or surgical, has become meffec tive and further steps must be considered

In reviewing the series of cases here reported the following observations seem permissible

(1) that the duration of the disease prior to its drignosis is longer than it should be owing to its insidious nature and the fact that central visual acuit is not affected in the early stages

(2) that it is possible to make a diagnosis before the patient has become conscious of any reduction of visual actify or limitation of the visual field by tonometry and scotometry in at least 28% of the cases

(3) that 30% of the cases came with symptoms of eye strain believing a change of glasses to be necessary

(4) that the present day tendency for people to consult optometrists as a result of their aggresive propaganda is a bar to the early recognition and diagnosis of simple glaucoma

In conclusion it seems fair to say from the study of the cases reviewed and from the generally expressed opinious to be found in the literature that the most important single procedure in the diagnosis of simple chronic glaticoma is tonometry. If, as already has been stated, all the symptoms and signs of glaucoma depend upon increased intra ocular tension we must agree with Hiden that, "it is incumbent upon us to discover its presence before the symptoms occur."

DISCUSSION

Dr Arthur Bedell—It is a great pleasure to discuss Dr Marlow spaper. He has so carefully analyzed the many complex problems associated with the drignosis of this disease that it seems wise for me to confine my remarks to the changes in the fundus dwelling for a moment upon the variations in the disc structure which may lead to inaccurate drignoses and then presenting photographs to illustrate the actual disc appearance as found in cases of proven simple glancoma.

The critical inspection of these photographs should convince the skeptical that there is no method so dependable or so accurate as stereoscopic photography and it will further show that small shallow central excavations are found in cases with high intraocular tension and that large deep excavations are seen when no glaticoma is demonstrable. The pictures also emphasize the lact that very extensive undernining of the disc may be found with only very slightly increased tension and furthermore this elevated tension may not be constant. We experience our greatest difficulty in distinguishing

between some types of simple glaucoma and optic

rtophy

To give point to these observations, a group of photographs have been selected for a lantern slide demonstration. These melude several normal eveavations, anomalions exit and entrance of vessels, temporal comis, crescent staphylomi circumpapillary atrophy and optic nerve atrophy. Special emphasis is placed upon the great difference in appearance in the disc in simple glaucoma. This ranges from an extremely small, shallow central excavation to the complete undermining cup. The importance of carefully focusing the true disc margin is illustrated and discussed. The use of red free light is referred to as a valuable and in distinguishing between nerve lissue and scleral exposure.

To make the diagnosis of simple glaucoma from the funding examination the ophthalmologist must be alert and able to recognize the physiological variations as well as distinguish between primary atrophy and the second ary destruction of nerve fibers

John M. Leans New York, N. Y.—I wish to discuss but one phase of Dr. Marlow's paper—namely the visual fields. The return is not uniformly sensitive to light over its entire extent. When various sizes of objects are used we are able to determine the thresholds of various retural zones of light sensitivity. By the use of small objects or by reduction in the general illumination we lower the entire retural response to a level at which it is easy for us to defect variations from the normal. It intales relatively little difference what the state of light adaption may be so long as the conditions are such that we can reproduce them.

It is thus apparent that properly conducted examinations of the visual field with reduced illumination or with relatively minute objects may be interpreted in terms of

a light sense test the diagnostic value of which is proven by the importance we have come to assign to visual field studies

In the past we have looked upon a scotoma as a two dimensional projection of a defect in that passively expectant photographic plate the return. There is much evidence lowever to show that returnal response is in a refund sense modified by the heart bear respiration virtuals and chi road metabolism and its own vital processes.

We are forced then to consider not only the surface dimensions of length and breadth as we have in the past but do the altitudinal dimension of depth we include not only the retina but also all its associated lissues. This forces the inclusion of the dimension time

THE PATHOLOGY OF CHRONIC SIMPLE GLAUCOMA

By ALGERNON B. REESE, M.D., NEW YORK, N. Y.

Read at the Annual Meeting of the Medical Society of the State of New York, at New York City, April 4, 1933.

THE pathologic changes demonstrable in eyes affected by chronic simple glaucoma are consequent to an increase in the intra-ocular pressure. There is a functional or dynamic factor about which we know little antedating the rise in pressure and the resulting changes to be discussed in this paper. Therefore, this discussion necessarily deals with the lesions produced by glaucoma rather than the lesion producing glaucoma. The various sites of such lesions will be discussed.

Filtration Angle-Peripheral anterior synechia is a common finding. Some factor not well understood causes the apposition of the anterior surface of the iris in its periphery to the posterior surface of the cornea in the region of the pectinate ligament. If the apposition of these structures occurs often enough and over a sufficiently protracted period an agglutination of the surfaces takes place which in due time becomes a permanent adhesion which is termed a synechia. When this occurs over a sufficient degree of the circumference of the angle there is a constant increase in intra-ocular pressure which can only be relieved by the formation of a vicarious sluice way for filtration of the aqueous subconjunctivally. If the glaucomatous state is not relieved the peripheral synechiae increase in breadth. Therefore, it can be said that peripheral synechiae cause glaucoma and glaucoma causes peripheral synechiae. Here is a vicious circle which is initiated by the unknown factor in glaucoma. When the synechiae occur over a broad area it is possible in performing an iridectomy to allow the keratome to enter the posterior chamber instead of the anterior chamber and thus rupture the anterior hyaloid membrane which results in the loss of vitreous. Also, when a trephine operation is performed on such eyes the trephine may go through the synechiae into the posterior chamber with a similar injury to the anterior hyaloid membrane. Obviously if the trephine opening goes through the synechiae the iris can not prolapse for excision. When a cyclo-dialysis is performed in the presence of broad synechiæ the tendency is for the spatula to perforate the iris because the radius of curvature of the sclera is greater than that of the cornea.

Cornea—Normally, fluid can pass through the cornea from the conjunctival side to the anterior chamber but not in the reverse direction. When the intra-ocular pressure is elevated, this fluid is forced into the cornea from the anterior chamber and the changes seen in the cornea in glaucoma are mostly incident to this. The steamy appearance seen clinically is based somewhat on edema of the

stroma but this is not the entire cause, for witness its immediate disappearance when the pressure is reduced by evacuation of the anterior chamber. It is therefore supposed that a large factor is the distortion of the corneal lamellae by the pressure which changes their refractive index. The stippling of the corneal epithelium is due to separation of the individual epithelial cells by edema which thereby breaks their continuity and thus decreases the lustre of the surface. Not only is there a separation of the individual epithelial cells but also a tendency toward a separation of these cells from the underlying Bowman's membrane. In glaucoma this weakening of the union of the epithelium to the membrane makes an abrasion more possible and particularly is this seen following the use of a tenometer if some care is not exercised against it. The separation of the epithelium from Bowman's membrane may occur spontaneously by the accumulation of fluid between the two and is termed a vesicular keratitis. If this vesicle ruptures the resulting filaments of redundant epithelium give a condition termed filiform keratitis. In the later stages of glaucoma there is a tendency for the ingrowth of a thin fibrous membrane between the epithelium and Bowman's membrane termed a pannus degenerativus. When this occurs from the limbus into the periphery of the cornea it usually carries with it some capillaries. There is normally a slight physiologic pannus in the periphery of the cornea above and it is over this site where the glaucomatous pannus usually extends farthest. fact often makes it easier to dissect the epithelium from the corneal lamellae in performing a trephine operation. When a glaucomatous pannus appears in the cornea other than at the limbus it is usually in the nature of disseminated faint irregular grayish white areas which in time may enlarge and conflue. These represent very thin, non-vascular plaques of fibrous tissue which extend through the nerve canals of Bowman's membrane to spread out under the epithelium. If they conflue and then are separated by fluid from the membrane along with the overlying epithelium they form the condition known as bullous keratitis. A deposit of pigment granules on the posterior surface of the cornea is an early and frequent manifestation of glaucoma. The nature of these deposits will be discussed later.

Iris—The earliest organic change demonstrable in a glaucomatous eye is the dispersement of pigment which is mostly seen in the iris with secondary deposits on the cornea and in the meshes of the pectinate ligament. Pigment globules are seen migrating through the stroma of the iris towards the anterior surface and thus into the

anterior chamber. This pigment comes in part from the pigment epithelium on the posterior surface and in part from the chromatophores of the stroma.

Attophy of the tris is a frequent finding in glancomatous eyes. It may be of two types both of which may be present in the same iris. For purposes of description these types will be designated as atrophy with proliferation of the stroma and atrophy without proliferation of the stroma

I Atrophy with proliferation of the stroma This is by far the commoner type the iris has a bleached gray appearance, the surface markings such as the crypts, the contraction furrows and the angular line are missing in part If it is of sufficient degree and dura or wholly tion the pupil will be immobile and in mid-dilatation or larger and usually an ectropion uvea of varying degree will be present. Microscopically, we find that the delicately branching loosely arranged chromatophores of the stroma have been replaced by a denser, parallel coursing fibroblastic In other words the iris stroma has been replaced by a non pigmented fibrous membrane This explains its acquired color and the loss of the surface markings The fibrous membrane has no clasticity and thus splints the iris and renders it The contracture of the fibrous tissue ımmobile tends to cause a gradual dilatation of the pupil As the pigment epithelium takes no part in this contracture it extends around the pupillary margin onto the anterior surface of the iris producing the ectropion uvea.

2 Atrophy without proliferation of the stroma Clinically, this is seen as rarefied areas of the stroma or even complete disappearance of the stroma at which sites the black pigment epithelium shows through in bold relief. In an extreme degree one sees a hole through the entire iris

The cause of atrophy of the iris

The pressure in the veins of the iris is about 30 35 mm of Hg and that in the arteries about 60 70 mm of Hg When the intra ocular pressure reaches that of the veins of the iris there is some passive congestion which results in an ef fusion of some fluid in the interstices of the This causes pressure on the delicate chromatophores and results in some pressure necrosis Pigment is thus liberated some of which is absorbed and some dispersed. Chromatophores can not reproduce chromatophores therefore the reparation of those destroyed is by fibroblasts Thus the atrophy of the iris with proliferation of If the intra ocular pressure reaches its stroma that of the arteries of the ins then an ischaeinic necrosis occurs which results in the disappearance of the stroma and thus atrophy of the iris with out proliferation of its stroma. The reason that an ischaemic necrosis of the iris stroma does not always occur in eyes with an intra ocular pressure of 60 70 mm of Hg is due to a vascular compen

sation which occurs when the intra-ocular pressure gradually reaches such a degree over a long period. It is thought to appear only in those eyes in which a sufficient time has not elapsed for a gradual vascular compensation before such a high degree of intra ocular pressure ensues. Also, the state of the blood pressure in the individual may be a factor.

Optic Nerve-In very young people (up to the age of approximately 12 years) glaucoma causes an increase in size of the entire globe (hydrophthalmos and buplithalmos) whereas in adults it causes a giving at some vulnerable place the most pronounced of which is over the site of the foramen opticum sclerae which is protected only by the lamina cribrosa If the intra ocular pres sure is increased very slightly over a long period the lamma cribrosa will manifest a resisting re-Usually, tho, the inaetion by proliferation tra ocular pressure is sufficient to cause the lamina to give, which results in a cupping of the disc When a cupping of the disc occurs it is permanent The cup may become filled, tho, and thereby ostensibly disappear in two ways. The fine ghal meniscus which covers the surface of the normal disc may proliferate and completely fill the cup Also, when the increased intra ocular pressure is suddenly reduced to zero by an operation which evacuates the anterior chamber an effusion of fluid occurs in the intra ocular tissues One of the sites where the edema is particularly marked is often the disc It so happens, therefore, that following an operation occasionally the cupping of the disc will disappear to reappear again as soon as the papilloedema disappears

Exactly how the pressure around the optic disc destroys some of the nerve fibers and thereby gives the various field defects is not entirely understood The nerve fibers which are the axones for the neurons immediately around the disc un questionably he deepest in the nerve fiber layer as it courses around the periphery of the foramen opticum chorioidae and sclerae to form the optic nerve Increased intra ocular pressure, therefore, presses these fibers against the border of the foramen opticum chorioidae and sclerae and is therefore probably the cause of the field defects around the blind spot (Bjerrum and Seidel Scotoma) The cause of the constriction of the peripheral fields which occurs particularly on the nasal side is difficult to say The nerve fibers from the periphery of the retina he most superficial at the periphery of the disc. They are therefore not pressed particularly against the borders of the foramen The explanation of the peripheral field contraction is probably based on arterial compression at the disc which manifests itself in a nutri tional disturbance at the periphery of these end The fact that there is a greater distance traversed by the retinal vessels from the disc to the periphery of the retina on the temporal side

than on the nasal side is some substantiation.

In the optic nerves of eyes affected by glaucoma one not infrequently finds flat cavernous spaces. They occur in the intra-lamina part and run parallel to the surface of the lamina cribrosa. They are usually called Schnabel spaces as he gave a particular interpretation to them. He claimed that they were evidence of a primary atrophy of the optic nerve and that the cupping of the nerve appeared as a result of the collapse of the spaces. This served to explain those cases classified as simple glaucoma in which no rise of intra-ocular pressure can be detected but in which a cupping of the nerve and field defects are present. Belonging to this same group are those interesting cases described by Arnold Knapp in which sclerotic changes of the basal vessels of the brain cause a pressure on the optic tracts sufficiently to produce an atrophy of the optic nerves and then slight cupping and field defects simulating simple glaucoma.

In glaucomatous eyes pressure around the optic nerve sometimes causes atrophy of the pigment epithelium adjacent to the disc and thereby gives an ophthalmoscopic picture of a somewhat bleached area around the disc usually termed the glaucomatous halo.

In a recent monograph on "Glaucoma and the Retinal Circulation" Salzmann has shown conclusively that glaucoma frequently causes an occlusion of the central retinal vein. He describes four factors which are at work constantly in glaucomatous eyes tending to narrow the central vein gradually but progressively. At any time during this process of narrowing an acute occlusion may occur by the formation of a thrombous and thus hemorrhagic glaucoma. If, however, the process suffers no intercurrent thrombosis but proceeds

progressively to complete occlusion of the vein then sufficient time elapses for the formation of collateral circulations. These take place from the veins of the disc into the chorioid or into the veins of the lamina cribrosa and then into the veins of the optic nerve sheath and by other routes. The collateral circulation may be sufficient to prevent any hemorrhages of the retina even in the presence of a complete occlusion of the central vein. It is a well known fact that a primary occlusion of the central vein often causes glaucoma therefore as glaucoma causes an occlusion of the central vein a vicious circle is established. The primary initiating force in glaucoma, which may be very insignificant, gathers momentum as it travels in the path of this vicious circle. When glaucomatous eyes have been quiet for years and suddenly show a high rise in intra-ocular pressure with resulting compensation disturbances it often means an occluded central As Salzmann says—the final act in the tragedy of glaucoma is frequently introduced by an occlusion of the central vein.

Retina—In the late stages of glaucoma cysts sometimes form in the retina and particularly in the macula region. These have been described clinically by Vogt who designates them as "honeycomb cysts of the macular." They are probably the result of venous stasis.

In the very late stages of glaucoma one notes a disappearance of the nuclear elements of the retina so that ultimately the retina may be reduced to merely its supporting tissue. In such instances one sees only a glial membrane instead of the retina,—a condition called gliosis of the retina. This is caused by a pressure atrophy of the rods and cones which initiates an ascending atrophy of the succeeding neurones and their nucleii.

DISCUSSION

Bernard Samuels, M.D.: One of the characteristic and puzzling traits of glaucoma is the periodicity of the attacks, one attack being separated from another by comparatively free or absolutely free intervals. How it is possible, with pathologic changes that are continuously present, to have intermissions in the signs and symptoms of the disease, is not easily explained. There is certainly a factor in the pathology of glaucoma, as the essayist has intimated, which is not demonstrated in anatomic

preparations.

The pathonomonic sign of chronie simple glaucoma under the microscope, is the adhesion of the root of the iris to the pectinate ligament. Certain types of eyes are predisposed to glaucoma. Many eyes afflicted with glaucoma have a cornea small in comparison with the rest of the globe, and a shallow anterior chamber. There are wide variations in the thickness and texture of the iris. In some eyes it is thin, in others it is thick. In some anatonic preparations the root of the iris tapers off almost to a point at its insertion in the anterior surface of the ciliary body. In other preparations the periphery is thick and ends bluntly. A thin root of the iris is associated with a large well-rounded open sulcus, and the reverse is true when the root of the iris is thick. In hyperopic eyes the ciliary process often projects far under the periphery of the iris and are usually in close proximity to its posterior surface,

. It is known that glaucomatous eyes are mostly hyperopic, and that myopic eyes are seldom afflicted. It is true that eyes with anterior chambers of normal central depth are occasionally attacked with glaucoma, but under

the microscope these eyes may reveal narrow angles. We know that glaucoma is a disease of middle and later life and that it becomes relatively more frequent with each decade of life. With age the lens increases in size so that its anterior pole and with it the iris advances nearer and nearer to the cornea. We cannot see what is happening at the angles clinically, but anatomic experience teaches that all glaucomatous eyes, with few exceptions, show under the microscope adhesions at the

In regard to the dependance of glaucoma on diseases of the body as a whole, such as diabetes, albuminuria, and hypertension, it is striking that glaucoma does not occur oftener in systemic diseases. It is remarkable that it occurs so often in individuals who are in good general health although they may complain of nervousness. The cause and pathology of chronic simple glaucoma are to be sought rather within the globe than without.

Harold II. Joy, M.D., Syracuse, N. Y.: Dr. Reese has presented a most interesting demonstration of the pathology of chronic simple glaueoma, and it has been ably discussed by Dr. Samuels. My remarks will be eon-

fined to some phases of its pathogenesis. I do this with the realization that much of it is controversial.

With our present knowledge, we must as Dr. Reese has stated, attribute most of our pathological changes to an increase in intra-ocular tension. And yet there must be other factors, for glaucoma simplex is a disease of which hypertony is only a symptom. It is a disease which is a part of a systemic disturbance closely related to vascular changes and nerve influence.

As a result of the vascular changes and disturbed nerve innervation, there is capillary instability and increased permeability causing an alteration of osmotic equilibrium. As a consequence, we have ocular edema, which together with the embarrassed capillary circulation, the angio-spasm, the selerosis of vessels and stroma, impair the tissue nutrition, and undoubtedly produce pathologic changes aside from the resultant increased ocular pres-This affects all the intra-ocular tissues, but the optic nerve would seem to be particularly vulnerable. This may explain the optic atrophy in such conditions as VonGraef's amaurosis with excavation, as well as those cases of simple glaucoma which go on to blindness in

spite of early operation and subsequent normal tension.
Considerable experimental work has been done and various theories evolved to explain the field changes in glaucoma. The most generally accepted explanation is that of pressure on the nerve fibres. Traquair disagrees, maintaining that it is pressure on the blood vessels at the disc which causes these changes, at least in the early stages. From his perimetric studies he concludes that it is the anatomical condition of the disc which determines the order in which the fibre groups are affected. In most cases, the first fibres involved are those entering

the dise to the outer side of its upper and lower poles in the neighborhood of the large vessels. He maintains that if arcuate scotomata were due to pressure on the nerve fibres at the scleral ring, the defect would have to start at the blind spot and gradually work toward the periphery. As a matter of fact this is not always so. It may start peripherally and work in the opposite direction, and furthermore the most intensive part of the sectoms is not always that nearest the blind spot. Also, in the temporal field the defect is mainly peripheral from the first, and extensions from the disc are rare. Finally, the last part of the field to be lost is often close to the outer side of the blind spot with which it may remain in contact until very late. He explains the presence of an isolated scotoma by assuming that an arterial twig supplying that area has become occluded or stretched at the dise margins. This vascular theory is strengthened upon considering the character of the scotomata, especially in the early stages. They are sharply demarked, the acuity on either side being almost normal. This indicates a marked impairment of a small group of fibres rather than partial impairment of a consider-able number. It is what would be expected if there were interference with the vascular supply to that area. Magitot agrees that these changes are angioscotomas, and in addition maintains that arteriolar spasm is an important factor. He thus attempts to explain these sectomata which change in shape and size from day to day irrespective of the intra-ocular tension. He also cites a case reported by Gallois, who, in a patient with double glaucoma, injected acetyleholine (a vasodilator). In spite of an increasing tension the field progressively enlarged.

OPERATIVE TREATMENT OF CHRONIC GLAUCOMA

Report of 200 Successive Operations

By ARNOLD KNAPP, M.D., NEW YORK, N. Y.

Read at the Annuat Meeting of the Medical Society of the State of New York, at New York City, April 4, 1933.

NE of the greatest advances in Ophthalmology during the last thirty years has been the sclerectomy form of operation for chronic glaucoma. Its advantages are now generally conceded, though the exact type of operation has not been agreed upon.

A consideration of this phase of the glaucoma question is best served by a presentation of a single operator's experience. For this reason I have selected 200 successive cases from my private records during the past twenty years, and their subsequent course was noted in as many of them as possible. The operations practiced were the Lagrange, trephining, iridectomy, cyclodialysis and irido-

tasis. (Table I.)

There were 95 Lagrange operations with 85 successes. In 10 cases, the filtration was not re-established and tension returned. Of these 10, in 2, trephining was then successfully practiced, and in 1, cyclodialysis, but without permanent result.

There were 80 cases of trephining of which 60 were successful; in 20 increased tension returned. Of these, a second trephining was performed in 9 which was successful in 7 and failed in 2; a cyclodialysis was done in 4, with 4 failures.

Iridectomy was attempted in 12 cases. In these, the tension was permanently reduced in 5, and in 7 it recurred: In 2 of these 7, trephining was done successfully in 1 and failed in 1.

There were 8 cases of cyclodialysis in which

Operation	Cases	+	_	Trephin-	+	-	Cyclodi- alysis	+	_
Lagrange, Trephining Iridectomy. Cyclodialysis Iridotasis.	12	85 60 5 5	10 20 7 3	2 9 2	2 7 1 	; ż 1	1 4 	::	4

⁺Filtration.

⁻Return of tension.

the operation succeeded in reducing the tension in 5, and failed in 3.

Iridotasis was performed in 5 cases. In all of

these the tension remained down.

In considering the unusually good results after the Lagrange operation it must be remembered that the cases were selected. This operation was done only when the glaucomatous process had not lasted for a long time, where the field was still good, the iris of good texture, and where the tension could be brought down with miotics to below 35 Schiotz. The cases which did not fulfil these requirements were subjected to a trephining operation. An iridectomy was done in cases seen very early, and where the tension could be readily brought down with drops, so that an obliteration of the iris angle was not present. Cyclodialysis was made in cases where there were reasons for not doing the other operations, such as nervousness on the part of the patient, myopia, or extreme advance of the glaucoma. Iridotasis was done as this operation had been so highly spoken of, and the tension was reduced in the few cases in which it was tried.

The Lagrange operation requires considerable practice, and the small Graefe knife must be sharp-pointed and firm. I have used with great satisfaction a small Smith-Wilson knife, which was made for me by Down Brothers, London. I have always found the special Lagrange scissors more satisfactory than the punch forceps. the Lagrange operation the anterior chamber generally restores earlier, and the pupil dilates better than after trephining, and the resulting filtrating area is smaller and presents a better protecting conjunctival covering than in many of the trephined cases. It is difficult always to get a scleral flap or tongue of just the right size. If the flap is too small, the resulting opening or gap in the sclera is apt to close; on the other hand, if the flap is too long the resected portion is too distant from the limbus. In a certain proportion of Lagranges though there is no raised filtration area, the gap in the sclera is visible and the tension remains reduced.

John E. Weeks (Archives of Ophthalmology, vol. 49, p. 320, 1920) laid great emphasis on massage in the after treatment of a Lagrange operation to insure drainage, but I have not been able to convince myself, after faithful trial that I succeeded in converting a filtrating wound which was closing, into an open one.

In a number of cases I tried the modified Lagrange operation which consists in reflecting down a conjunctival flap making a keratome incision, and using the punch forceps for the scleral resection, but the wounds had a great tendency to close than in the usual operation.

Failure in 25% after trephining corresponds very closely with European statistics.

There is very little\to add on the technic

of trephining, especially after Elliot's recent article in the Archives of Ophthalmology, vol. 8, p. 798, 1932, except to repeat that trephining is not as simple a procedure as it is made out to be. There is no operation on which one is so dependent on absolute sharpness of the instruments, and sharpening of a trephine is a difficult art. Then in the dissection down of the episcleral tissues, the eyeball sometimes becomes soft due presumably to opening the episcleral vessels, which makes the trephining of the sclera difficult and leads to the early escape of the aqueous with failure of the iris accommodatingly to pro-The attempt then to fish for the iris in unruly patients, leads to a traumatic cataract, which occurred in 2 of my cases. It is better to wait for 24 to 48 hours when the iris will be presenting in the disc area, and then can be seized and abscised after reflection of the conjunctival The Green modification of trephining (Archives of Ophthalmology, vol. 6, p. 752, 1931) was practiced in a number of cases with satisfaction, the filtration was moderate though adequate and the advice not to draw on the iris in making the buttonhole iridectomy was carefully A thin vesicular bleb cannot be avoided after some trephinings, and the dreaded late infection occurred in 3 of my cases. In 2 of these the eyes were lost from purulent iridocyclitis, and 1 recovered after treatment (milk and subconjunctival cyanide injections). cases the blebs ruptured spontaneously, fortunately the condition was remedied in time by a conjunctival plastic operation. It is generally believed that if a trepline opening remains open for a certain length of time, the opening is permanent. In one case which was under constant supervision, the trephine opening closed after 11 years with return of the glaucoma, requiring another trephining operation. The prognosis of secondary trephinings is much poorer than in the case of a primary operation, and the more dissection is done, especially in scar tissue, the less likely does filtration result.

The iridectomies were principally done at a time before the necessity of a scleral resection was generally accepted. In the last 100 cases only sclerectomies were done.

Cyclodialysis is a temptingly simple operation but the results have been very disappointing, principally because one never knows how long the good result may last, and another serious objection is, that the return of tension may be abrupt and stormy.

Iridotasis was not persisted in because in 2 of the cases, large, thin cystic scars developed partly composed of iris tissue.

Every one knows that the results of operations for chronic glaucoma depend greatly on the type of eye affected. A difficult type is the very hypermetropic, rudimentary eye with an unusually shallow anterior chamber; operations in these cases usually do not establish drainage and the anterior chamber remains shallow. The prognosis is bad, though extraction of the lens

may be attempted.

There were 14 cases in which though sufficient filtration had been established, the vision and particularly the field underwent a progressive deterioration. This is a very striking feature which is difficult to explain, though it has been repeatedly mentioned in the literature.

While investigations of glaucoma and its

causes are undoubtedly making progress and should be encouraged in every possible way, valuable time must not be lost in experimenting with medical treatment, and the favorable time for successful operation must not be allowed to pass. There are undoubtedly several methods of operating in chronic glaucoma, by which a satisfactory result can be obtained, and I concur entirely with a quotation which I think was expressed by Dr. John E. Wecks, "that whatever method the operator can use with confidence is the best method for him."

DISCUSSION

must be taken to be sure that the posterior surface of the iris is entirely exposed, because in cases of partial prolapse a cyst of the iris is apt to form, leaving an unsightly lump. It is very easy even if the iris fails to prolapse, to pull the conjunctiva to the nasal side and, inserting an iris forceps, place the iris in the posi-tion required. Originally, I was satisfied with a simple suture of the conjunctiva wound, but the pressure of the aqueous in the early stages tend to make a rather tenuous scar. So, in my more recent cases, I have found that the matress suture carried under the temporal edge of the conjunctiva results in a more firmly closed

The beauty of this method of operation is that there is less trauma, speedier convalescence, and an almost

certain reduction of pressure.

I feel that massage is a valuable method of treatment following operation, but I also believe that it is generally wrongly applied. When done in the early generally wrongly applied. When done in the early stages of any operation, it should be performed standing back of the patient and massaging from below rather than from above. When massage is done from below, the pressure of the fingers tend to send the aqueous towards the operative wound. Whereas, if done from above the pressure would rather tend to close the original wound and force the fluid in the wrong direction. I have seen definite benefit from massage, and think it is a valuable method of treatment.

Dr. Arthur C. Bennett, M.D.: Having done about one hundred iridotasis operations, I can say, without

hesitation, that this method has given me the best all round results, and I have tried all the other methods that Dr. Knapp numerated in his paper. In this experience, I am backed up by Colonel Herbert of London and Dr. W. H. Wilder of Chicago.

I have recently employed a method that is slightly different from the classical iridotasis operation, but it has been so successful in my hands that I will, with the chairman's permission, demonstrate by diagrams the method I employ. Almost without exception this has been done under local anesthesia. I prefer to use a Wheeler's Discission Knife, entering the point at about half past one, at about 4 mm. external to the limbus. Directly the point is seen in the anterior chamber the handle of the knife is depressed to horizontal and the blade is advanced to a corresponding position, and emerging about 4 mm. or a corresponding point to the wound of entrance, being careful not to puncture the conjunctiva. The knife is now almost in the angle of the iris and by making a slow incision the aqueous will escape under the conjunctiva raising a watery bleb. If care is now taken the section can be completed without cutting the conjunctiva further, except at the wound of entrance. On the completion of the section the iris will nearly always be present in the wound, but care

MEDICAL TREATMENT OF CHRONIC SIMPLE GLAUCOMA By WILLIAM ZENTMAYER, M.D., PHILADELPHIA, PA.

Read at the Annual Meeting of the Medical Society of the State of New York, at New York City, April 4, 1933.

THE treatment of Chronic Simple Glaucoma is essentially surgical. Medical treatment is however indicated when operation is refused; in most cases in the early stage of the disease; in patients who acquire the disease very late in life, if the tension is not too high or if they are in poor physical condition; and in cases in which one eye has been operated upon with unfavorable results, and with greatly contracted fields in the

remaining eye. In 1895 Zentmayer and Posey studied 167 cases of Chronic Simple Glaucoma and concluded that the effect of the administration of eserine and of the performance of iridectomy in checking the course of the disease is proportionately the same. They advised therefore that miotics should be employed in all cases, but if at the end of a month the field had diminished, iridectomy should be performed.

Later Posey gave a fresh impetus to the use of miotics by publishing his results in their use in private practice. He showed that in early cases treated by eserine full vision with somewhat restricted fields might be present for from ten to twelve years; and that they were capable of preserving the central vision for a long time, and to a less extent the fields, of cases already advanced before miotics were employed.

It will be of interest and advantage to quote Dr. John E. Weeks on the use of miotics in the treatment of Chronic Simple Glaucoma. He says: "For many years I have made it a routine practice when time and circumstances permit to try the effect of miotics in all cases of hypertension before advising operation. There are a number of conditions that may develop which cause me to decide that operation is desirable, and when convinced that

operation is the conservative course to pursue I inform the patient that he must assume the responsibility for the consequences if the advice is not followed. A diminution in the field of vision for form and colors, with or without enlargement of the blind spot, is an urgent sign, as is also a slight positive diminution of vision. It is allowable to permit a low degree of hypertension if no falling off in the fields for form and colors, or diminution of vision can be detected. Operation is advised if the patient is inclined to irregularity in the use of the miotics, and in contemplated long absences from efficient observation by a competent ophthalmologist. Experience has convinced me that early operation is desirable."

Posey's views may be stated thus: Miotics should not be used where there is a doubt of the patient's cooperation in the persistence of the treatment or where the patient lives at such a distance from ophthalmic care that he is unable to report at sufficiently frequent intervals for the supervision necessary. In all patients under 55 an operation on the more affected eye should be performed and miotics used thereafter in both eyes. In all cases of chronic glaucoma without regard to age or the development of the disease, in which miotics have been given a faithful trial for at least six weeks or two months, as evidenced by constant maintenance of the pupil to almost pinpoint size, if the vision and fields show progressive deterioration operation should be performed.

As yet we have no way of knowing what the response of a given case of glaucoma will be to the medical treatment, or the reaction to a decompression operation. Many of us must have had the experience that using our best judgment we have operated on an eye for glaucoma with disastrous results. In consequence of this we have persisted with the medical treatment of the equally affected fellow eye, with the result of seeing the symptoms held in check for years.

The following case history illustrates this point: A man aged 68 years first came under observation with the upper field of each eye lost. He had no suspicion that there was anything seriously wrong with his eyes. Vision in each eye was 6/9. Tension, with the Schootz tonometer was 49 in the right eye and 36 in the left. Both discs were deeply cupped. A consultation was had and a trephine operation on the right eye was advised, and per-November 5th, 1929. apparently correctly performed and the eye did well for a time but after the lapse of several weeks a low grade uveitis developed, with high tension and bullous keratitis, requiring enucleation.

When first seen the left eye was affected to about the same degree as the right except for a higher tension. Because of the disastrous result of the operation on the right eye consent could not be obtained to operate upon the left eye. Pilocarpin, 1/4 gr. to 2 drams, was prescribed for instillation twice a day, and eserine of the same strength at bed time.

As the tension was not holding at the end of several months, ½ per cent eserine three times daily, with an adrenalin pack once a week, in addition, was necessary. time a severe folliculosis of the conjunctiva was set up, with haze and vascularity of the The eserine was discontinued and dependence placed upon gynergen and occasional adrenalin packs. These agents together with an astringent collyrium have now been in use since January 1932. Today after three and a half years since he was first seen, tension with the Schiotz tonometer is 25 mm Hg. on most occasions, and the field is unchanged. Visual acuity is slightly reduced probably because of the corneal condition.

If the aqueous humor is a dialysate of the blood plasma through the walls of the capillaries, and glaucoma results from some disturbance of this metabolism the medical treatment of glaucoma,—especially with the newer agents which act upon the capillaries,—should be of especial value. If the cause of glaucoma is to be sought in structural and mechanical interference at the angle of the anterior chamber with the outflow of the intraocular fluids, the main medical dependence in the earlier stages of the disease will be upon miotics.

It goes without saying that for miotics to be efficacious they must be properly administered. As the disease is a chronic one the action must be long maintained and for this reason the dose must be gradually increased, and as their action is transient they must be instilled at least three times a day. As the object is to keep the pupil contracted, a strength sufficient for this purpose must be constantly maintained. As in the early stages of the disease the action of the iris is unimpaired a very weak solution will often attain this end. While no hard and fast rule can be laid down, in a general way it may be stated that the weaker of the miotics, i. e. pilocarpin should first be used. An initial strength of ¼ gr. to the ounce may be expected to keep the pupil to pin-head The strength will probably have to be increased until a 4 gr. solution has been When the stronger solutions are reached several annoying effects are at times noted, brow-ache, twitching of the lids (spasm of the orbicularis), spastic (dynamic) myopia, irritation of the conjunctiva, and occasionally posterior synechia. Some of these annoyances

may be allayed by incorporation of cocaine in the solution, and by using a weaker solution during the day and a stronger solution at bed time. Follicular conjunctivitis is less likely to occur if the solution of the miotic drug is kept fresh and sterile by prescribing a small quantity at a time, one to two drams, and by the use of an astringent collyrium twice daily.

The newer drugs for reducing intraocular tension are now known to all of you and it is therefore unnecessary to speak in detail of

their origin and nature.

The most used of these is adrenalin (epinephrine) or its substitute glaucosan. It is generally agreed that adrenalin used as a pack in the manner suggested by Gradle obviates the danger of the systemic effect of the drug occasionally noted when given subconjunctivally, and that its hypotonic effect is but

little under that of glaucosan.

Gradle's method is to anesthetize the eye with butyn or holocaine and to tuck a small pledget of cotton saturated with three or four drops of adrenalin up under the upper lid into the cul-de-sac and allow it to remain four or five minutes. Its absorption produces a dilatation of the pupil. At first the pupil usually assumes an eccentrically oval shape and finally, in the absence of synechia, it becomes round. In most cases of Chronie Simple Glaucoma a fall of tension of from five to twenty millimetres occurs. The period over which this reduced tension would have continued cannot be stated from my own cases as miotics were used to control the mydriasis.

S. Gifford found that by using adrenalin after the method of Gradle no systemic effects resulted. He draws the following conclusions from the use of adrenalin in 100 eases of Chronic Simple Glaucoma, in which two developed severe acute glaucoma: Adrenalin, or glaucosan, is of definite value in Chronic Simple Glaucoma as an adjunct to other remedies. It is dangerous in eyes in an inflamed state and in eyes with damaged vessels. The danger of provoking acute glaucoma is due to mydriasis. This danger is even greater in simple glaucoma than previous reports have indicated and should be watched for. Mydriasis should be prevented or minimized by the free use of miotics before and after the use of adrenalin.

I have not used the stronger solution of

adrenalin introduced by John Green.

Osmotic therapy.—The intraocular tension can be lowered by producing a hypertonic state of the blood plasma which results in an absorption of fluids from the ocular tissues into the blood vessels.*

Cantonnet was the first to employ this method. Hertel, Weckers, Duke-Elder, and Garland have since used it with success. Hertel employs 150-200 cc of a 10 per cent solution of sodium chloride but others prefer smaller amounts, 35 to 50 cc; in higher concentration 30 per cent. The saline is usually given intravenously, slowly and uniformly. It may also be administered by mouth or rectum. It finds its chief application in acute glaucoma though it may be safely tried in any form of glaucoma.

Massage.-Massage should be regularly employed in the chronic simple type of glaucoma. Its value has not received due appreciation. Any means which improves the circulation of the fluids will tend to lower the hypertension. The eiliary body and the structure at the angle of the chamber are quite accessible for massage. (It may be applied either digitally

or by special apparatus.)

In applying digital massage the patient is directed to gently close the eye. The surgeon then places the index finger of each hand upon the closed lid, and makes alternate gentle pressure over the ciliary region, much as in palpating the ball in taking tension. Beginning with slow movements the speed may be increased. In addition the tip of the middle finger should be moved circularly over the ciliary region. These movements should be continued for about three minutes, and given on arising and before going to bed, and occasionally more often according to the effect obtained. surgeons also employ gentle tapping of the globe. The patient must be instructed in the personal application of massage.

Diet.—Levan and Joseph noted marked reduction of tension with a low diet, 300 grams of milk per diem for four days. Lacroix found milk and vegetable diet beneficial. Passerelli advised that the meals of glaucomatous patients be divided up as much as possible.

The Part Played by Disturbance in the General System. - LaGrange, Risley and others have contended that glaucoma usually occurs in individual, who are in poor health. In the words of Risley: "Glaucoma is a disease coming on at an age when wear and tear, harassing vicissitudes, misfortunes, exposure, overwork, and vicious living have sapped the phy-siologic foundations of life, when infections have found entrance into the organisms through the doorway of the epithelium; and when a variety of toxic and autointoxic, and other influences, have set up vascular and cardiovascular disease associated with nephritis, uveitis, high blood pressure & c."

And LaGrange says that in glaucoma the eye is not merely hypertonic but also a sclerosed dystrophic organ which shares its

Maddox has recently extelled the use of the high frequency current in reducing the intraocular tension, but warns against its use in luffamed eyes and those with vascular degeneration.

troubles with the rest of the body, a body in which renal and cardiac disease, the calculus and arthritic diatheses, and neuropathy play leading parts. The secretions of this organ are toxic and anisotonic whilst the channels of the excretions are blocked. Of course these are generalized statements and far from holding good in all cases.

According to Gifford there are two general conditions which seem to have an undoubted etiological relationship to chronic glaucoma. These are the so-called vasoneurotic diatheses and the related condition of bronchial asthma. Such patients have unstable vasomotor mechanism and usually have an unstable nervous system as shown by urticaria, tachycardia, flushing and angioneurotic edema.

Von Hipple was probably the first to suggest that a disturbance of the organs of internal secretion might be a causative factor.

Friedenberg intimates that many characteristics of glaucoma suggest the importance of the internal secretions in its causation. He states however that endocrine etiology does not imply treatment mainly by gland substance but calls for a better understanding of the management of endocrine disorders.

Imre believes that disturbance of the balance of the endocrine organs causes a lasting change in the intraocular pressure. He has treated his cases with mixed extracts of the deficient glands. In 31 cases treated 27 showed a close relationship. The effect of the organ secretion is a specific one. When the defective organ or organs are discovered an extract of their substance is administered and the tension becomes normal in some cases where miotics and operation have failed.

Kümmel considers that glaucoma is but part of a general systemic derangement, and all operations are merely palliative. He found a well marked increase of blood pressure and other indications of diseased cardiovascular renal symptoms in glaucoma.

DeSchweinitz feels that operations are far from the last word in the treatment. He says: "The very best therapeutic means which an elaborate study of metabolism can suggest, or the aid of an internist can devise, are called for in the treatment of glaucoma."

Carlotti gives the history of 26 cases of various types of glaucoma which seem to prove a relationship of syphilis to glaucoma. He states that others have maintained the role played by syphilis but that most authorities ignore it.

So much has been written pro and con as to the relation of increased blood pressure and arteriosclerosis to glaucoma that no review of the literature can well be made. Among the studies which seem to confirm the relationship Charlin's are frequently quoted. He finds that 90 per cent of cases of glaucoma showed general vascular disease.

It is claimed by some that at corresponding age periods there is usually a higher average blood pressure in glaucomatous patients than in non-glaucomatous subjects. I think Elliott voices the conservative opinion today when he says that there is no obvious causal relationship between arteriosclerosis, with the attendant rise of systemic pressure, and the onset of glaucoma.

All this leads up to the importance of an exhaustive study of the patient, not only of the cardiovascular symptoms but the renal and nervous system as well. A thorough metabolic study should be made. All exogenous and endogenous factors should be eliminated. A suitable diet should be prescribed. Alcohol and other stimulants should be used only with moderation. Regular hours of rest at night, and during the day, should be insisted upon. Repeated refractions should be made. Reading should not be interdicted but instructions should be given as to proper illumination, and as to the avoidance of poorly printed books and papers.

SUMMARY

In the medical treatment of glaucoma the main dependence is upon physostigmine (eserine) and pilocarpin. Adrenalin and its substitutes are of value as adjuvants to be employed principally to increase the efficacy of miotics.

Ergotamin (gynergen) given by mouth is of value as adjuvant and also may be substituted temporarily for the local treatment when folliculosis develops.

Massage aids in the reduction of tension by improving the circulation of the intraocular fluids.

Osmotic treatments may be employed before operation to reduce excessively high tension.

No specific therapy is indicated but systemic conditions should be treated. Physical and mental rest, and diet, are important.

Conclusions.—In conclusion I should like to emphasize that the great majority of cases of Chronic Simple Glaucoma sooner or later require operation. In carrying out the medical treatment it is essential that this should be kept in mind, and so soon as the treatment fails to hold the fields and tension, operation should be done, as delay not only results in further impairment of the vision but also imperils the success of the operation.

Discussion-Dr. Thos. H. Johnson, New York: Our practice is to use myotics in all cases of chronic simple glaucoma over a period of from a few days to several weeks to determine whether or not the tension can be controlled. If normal tension and fields can be maintained the myotics are continued. It is our custom to start with solutions of 1/2% to 2% pilocarpine, depending upon the tension present when first seen, using the drops from two to four times a day. If pilocarpine does not control the tension it is reinforced by 1/2% to 1/26 eserine given from one to three times a day. I have under my care at this time two patients with glaucoma treated with myotics that have been under observation for ten or more years without loss of vision or serious field defect. My feeling is that when pilocarpine does not control the tension, an operation should be performed, except where the patient is advanced in years. It must be remembered that intraocular pressure is not only destructive to the nerve head, but presses the iris against the cornea in the iris angle, producing anterior synechia which in turn raises the tension by retarding filtration. The results from surgical treatment in my experience have been best in eyes that have been operated when the tension has

not been above the low thirties. Cases that run along with a normal tension with an occasional jump on into the high thirties or forties are best treated by operation, as this occasional increase in pressure brings about an extension of the anterior synechia. Although it has been my practice to use myotics as long as the tension and changes in the visual fields could be controlled, I believe that more eyes would be saved if an operation were done in all cases as soon as a diagnosis of glaucoma has been established, except in cases of advanced age or where there has been extensive pathological and functional changes before the patient has presented himself for treatment. Where the visual fields have been reduced to within 10° to 20° of the fixation point, myotics are probably the treatment of choice. Such cases in my experience have not responded favorably to surgical treatment ment. Where the corneal microscope or gonioscope show extensive anterior synechia it is obvious that myotics can not be effective. The above apparatus, if more frequently used, might give us a better insight into the condition of the iris angle. However, the practical test is tonometry. If the tension is above the normal level, we know that the destructive process is going on.

Discussion-Walter S. Atkinson, Watertown: The lack of accurate knowledge regarding the exact etiology of glaucoma necessarily limits the medical treatment to various palliative measures of a rather empirical nature, Local treatment alone is generally conceded to be inadequate; and the use of the various local agents such as miotics, glaukosan, massage, etc., afford only temporary relief. Glaucoma surely must be considered as simply a symptom of a complex disorder, the pathology of which still remains obscure. As long as this obscurity remains, there will be a great diversity of opinion regarding the methods of treatment. Certainly no one form of treatment now used is applicable in all cases of any type of

Psychic disturbances may often precipitate an acute attack of glaucoma or so upset the metabolic equilibrium

of the eye under treatment that it is difficult to keep the disease under control. Some of the newer sedatives, particularly of the barbaturic acid group, assist greatly in producing the proper mental relaxation which favors the control of the disease.

In non-congestive glaucoma, where it progresses in spite of the medical treatment and where an operation is indicated, the decision to operate requires courage and often a battle with ones conscience.

Since von Gracfe introduced iridectomy for the relief of acute glaucoma, there have been greater improvements made in the surgical treatment of glaucoma than in the medical treatment. So with our present knowledge of glaucoma, there seem to be three main periods suited to medical treatment; before operation, after operation, and when operation is contra-indicated.

Discussion-Albert C. Snell: In our management of simple chronic glaucoma, even when we have considered the criteria which should guide us in our choice between continued general and local treatment or operation, as has been so clearly presented by Dr. Zentmayer, we shall en-counter many individual cases in which no general rule or set of rules of procedure can be followed. In such cases we must attempt to formulate an opinion based on our judgment whether the chances of further deterioration of vision favor continued treatment or operation, and which procedure is the more likely immediately, or in time, to be followed by a visual disaster. In some cases the balance of judgment lies between the probability of the patient's outlasting the approach of visual disaster or useful vision outlasting the patient.

As a guide to aid our choice of procedure I believe that we may generally accept the rule that a tension of 30 mm Schoitz continued for 3 to 6 weeks without a period of lower tension must be regarded as a dangerous state. This degree of tension and any further loss of visual acuity or contraction of field indicates that medical treatment will not succeed.

A range of tension between 25 and 30 mm is the zone of watchful waiting. Many of these cases may continue the medical treatment over many years without material change in vision. Individual cases again will vary, and again our guide to procedure depends largely on the maintenance or loss in vision.

Dr. de Schweinitz suggested that the additional instillation of myotics some time during the night was a help in controlling or reducing tension. I have followed this advice in many cases with sceming benefit.

In some cases medical treatment must be continued simply because the hazard of operation is far too great. In this category are those cases of advanced general debility, cases of marked optic atrophy, those with only small central fields and those with fields of Seidel characteristic.

Since the physics and physiology of normal intraocular pressure seem to be placed on a firm foundation by the recent experiments of R. Sonderman, who claims to have proved that intraocular pressure is directly related to the colloid content of the blood, the medical treatment of glaucoma simplex should be further advanced.

SYPHILIS OF THE LUNG

Report of Four Cases with Autopsy Findings

HAROLD COMONFORT DENMAN, M.D., BROOKLYN, N. Y.

From the medical service of Kings County Hospital, Brooklyn, N. Y

THE appearance of a patient having syphilis of the lungs upon the wards of Kings County Hospital, together with the statement about the same time by the pathologist of one of the largest hospitals of New York City, that he had seen only one case of this disease in the lungs among 20,000 autopsies, caused the writer to review more carefully syphilitic patients who were suffering from involvement of the lungs. condition is apparently more common than the above figures would indicate, as autopsies have been performed upon four patients at the Kings County Hospital having syphilis of the lungs during the past two years. A report of one of these patients has already been given in detail,1 the histories of the other three are as follows:

Case No. 1 L Mc G.; a colored male infant, two months old, was admitted to Kings County Hospital, April 4, 1932, because of a cough of two weeks duration, which was becoming progressively worse. The following history was obtained from the mother of the patient. The onset of the present condition dates from two weeks before hospitalization, with the appearance of a "head cold"; coryza, cough, loss of appetite and a slight temperature, the cough became more troublesome with time, and the child's general condition became worse, although not alarmingly so, until hospital care was advised.

The family history was not contributory, the parents had been married one and one-half years, and were apparently in good health. Venereal disease was denied. The labor was normal, the baby was breast fed, well and gaining until the onset of the present condition

Physical examination revealed a fairly well nourished colored male child, acutely ill, with a paroxysmal cough and a thin mucoid nasal discharge There was dullness in the left anterior chest in the second to the fourth interspaces near the sternum and bilateral medium moist rales at both bases posteriorly. A tentative diagnosis of broncho-pneumonia was made.

Nose and throat cultures were repeatedly negative for Loeffler's bacillus. The spinal fluid was bloody on two occasions, and on examination, showed globulin, reduced Benedict's solution, no increase in white blood cells and no organisms were seen nor found on culture. The blood examination showed, white blood cells 14,000; red blood cells 2,048,000; polymorphonuclear lucocytes 64 per cent, small mononuclear leucocytes 34 per cent, large mononuclear leucocytes 1 per cent; the hemoglobin was 40 per cent; achromia and polychromatophilia were present. The blood

Wassermann reaction was four plus, the spinal fluid negative.

Two days after admission the patient showed spastic extremities with a positive Kernig sign, the abdomen became distended, the spleen enlarged and easily palpable, and the condition grave. The evidence of meningeal irritation became more manifest and a deepening jaundice supervened to death, with a purulent ear and a bloody nasal discharge. The lung signs were those of consolidation of both bases posteriorly. It is a pleasure for the writer to acknowledge at this point, the cooperation and aid given by Dr. Richard Rendich, Roentgenologist, and Dr. William Hala, director of the pathological department of Kings County Hospital, and their staffs in the preparation of this paper.

The post mortem examination revealed a colored child six pounds in weight and twenty-two inches in height. The lungs were a peculiar light gray color; not adherent, the surfaces were smooth; on section, both lower lobes showed a well demarcated light grayish area, which was rather firm on section, non-crepitant and friable (Figure 1.) The upper lobes were a light gray color but crepitant throughout A few small



Fig. 1. Case 1.

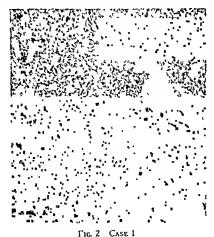
Congenital Syphilitic Pneumonia (Pneumonia Alba)

Fibrosis is well marked in the upper lobe at "A." In the
lower lobe at "A" the interstitual changes are more or
less obscured by a lobar consolidation.

petechial hemorrhages were noted on both lower pleural surfaces The head; on removal of the calvarium, a subaponeutotic hemorrhage was found in the parietal areas; the subpial vessels were congested.

Microscopical diagnosis was: brain; congestion and edema. The lungs; pneumonia alba, confluent broncho-pneumonia. (Figure 2) The

cause of death pneumonia alba



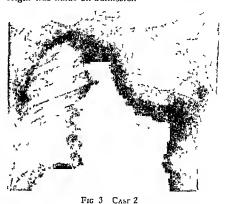
Congenital Pulmonary Syphilis 1002 Section taken from upper lobe of lung (figure 1) It shows the interstitual librosis so characteristic in cases of pneumonia alba

This is an example of the congenital form of s) philis of the lung-so-called white pneumonia -and the only type of pulmonary syphilis about which there is a general agreement. In this form of the disease gummata may occur, but as a rule are rarely seen. It is a diffuse fibroblastic proliferation with an interstitial infiltration of small round cells and is seen in still born babies, or those dying shortly after birth. The seeming well being of many of these infants at birth, and the negative history, is due, according to Warthin,2 to the apparent attenuation of the infection, especially in women, becoming so mild as to be practically nonexistant, an infection, perhaps not more active or injurious than the streptococcus of the mouth cavity. This type of lung syphilis may occur in the acquired form as a chronic interstitual pneumonitis or syphilitic pthisis. An example of acquired syphilis of the lung of this type was previously reported 1

Two types of lesion, the gumma and fibrosis are the chief conditions described by authors on this subject, although very different conceptions of these conditions exist among them Osler,*

and Lancereaux accepted these two main types Some authors denied the occurrence of pulmonary gumma, others described as many as seven types of this condition. But that the lesion occurs, is evidenced by the following case, of multiple gummata.

Case No. 2. O. C., a colored male, aged twenty-four years, single, was admitted to the medical service, Feb 10, 1932, complaining of a cough and loss of weight. The patient had not worked at his usual occupation of moving-van helper, for five months due to physical indisposition, but dates the onset of the present illness, two months prior to admission, when he first noticed a cough and weakness With time and the progression of the present illness, the cough became productive of a yellowish mucous never bloody or blood tinged He had night sweats, an irregular temperature, and lost thirty pounds in weight His appetite was good, and his bowels regular, not medicated The past history was not contributory. His mother, four sisters and one brother were alive and well, his father was unknown to On admission to the hospital he did the patient not look acutely ill, although the temperature was irregularly high and the pulse accelerated Physical examination revealed a fairly well nourished male negro There was no undue adenopathy The chest was poorly covered, with limited expansion of both sides, and presented the physical signs of pneumonia in the left lower lobe, with bilateral crackling rales in both upper lobes and broncho-vesicular breatling in the left apex. The heart was not enlarged and no murmurs were present. The blood pressure was 110/76 A diagnosis of pneumonia, probably of tuberculous origin was made on admission



Incamplete cansolidation of the left lower lobe, the consolidation being most marked in the mediol and upper portions of the lobe. The upper lobe and the right lung are well aerated and present no evidence of pathological changes.

X-ray examination revealed partial pneumonic consolidation of the left lower lobe. (Figure 3.) Repeated sputum examinations were negative for the tubercle bacillus. The urine showed a trace of albumen and a few granular casts. The blood examination revealed, 2,800,000 red blood cells, 17,200 white blood cells, 92 per cent polymor-phonuclear leucocytes and 8 per cent smaller mononuclear leucocytes. The blood Wasserman reaction was four plus.

The post mortem examination revealed a left lung entirely adherent to the pleura, especially the lower lobe. The weight was 1180 grams. On section the lower part of the left lower lobe was entirely caseous. In the middle section of this lobe, three well defined cavities were found, ranging in size from two centimeters to three and a half centimeters in diameter. The upper part of this lower lobe contained a strip of broncho-pneumonic infiltration and edema. The tissue in this latter part appeared filled with a gelatinous mucoid material, green in color. The upper lobe of the left lung was infiltrated with many miliary The right lung weighed 400 grams, and on section showed moderate compensatory emphysema and a few miliary tubercles.

The mediastinal and peribronchial glands were markedly enlarged (two centimeters in diameter) and on section were filled with caseous material. The spleen was normal in size, the capsule was smooth and of a dark slate color; on section the

pulp was soft and pultaceous.

Histological examination revealed—The liver: cloudy swelling, moderate passive congestion and gummata. The aorta: atherosclerosis and aortitis The spleen: chronic interstitial splenitis, moder-

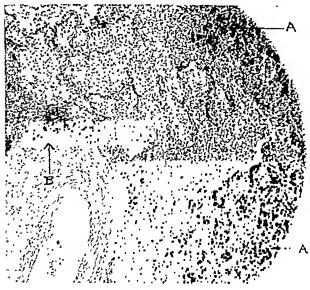


Fig. 4. Case 2.

Pulmonary Syphilis (Acquired). 80x. Observe the rather large areas of lobular consolidation at "A." The Pulmonary Syphilis (Acquired). cells in these areas consist of small lymphocytes and plasmatocytes. A small miliary gumma can be seen in the adventitia of the blood vessel. Arrow B points to it.

ate passive congestion and gummata. The lungs: numerous miliary gummata, (Figure 4) some rather large and showing central necrosis and secondary exudative inflammation, congestion, edema and moderate anthracosis. There was no evidence of tuberculosis. The cause of death was syphilis of the lungs, gummata of the liver and spleen and luetic aortitis.

Dann⁵ in 1908 first described pulmonary syphilis praecox; and many papers have since been written upon this from the clinical side, no autopsy studies have been discoverable to substantiate the early symptoms and x-ray findings of pulmonary conditions in the second stage of

syphilis thus described.

The following case is of interest, not that it throws light on the initial lesion of pulmonary syphilis, but in that the progress of this condition for seven months, to its fatal termination was followed by complete roentgenologic study.

Case No. 3. C. F.; a colored laborer, aged 42 years, was admitted to the medical service of Kings County Hospital on October 22, 1930, bccause of precordial pain. The following history was obtained from the patient; one year prior to admission he caught a "cold" producing a productive cough and slight dyspnoea which kept him in bed for seven months. Since that time the above complaints have become progressively worse, with the addition of precordial pain and the sensation of a swelling beneath the sternum on slight exertion. The sputum was in small amounts, white and never blood tinged. He also noticed progressive weakness, loss of weight and appetite.

The family history and previous personal history were not contributory. Venereal disease was denied.

Physical examination revealed an adult male negro, not acutely ill, dyspnoeic, nor in severe pain, with a slightly productive brassy cough. The eyes were bulging, their reactions normal. The chest showed retraction of the left supra clavicular space, and crackling rales on auscultation over the entire left side, anteriorly and posteriorly. The aortic arch was enlarged and the aortic second sound markedly accentuated, no cardiac murmurs were heard. Daily sputum examination for the tubercle bacillus were negative, cultures showed gram positive cocci in clusters, short chain streptococci, staphlococci and gram negative bacilli. The blood chemistry and blood count were normal. The blood Wassermann reaction was repeatedly negative.

Bronchoscopic examination October 22, 1930, showed an aneurysm of the aorta with narrowing of the forward cornua of the trachea preventing

passage of the instrument.

The x-ray examination of the heart and chest on admission, disclosed a moderate aneurismal dilitation of the ascending aorta with no evidence of pulmonary or pleural pathology. Further periodic study showed no change in this process until the fourth month of hospitalization, when a slight broncho-pneumonic infiltration of the left lower lobe was noted. Subsequent roentgenologic examinations showed a constant progression of the pathological process in the left lung, indicative of a chironic inflaminatory process, syphilis to be considered, and from a radiological point of view the lesion did not appear to be malignant (Figures 5 to 8). The patient died seven months after admission in marked orthopnea, having an

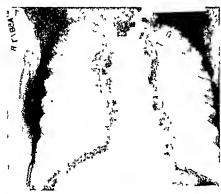
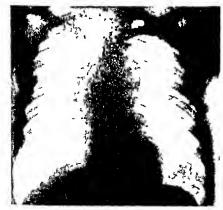
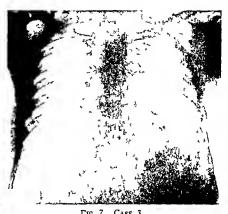


Fig 5 CASE 3

Nov 10, 1930 Antero-posterior view Moderate saccular aneurismal dilitation of the ascending aorto and arch No evidence of pulmonory or fleural pothologs



Morch 11, 1931 Antero-posterior view Moderate size oncurysm of the ascending, transverse and descending arch of the oorto, slight broncho pneumonic infiltration in the left lower labe



May 12, 1931 Moderote size socculor oneurysm of the ascending aorto, moderate elecation of the left dia plirogin with infiltration of the left lower lobe, which appears to be the result of bronchectasis



FIG 8 CASE 3

Evidence of moderate size aneurysm of the ascending arch, with almost complete absence of illimination of the inferior three-quorters of the left lung. Review of films show a constont progression of the pothological process in the left lung, which appears to be a chronic inflammotory affair—syphilis to be considered—and from a radiological standpoint the lesson does not oppear to be molinour.

almost constant brassy cough, fixation and left displacement of the trachea, difficulty in swallowing, pain not relieved by morphine, and the physical signs of absent aeration of the left lower lobe.

The post mortem findings were: the lungs were markedly adherent; there was no abnormal free fluid in the body cavities. The trachea, heart, lungs and thoracic aorta were removed en masse. The aorta bulged at its arch, and on opening the vessel, a sacculated aneurysm with blood clot acting as a valve was found. On removal of the clot, the coats of the aorta were found dissected. causing pressure on the lower portion of the trachea, and partial occlusion and displacement of the trachea to the left. The lungs were dark gray; their combined weight 1800 grams; the pleura was thickened. The left lung was adherent to the diaphragm. On section of the left lung, marked miliary tubercle formation was present, (Figure 9) and a purulent material exuded; at the base of the left lower lobe, bronchiectatic cavitation was found with an abundant fibrosis;

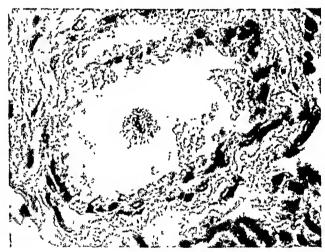


Fig. 9.

Pulmonary Syphilis (Acquired). 700x. A highly magnified picture of a pulmonary vessel showing the perivascular small round and plasma cell infiltration incident to lues.

the cavities varied in size from one centimeter to three centimeters in diameter. The right pleura was thickened, and the right lung on section showed raised granular areas, together with miliary tubercle formation.

The heart weighed 250 grams; the epicardial fat was present; on section the myocardium was fibrotic; the valves were grossly normal. The aorta in addition to the preceding findings, showed longitudinal striations of mother-of-pearl plaques. The coronaries were narrowed at the mouth of the vessels.

The histological data follows: the lungs, acute fibrinous pleuritis, chronic pleuritis, multiple pulmonary abscesses, broncho-pneumonia, definite luetic fibrosis, emphysema. The liver: chronic passive congestion. The spleen: chronic inter-

stitial splenitis. Kidneys: chronic vascular nephritis. The peribronchial lymph glands showed moderate anthracosis and hyperplastic lymphadenitis of luetic type. The aorta: luetic aortitis.

We do not know how often pulmonary syphilis occurs. It is indeed a very simple matter to determine the relative proportion of syphilities among the general population of a great city, as compared to the determination of the incidence of pulmonary syphilis among syphlitics. covery of pulmonary syphilis depends largely upon the personal experience of the clinician and the opinion of the pathologist; this may be influenced in a measure by the degree to which the subject has been popularized. The multiform variety of the lesions of syphilis of the lung as described by the early investigators, increased the difficulty of diagnosis, and may explain the wide differences of opinion as, expressed by them: Stolper⁶ described 61 cases of lung syphilis out of 2,995 cases, only one of which showed gumma, while Hunter gave the lungs the last place as the seat of syphilitic lesions. Carrera,8 while working in Madrid, in four years did not see a single case of lung syphilis out of hundreds of syphilitics. Rössle, however, described twenty-five cases of his own, and believed that syphilis of the lungs is at least as frequent as syphilis of the liver. Flockemann¹⁰ was of the opinion that, there is no good reason why the lungs should not be attacked by lues as frequently as any other part of the body.

Morgagni,11 whose knowledge of the gross pathology of syphilis consisted almost wholly of observations upon gummatous lesions of the bones, aneurysms of the aorta and change in the lungs and kidney, was of the opinion that the lungs were frequently injured by lues venerea. Rokitansky in his "Handbook of Pathological Anatomy," and Virchow in his "Cellular Pathology" added nothing to the pathology of syphilis. However, Virchow¹² in 1858 did distinguish the simple inflammatory from the gummatous lesions of syphilis, and showed for the first time the part played by this disease in producing inflammatory conditions of the most varied organs and tissues. Since the year 1797 many articles have appeared, mentioning syphilis of the lungs as a distinct affection, for there is no paucity of literature on the subject of pulmonary syphilis, nor dearth of figures relative to its frequency. Unfortunately, prior to 1900, the diagnosis of syphilis of the lungs made by many of these writers will not survive critical examination; tuberculosis, brown induration, chronic lymphangitis, gangrene and other lesions having been confused with luetic lesions. At Kings County Hospital, among 3,427 syphilitics, there were seventeen cases of syphilis of the respiratory tract, and of these, five were syphilis of the lungs, this diagnosis having been confirmed by autopsy in four. In the Bellevue Hospital series Symmers¹³ found syphilitic lesions of the respiratory tract in thirty-five of three hundred and fourteen cases, or 105 per cent, and the lungs were involved in twelve of the thirtyfive cases (38%) Warthin2 did not determine the percentage of lung syphilis in his series, but expressed the opinion that, our knowledge of syphilis of the lungs is very fragmentary and vigue

Differences of opinion have arisen in what constitutes pulmonary syphilis, and there is a lack of agreement as to the class of cases to be included under the title, syphilis of the lungs lum14 states that in the lungs "the lesions of the tertivry stage of syphilis, as elsewhere, are diffuse syphilitic infiltrations or gummata, but whether pneumonic or illcerative forms of syphilis with cavity formation really exist is uncertain" the recent writers admit the possibility of caseation of the gumma, and some of them, as Mar shall16 accept the possibility of its evacuation through the bronch: Stanley16 says that the first stages of lung syphilis are essentially those of an acute interstitial pneumonia In general the opinion of writers upon this subject is represented by Rossle' who says that the early stages of the lesion are unknown Warthin2 definitely states that "the gumina is not the essential typical lesion of old or latent syphilis. It is a relatively rare formation, and the great majority of cases of syphilis run their course without the formation of gummatous granulomata The new pathology of syphilis is based upon the demonstration that the essential tissue lesion of either late or latent syphilis, is an irritation of inflammatory process, usually mild in degree, characterized by lympho cytic and plasma cell infiltrations in the stroma,

particularly about the blood vessels and lymphatics, slight tissue proliferations, eventually fibro sis, and atrophy or degeneration of the parenchyma

There is no characteristic picture of pulmonary syphilis by the roentgen ray According to Jaches, 17 this diagnosis should be made only by the history, a positive Wassermann reaction, and the result of antisyphilitic treatment tunately, the Wassermann reaction is often negative with indubitable physical evidence of syphilis present. In the light of our present knowledge, Allison18 is of the opinion that even a tentative diagnosis of syphilis is not warranted until every other possible type of pulmonary disease is ex-The writer believes that in the presence of syphilis, and the evidence of a chronically progressive pulmonary infiltration, that syphilis of the lung, as a diagnosis, should be considered sec ond to none, and with Flockmann,10 that there is no good reason why the lungs should not be attacked by lues as frequently as any other part of the body It is not difficult to realize that the clinical picture of this condition is not character-The symptoms simulate pulmonary tuberculosis and the diagnosis of tuberculosis is usu-MacCallum's14 description of the ally made tertiary stage of syphilis and how difficult it is to differentiate it from tuberculosis, especially in the lungs, may be a good explanation for syphilis of the lung being so rare as an autopsy finding Yet, Carrera,8 in a study of sixty cases of tuberculosis, in comparing the connective tissue formation with that found in syphilitic lungs, was convinced that it is never impossible to distinguish the fibrosis of tuberculosis from that of syphilis

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PROSPECTS FOR STATE MEDICINE

Walter Lippmann, writing in the New York Herald Tribune of December 14, said:

"I do not think it is possible to find an instance where a social order has been radically altered because some one thought some other kind of order would be better. There has to be a complete breakdown of the old order, a total paralysis, and an extinction of all hope that it can revive before a genuine social

revolution occurs. When these conditions do not exist, you may get a change of government, in moments of excitement, even a violent change, but when the smoke clears away, you are pretty sure to find the essential institutions and habits of the nation the same."

The family practice of medicine is still going strong, and the American people have no incentive to replace it with state medicine.

THE JOURNAL

This issue of December fifteenth of the New YORK STATE JOURNAL OF MEDICINE will be the last one to appear under the present Editorial Board. It is with a feeling of pride that we review the growth of the JOURNAL from the time of our taking charge ten years ago.

At that time it was very evident the Journal should play a more important part in the publicity of State Society activities. It was therefore reorganized and expanded, with a separate and complete staff, housed in its own quarters, and it has worked most effectively ever since as a har-

monious unit

We wish to thank our Executive Editor, Dr. Frank Overton, for his untiring devotion to an ideal; to Miss Bownc and Miss Wheeler for their enthusiastic support; to Dr. Stedman, an able

contributor and to Mr. Tufts, our Advertising Manager, whose time solely devoted to the Journal increased the advertising income over four hundred per cent during our tenure of office.

Unless this organization had been harmonious, loyal, and unselfish, the Journal could not have earried on during this last decade as a smooth

running department.

We wish to thank the Secretary's office, the heads of Committees, and those with whom the Journal has come in contact, for their cordial and sympathetic support.

To the new Editorial Board we wish the best success, and trust they will get the whole-hearted cooperation and support of the State Society. This they must have if the JOURNAL is to be a success.

ORNIN SAGE WIGHTMAN.

INDEX OF ACTIVITIES

For the sixth year this Journal is publishing a detailed index of the activities of the medical societies recorded in the Journal (page 1462). These records include those of the official medical societies of the counties and states, and of the nation. They have grown in scope and volume with the evolution and development of a spirit of cooperation among physicians, and now cover practically every phase of medical society activity. Of special value are the references to activities of other state societies along lines similar to those of New York State.

Experiences and precedents are of value in direct proportion to the availability of their Great movements often start from small beginnings, and their germs are found in a county society quite as often as in a state organization. In fact, it is a growing custom that a state society shall refer a new proposal to a county society for its trial and demonstration by a group of physicians who are in sympathy with the movement and will give it a fair trial. Graduate education, for instance, was first exemplified by county societies whose success encouraged the officials of the state societies to provide courses for the counties which desired them. The index of the graduate courses of the several states reveals a wide variation in the details of the courses: hut through all the divergence there runs a consistent plan of the promotion of the courses by state societies along lines which are adapted to the individual group of physicians. Anyone who is investigating the subject of graduate medical education will find the index of the activities recorded in this Journal to be a comprehensive guide to what is being done in that line by the official state medical societies throughout the entire nation.

The significance of events of history are not comprehended by those who are engaged in making the history. The evolution of every historie movement shows trials along many lines, some of which turn out to be practical, while others are visionary. There are medical leaders who discover new methods and new activities, only to find that they are already used successfully by some medical societies. On the other extreme are the doctors who kill every new proposition by references to its trial and failure in other societies. The journals of the medical societies of the several states carry a wealth of valuable records which are not available because they are not indexed in a central source. The annual index of the activities of medical societies contained in the NEW YORK STATE JOURNAL OF MEDICINE points the way to a wealth of experiences and precedents which will be of essential service to the officers and committeemen of the medical societies throughout the State.

An extensive index of the available records of the activities of a medical society is necessary if that society is to fulfill its mission of bringing all forms of medical service within the reach of every citizen.



MEDICAL PROGRESS



A Clinical Conception of Rheumatic Heart Disease.—After a critical analysis, Samuel A. Levine is of the opinion that it cannot be said that streptococci cause rheumatic heart disease. Similarly, the diligent search for and removal of foci of infection have proved far from effective in either preventing or ameliorating the ravages of the disease. A phase of the problem that has not received sufficient attention is the condition of the host or patient, the internal environment in which the disease develops, and especially the possible rôle the glands of internal secretion may be playing. The response of the human body to outside influences is very variable and difficult to predict. This is true whether the offending agent is a physical, chemical, or infectious cause, or whether it is a psychic trauma. Not only do human individuals differ from each other, but each one differs from year to year and from month to month in his bodily behavior, in physical, anatomical, and chemical make-up, and presumably in biological reactions to bacterial invasions. This is particularly true of the endocrine glands. It seems that many, if not all, are exposed to infection, certainly if the streptococci have much to do with it. One child gets the infection and manifests it as St. Vitus' dance, another polyarticular rheumatism, a third skin lesions, a fourth may show none of these lesions and respond purely with a pericarditis, etc. Furthermore, in the same person the internal environment may be in such a state that during one month or one year he may have chorea and at another rheumatism. It does not seem that such variations can be ascribed to changes in the infectious agent, but are more likely due to changes in the host. A striking observation in regard to chorea, which illustrates the author's thesis, is that one practically never sees chorea in patients over twenty years of age, except in a pregnant woman. Here pregnancy alters the internal environment, especially the endocrine balance. A further illustration is the occurrence of so-called "growing pains," which disappear as full growth and endocrine balance are established. Another peculiarity of rheumatic disease is its family incidence. While factors that spread the infection by contact are important, there must be an additional hereditary factor of vascular vulnerability. The following instance throws some light on this A husband and wife died of coronary artery disease. Among their children three developed hypertension in the thirties or early forties. Each of these children had one child with either rheumatic fever or chorea. There is reason to hope that an investigation of the glands of internal secretion will throw some light on the prevention and treatment of rheumatic heart disease.—American Heart Journal, October, 1933, ix, 1.

Thyroidectomy in the Treatment of Advanced Congestive Heart Failure and Angina Pectoris.—Samuel A. Levine, Elliott C. Cutler, and Eugene C. Eppinger refer to the remarkable results that have been obtained following subtotal thyroidectomy in patients with hyperthyroidism and various forms of heart disease. Those disturbances which are entirely due to hyperthyroidism may be permanently cured by surgical therapy. It has been discovered quite recently that hyperthyroid heart disease can exist with a normal metabolism and that even under such circumstances subtotal thyroidectomy can effect marked improvement of this circulation, even though it may not alter the metabolic rate. It would seem that not all the effects of the thyroid gland on the heart can be measured in the terms of basal metabolism. In order to test the possible application of these principles in cases of advanced cardiac failure but with normal glands, the authors performed partial or complete thyroidectomy on twelve patients—four with angina pectoris, four with valvular heart disease and auricular fibrillation, and four with non-valvular congestive heart failure. Only those suffering from hopeless, incurable, and intolerable heart diseases were chosen. Improvement in six was marked, in three it was slight to moderate, in one there was no improvement, and in one sufficient time had not elapsed to judge. One patient who was moribund at the time of operation died. The most promising group seemed to be those suffering from angina pectoris. From this brief experience it is impossible to predict whether the non-valvular or the valvular cases are likely to receive the most help. There were no conspicuous alterations in the blood flow or the blood cholesterol following operation in these cases. The authors feel that the results were sufficiently beneficial to warrant the conclusion that this new procedure will prove helpful in the treatment of properly selected patients suffering from various forms of heart disease who do not improve on the measures customarily used.—New England Journal of Medicine, October 5, 1933. ccix, 14.

Urticaria and Syncope "a Frigore."-Jean Affolter had occasion to observe in June, 1930, an unusual type of case in which brief exposure to cold water produced all the phenomena of a colloidoclastic shock. The patient, a young man in perfect health, had just begun to bathe in a lake when he observed a reddening of his limbs accompanied by a eurious sense of formication with intolerable itching, which soon extended over the entire surface of his body. The experience was entirely new. There was a strange metallie taste in his mouth, visual troubles appeared, objects assuming abnormal colors; his pulse beat violently, and it was with difficulty that he kept from losing consciousness. The phenomena lasted about half an hour. From that day on, they have reappeared whenever the patient has entered water at a temperature below 24°C. (75°F.), while exposure to cold air has no such effect. The author was able to provoke attacks in the subject at will, either by cold water or by spraying with sulphuric ether or ethylchloride. Immersion of the forearm in water at 18°C. (64°F.) sufficed to bring them on locally in two minutes, accompanied by an edema that stopped abruptly at the point where the contact with the water began. When a full bath was taken the entire surface of the skin was covered with urticarial spots, often confluent, which persisted half a day. Headache and diarrhea frequently accompanied the attacks. On one occasion when the temperature of the water was only 12°C. (54°F.), the patient actually collapsed, the pulse became imperceptible and he lost consciousness for half an hour. These attacks continue to the present day. A study of the white blood picture on these occasions shows a primary leucocytosis appearing almost immediately, followed by a fall in the number of polynuclears about half an hour later, after which a relative lymphocytosis and leucopenia of polynuclears appears. This leucopenia has the peculiarity of occurring after the urticarial eruption. From a study of the literature, three possible explanations suggest themselves: (1) That the disturbances were purely of vasomotor origin. (2) That there was a direct change in the tissues produced by the eold, such for example as a modification of proteins, analogous to what occurs under certain chemical influences or exposure to light rays.
(3) That an allergic process was in question, with a discharge of reagins. None of these possibilities can be absolutely rejected. Some of the phenomena cannot be accounted for unless both a vasoneurosis and an allergy are assumed. Recently E. Klein regarded these two mechanisms as opposed to one another. Affolter thinks, however, that this case is very instructive in this respect, and that the two processes may instead be combined.—Schweizerische medizinische Wochenschrift, September 9, 1933.

Theophyllin as a Diuretie,—C. Römer and H. A. Meyer say that, while the introduction of such mercuric preparations as salyrgan represented a gerat forward step in the dehydration of hydropic patients, they were attended with certain disadvantages, such as their injurious effects on the kidney and intestine, the production of too great a loss of water, with consequent weakness of circulation, not to mention the drawback of having to be given continually by injection. These authors have accordingly given their attention to theophyllin, a substance which was introduced into therapeutics in 1902, but which was relcgated more and more to oblivion because of its alleged secondary effects. They have been using it in the most various forms of hydrops, administering it in doses of 0.3 gm, t.i.d., combined with 0.05 gm. luminal, to offset its exeiting effects. A comparison of its diuretic properties with those of salyrgan shows that it is in no way inferior to the latter. It has a powerful diuretic effect in cardiac and renal affections, but in Laennec's cirrhosis of the liver, to the surprise of the authors, it has proved to be practically without any effect, which is in striking contrast with the powerful diuresis it sets up after a single dose of 0.03 gm. in ascites following cardiac insufficiency. The question arose, why this difference in effect should exist for theophyllin and not for salyrgan. It is known that salyrgan produces chiefly a sodium chloride diuresis, in which the water is carried along only in connection with excretion; also that mercuric preparations have a close relation to the liver. The effect of theophyllin, on the other hand, depends ehiefly on its stimulation of the cell protoplasm of the renal epithelium to inereased function, but it is probably also related to the secretory endothelium of the lymph eapillaries and canaliculi. In view of the ehanged activity and the dryness of the subeutaneous cellular tissue in cirrhosis of the liver, it may be assumed that these lymph capillaries and their endothelium constitute a poor point of attack here. Hence there is lacking the excitation of lymph excretion upon which the diuretic effect of theophyllin depends as much as it does upon the stimulation of the renal epithelium. This observation makes the administration of theophyllin an ideal means of diagnosis in cirrhosis of the liver, provided there is a well compensated circulation. Besides the simplicity of its administration, it can be given without injury for a period of many days. The extent of the diuresis it produces can be controlled better than that from salyrgan, and it has the advantage of being particularly well adapted for use in renal affections, in which the use of mercuric preparations is contraindicated.—Deutsche medizinische Wochenschrift, September 8, 1933.

Neurological Emergencies.—In dealing with the comparatively common crises in general practice, Wilfred Harris says it is possible to do good sound work with the ordinary neurological tools. Fits of various kinds are a common cause of difficulty, and a correct diagnosis will often mean the saving of a life. You receive an urgent call and find a middle-aged man, or woman, lying unconscious at the foot of a staircase. You have to consider whether the patient fell in a fit before going upstairs, or whether a severe fall downstairs has caused a fractured skull, or whether it is a primary case of cerebral hemorrhage. Evidence of bleeding from scalp or ear, or bruising, will indicate a fall, and further evidence of unequal pupils, conjugate deviation of the eyes, twitching of face or limbs, or signs of hemiplegia, may clinch the diagnosis of cerebral injury. An alcoholic smell may suggest drunkenness, but it is well to remember that a single glass of beer or cider taken two or three hours previously may taint the breath heavily. This is particularly important for police surgeons to remember with persons accused of being under the influence of alcohol to a degree rendering them incapable of driving a car. If the possibility of fracture of the skull has to be considered, an x-ray of the skull is important. there is a definite lump or gross irregularity of the skull, it is advisable not to wait for an xray, but to cut down on the bone to make certain of its condition, when a quick dealing with Concussion a depression may be life-saving. may be followed by recovery of consciousness, and later there may be delirium, increasing drowsiness, and coma. This indicates the on-set of cerebral edema. Lumbar puncture will almost certainly show yellow staining of the fluid from altered blood. If the pressure of the fluid registers 200 to 300 on the manometer, decompression must be done at once. Lumbar puncture will also settle the question of cerebral hemorrhage, but beware of withdrawing more than the minimum of bloodstained fluid, as the release of pressure may start fresh cerebral hemorrhage.

Before administering analgesics in severe headache, attempt to determine the cause, whether migraine or whether it is due to sinusitis, meningitis, cerebral tumor, or poliomyelitis. Exceeding violent and continuous pain in the region of the eyeball, termed by Harris ciliary neuralgia, may be relieved by alcohol injection of the Gasserian ganglion. Post-

herpetic neuralgia in old people is very difficult to treat. Morphine should be avoided and reliance placed on the milder sedatives. Gasserian injection is helpful in trigeminal Facial neuralgia may be relieved by the inhalation of trichlorethylene; glass capsules containing 10 minims may be carried by the patient and used when required. Vertigo in which objects swing is usually of labyrinthine origin, such as otosclerosis. The patient should be kept in a somewhat darkened room and given bromides, but not aspirin, salicylates, or quinine. A local blister or mustard leaf behind the ear may be of service. Harris has seen 50 cases of cerebellar thrombosis, which is characterized by urgent objective vertigo, intense nausea, probably vomiting, and intense feeling of malaise. The patient's position in space appears to him to be altered or even reversed. The treatment is rest and sedatives. In any case never take hope from your patient, it is often one of the finest remedies in or out of the pharmacopoeia.—The Lancet, October 14, 1933, ccxxv, 5746.

The Pathogenesis of Multiple Sclerosis: A Possible Vascular Factor.—Tracy J. Putnam states that there is no unanimity of opinion as to whether multiple sclerosis is infectious, neoplastic, toxic, hereditary, or degenerative in origin. The essential histological changes in the lesions were described by Charcot, in 1868, as consisting of a patchy loss of myelin, with relatively intact axis cylinders, perivascular infiltration, and dense glial proliferation. Nothing of importance has been added to this description. Experimental lesions have been produced by exposure to carbon monoxide, and by the injection of small amounts of tetanus antitoxin. Both of these methods are extremely uncertain. An attempt was made to determine what common denominator could exist between carbon monoxide poisoning, tetanus intoxication, and multiple sclerosis in human beings. Many possibilities were investigated and discarded, before it was recognized that in all instances the lesions had a predominantly perivascular distribution, as has long been recognized in multiple sclerosis, and in some of them actual thrombi could be demonstrated. The histological picture is different from that ordinarily seen, following thrombosis of a cerebral artery, which usually leads to destruction of axis cylinders, glia, and all nervous elements within the anemic area. In the plaques under discussion the lesion is a milder one. After further experimentation, and after reviewing his slides, Putnam came to the conclusion that when a lesion was definitely perivascular in location the central vessel could usually be identified as a vein, never as an artery. More recently he has been able to

produce some acute lesions, which have both gross and microscopic resemblance to those occurring in human beings, by injecting bland oily substances "upstream" into the longitudinal sinus of dogs. If the hypothesis that sclerotic plaques are due to venous obstruction can be maintained, most of the current conjectures concerning the etiology of the disease will have to be abandoned. The ultimate etiological factor should probably be sought in local vascular abnormality, or in some alteration in the coagulability of the blood.—
New England Journal of Medicine, October 19, 1933, ccix, 16.

The Cerebrospinal Fluid in Neurological Diagnosis.-In the Deutsche medizinische Wochenschrift of October 13, 1933, G. Wüllenweber points out the rather narrow limits within which the examination of the cerebrospinal fluid is of sufficient diagnostic value to justify the discomfort it causes the patient, which may persist even for months afterwards in some cases. In the last 10 years it has been taken almost for granted that to maintain the good reputation of a clinic the neurological patient should as a routine matter have his ccrcbrospinal fluid examined. This is a mistaken course: it should, instead, be the aim of every well schooled diagnostician to reach a neurological diagnosis without subjecting the patient to the unpleasant experience of a puncture. It does not help the experienced neurologist, when he has already established the presence of an intracerebral tumor with choked disk, to learn in addition that the pressure in the fluid is raised and the protein increased; nor is it of any interest to him whether or not, in a paretic with exalted ideas, the Wassermann reaction in the fluid is found positive. Wüllenweber would limit the use of the procedure to those cases in which the findings may serve to point the way to the right therapy through the correct diagnosis. The aim even then should be to withdraw as little of the fluid as possible. A careful choice should accordingly be made as to the type of examination desirable: whether its purpose shall be to establish the type of cells, the sugar content, the Wassermann reaction, or the amount and quality of proteins present. The three main types of cerebrospinal fluid findings may be schematized as (1) inflammation, (2) compression, and (3) degeneration, the pressure, cells, total proteins, and colloid reaction being, in each type of finding, more or less characteristic. In which cases, then, does examination of the fluid promise a successful diagnosis? (1) In those cases in which the question is raised, whether an organic nerve affection is present, in which event only the pathological outcome of the ex-

amination gives any dependable information. Here, for example, examination may reveal whether we are dealing with multiple sclerosis or with hysteria, with encephalitis or with a functional condition. (2) In those cases in which the question is raised, What organic nervous disease is present? Here examinations should be limited to those which may clear up the diagnosis. For example, the sugar determination alone is enough when it is a question between encephalitis and meningitis; the pressure determination alone, sometimes enough, for differential diagnosis between brain tumor and softening of the brain. Only the experienced physician is qualified to answer these questions, or to determine the amount of cerebrospinal fluid to be withdrawn.

Cancer, a Generalized Disease .- For a number of years A. de Coulon and A. Ugo have been looking for some method of defining in a numerical way what is meant by a normal organism, particularly with a view to defining cancer in such terms. To define the "soil" they availed themselves of a physicochemical property of albumins: namely, the iso-electric point, whether this be the muscular substance of the mouse, or in the blood serum of the human being, or of the rabbit. In a normal animal, a mouse for example, the iso-electric point is always found in the same zone of the scale of hydrogen ion concentration. It is the same in mice carrying grafter tumors as in mice with spontaneous or tar tumors. We thus see that the "soil" has been modified by the presence of a cancer, for the authors have confirmed the fact that this modification is not a result of the cancerous condition, but is one of its causes; that is, the soil has been modified by some cause, extraneous or otherwise, and only when its iso-electric point has reached a certain value in the hydrogen-ion concentration scale can a cancer appear. Thus, if the external ear of a rabbit is rubbed with tar, a small papilloma will appear after a certain lapse of time, at the site irritated by the tar. If the blood of these animals is regularly examined for its iso-electric point, during the entire time that they are being painted with tar, it will be observed that from the very early days this point has a tendency to rise in the scale, and that only when it has reached a certain value does a papilloma appear; then a more marked elevation precedes the transformation of this papilloma into cancer. It would thus appear that the tar influenced the entire organism, by so modifying the "soil" of the animal that its iso-electric point was maintained in a zone favorable for the appearance of cancer .-Schweizerische medizinische Wochenschrift, September 30, 1933.



LEGAL



VALIDITY OF CONTRACTS TO PROVIDE PROFESSIONAL SERVICES DURING LIFETIME

By LORENZ J. BROSNAN, ESQ.

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An interesting situation arose some years ago in one of our Mid-Western States, when the validity of a certain contract that a doctor had entered into was tested out in the appellate courts. The facts must be set forth at some length in order to understand the ruling.

A certain Dr. Z had been for a number of years engaged in the practice of medicine, and among his patients was an elderly lady of considerable wealth. She had been for some time a sufferer from various ailments including maladies of the heart, stomach and kidneys, and also a condition causing stiffness of the knee-joints, and a further condition referred to as a disease peculiar to her sex. A contract was prepared on her behalf and submitted to Dr. Z, which provided that the doctor should provide for her such medical attention as she would require during the remainder of her life, and in return the doctor was to be paid out of her estate upon her death, the sum of \$100,000 in ten equal annual installments. The doctor questioned the installment features of the agreement, and it was drawn up and executed with the provision that the entire sum of \$100,000 was to be paid upon the woman's death.

Over a year later the contract was re-executed, the sole modification being that a preamble was inserted stating that the older contract had been signed by the woman as "Mrs. J. H. M." and that to be sure of its validity the second contract was to be signed "Mrs. Harriet G. M." The contract was then executed in the said form, the essential portion thereof reading as follows:

"Mrs. Harriet G. M., does enter into an agreement and contract for the professional service to be rendered by the party of the second part, Z— M.D., at any time or place, during any spell of indisposition which I may be subjected to during the remainder of my natural lifetime; that in the event of sickness such methods are to be employed or adopted as seem best and most expedient; all medicines or other paraphernalia necessary to the discharge of duties in cases of indisposition are to be provided by Dr. Z—; that when the critical moment comes when it is thought that I may pass out Dr. Z—may call the physician or physicians as his judgment may dictate; that the sum which I voluntarily contract to pay for the services thus rendered is to be \$100,000 payable immediately or as soon as possible by my estate, which I leave in trust with the X— Trust and Savings Bank."

Subsequent to the execution of the said contract until Mrs. M died some three years later, the doctor attended her constantly, reserving for her a large portion of each day when he allowed

her to call upon him for attention to the exclusion of all other patients. When the woman removed her residence to a certain hotel, he also took quarters in the same hotel. When a few months before her death she went to California, the doctor accompanied her and remained in attendance upon her until she died. Repeatedly during the last years of her life, Mrs. M spoke to various people of how well satisfied she was with her agreement. Mrs. M was a well-educated and intelligent woman, and it was unquestioned that she was in full possession of her mental faculties up to the time of her death.

After the death of Mrs. M, Dr. Z filed a claim with the executor for the enforcement of the contract, and subsequently brought suit against the estate to enforce the claim. A bitterly fought lawsuit ensued which was carried to the highest court of the State before the doctor finally prevailed.

There was no attempt made, when the case was considered in the final appeal, to defeat the claim on the often urged grounds of fraud, undue influence, or insanity to invalidate the agreement; but the principal contention was that the contract was contrary to public policy. The court discussed this point as follows:

"It is urged that this contract is void chiefly for the reason that it furnished an incentive to the appellant to shorten the life of Mrs. M— by neglect or improper treatment or by commission of the crime of murder. Each argument made by appellee in support of this contention involves a breach of contract and is not founded on the performance of it. It cannot be seriously contended but that in order to comply with the terms of this contract and be entitled to receive the benefits of it the appellant was bound to give Mrs. M— the best treatment within his power and skill and to prolong her life as long as possible. Should he fail to do this either through neglect, by wilfully treating her in an improper manner or by directly causing her death appellant would be unable to recover upon the contract. There can be no doubt that a contract to commit murder, or any other crime, or a contract to give a reward to one for the commission of a crime, is void, as against public policy. This contract does not contemplate the commission of a crime or the doing of anything which is unlawful or contrary to good public morals. * * *

"There have been numerous decisions involving con-

"There have been numerous decisions involving contracts entered into whereby one party has agreed that upon his death his property of specific portions of it, shall go to and become the property of the other party for considerations named, being usually the caring for and maintaining of the guarantor during his or her lifetime by the other party, or whereby one party conveyed his property to the other for the consideration of the care, maintenance and support of the guarantor during the re-

mainder of his or her natural life, and these contracts have universally been held to be valid and building. In every such case the incentive to hasten the death of the guarantor was present to the same extent as in this case. While such contracts are usually made between parent and child or between others closely related by blood ties, they have been frequently made between persons who bear no blood relationship to one another and no distinction has been made by the courts on that ground."

The court also said

It is, therefore, not contrary to public policy to contract to devise property or to refrain from devising property for a consideration or to contract that property shall pass at once or at the decease of the grantor to the other party in consideration for the support care and maintenance of the grantor during the remainder of liss initial life by the other contracting party. So far as the question of an incentive to the commission of a crime is concerned, we perceive no difference between such contracts and the one here involved.

The further point was raised that the contract should be declared void for the reason that it was a wagering contract, and therefore illegal. The court discussed that theory by pointing out that the contract, even though unusual, was founded on consideration moving between the parties, that is, for money promised, the doctor had agreed to render actual professional services.

The decision of the court in upholding the validity of the doctor's claim is very similar to that in another case which came up, in which the bene ficury of a like arrangement was a hospital

In that case the patient was an elderly woman who had been suffering for a number of years from cancer of the breast. She had been operated upon on various occasions, but her case had been declared incurable. She had a son and two sisters living, but none of them was in a position to care for her. She went to a hospital and discussed with the proprietress the matter of making arrangements whereby the hospital would take care of her for the remainder of her days. An agreement was made to the effect that the woman

was to pay \$1,000 cash and to give a note for \$3,000, in return for which she would be furnished with a private room, board and care during her natural life. The cash payment was made, the woman entered the hospital and died in a week's time.

Thereafter suit was brought on behalf of the hospital to enforce the payment of the note by the pitient's estate. A jury awarded the hospital the amount sued for, and the matter was taken up on appeal. Similar objections to the validity of the contract were urged before the appellate court as in the ease above referred to, but the court again refused to prevent the enforcement of the contract, saying in its opinion.

'The appellee corporation was organized to conduct a liospital where it could care for the sick and afflicted It had full power and authority to make all contracts incident to the business in which it was engaged. It made the contract with Mrs. G because she was sick, needed care and had no place to go and no one to care for her. The contract was not in the nature of life insurance, was not a lottery, was not against public policy and was not ultravires. The question as to whether the contract was in fact entered into was one of fact for the jury. The question of the construction of the writing was one of law for the court. The contract was not void under the Statute of Frauds because it was in writing. As we have already held, the contract was a valid and substitutal obligation and nothing more need be said as to the last contention of the appellant."

In each of these cases there is no doubt that the beneficiary under the contract received a very handsome remuncration for the services rendered but these are not to be confused with instances of unfair dealings with aged and infirm wealthy individuals. In each case the elderly lady knew what she was bargaining for and received the benefits of the bargain, although death in each case cut down the amount of services that the doctor and the hospital, respectively, were obliged to provide to carry out their parts of the transactions.



NEWS NOTES



CIVIL WORKS ADMINISTRATION

A copy of the special rules and regulations promulgated by the Civil Works Administration to govern skilled work projects for nurses and other professional personnel engaged in medical relief has been mailed to the President of every county medical society in New York State, by Dr. J. S. Lawrence, Executive Officer of the Medical Society of the State of New York.

The Medical Director of the T.E.R.A., who is also representing the Civil Works Administration, is willing that the county societies should have an opportunity to express their approval or disapproval of the physicians who might be employed on local projects, and suggests the following regulation will be added giving County Societies an important share in the administration of the law:

"The Comitia Minora or the proper officers of each County Medical Society shall pass on the list of physicians submitted to them as applicants for employment in 'skilled work projects' as to their professional standing and economic status, in so far as it is related to eligibility for participation in such projects."

Physicians applying for work under the Civil Works Administration will be required to register in the rules; but naturally they will not need to qualify as indigents nor will their statements be checked up by inspectors. This is another reason why the county societies should have some supervisory power.

The special rules and regulations are as follows:

CIVIL WORKS ADMINISTRATION OF THE STATE OF NEW YORK

- SPECIAL RULES AND REGULATIONS GOV-ERNING SKILLED WORK PROJECTS FOR NURSES AND CERTAIN OTHER PROFES-SIONAL PERSONNEL ENGAGED IN MEDI-CAL RELIEF.
 - I. Scope—In general, the scope of skilled work projects for nurses and certain other medical relief workers shall be to augment and render more adequate facilities already existing in the community for the provision of bedside nursing and other professional care to indigent persons. Increased or additional nursing programs submitted as "Skilled Work Projects" should continue and supplement the work which has been according under the TERP A state which has been organized under the T.E.R.A. statewide work relief nursing service wherever such service exists.

II. PROGRAM OF WORK.

- A. For Nurses (Listed in order of importance).
 - 1. Bedside nursing care, for needy persons, to supplement existing community service. All calls from families on relief lists must be met before other services are rendered.
 - 2. Professional advice in homes, at request

- of Welfare Officials, particularly in relation to special health problems, such as diets for children, eare of pregnant women, and chronic illness.
- 3. Sift out calls for medical service by home visits so that every family needing medi-cal service will receive it, but unnecessary medical calls will be reduced to a mini-
- 4. Health instructions in the homes, to interpret instructions regarding budgets; diets; cod liver oil as a protective food; prenatal hygiene; need for immunization; arrangement for correction of defects where indicated and feasible.
- 5. Supplement the work of existing community agencies such as out-patient clinics and consultations conducted as part of the public health work of a community.

B. For Other Professional Personnel.

Programs adapted to the special needs of the community under the same general restrictions as to seope and services as indicated for nurses above.

Note-Special skilled work projects relating to public health will require nursing service in addition to existing service, and such service should be submitted as part of the special projects. Special proj-cets, as well as regular ones, should be integrated with a statewide program approved by the State Commissioner of Health.

- III. ELIGIBILITY (Subject to Requirements of "General Rules and Regulations Governing Skilled Work Projects No. II-A and II-B").
 - 1. Nurses. All nurses employed in their professional capacity in skilled work projects shall:
 - (a) Be licensed to practice as registered grad-uate nurses in New York State. First consideration shall be given to such nurses who have been residents, for not less than six months, of the welfare district for which the project is proposed. No persons, residents of the State of New York for less than six months, shall be eligible.
 - (b) Be employed as a T.E.R.A. work relief nurse during November, 1933, under the approved statewide project for work relief nurses; Or,
 - (c) Be certified as eligible for work relief by the chairman of the local, (city, county, or joint) emergency work relief bureau or the official responsible for such cer-tification under the local Civil Works Administration; Or,
 - (d) Be registered as unemployed in the local office of the N. Y. State Employment Service and/or the National Reemployment Service; And

(e) Be approved as to professional standing and fitness for the particular job by the

District State Health Officer.

2. Other Professional Personnel. Physicians and dentists employed in their professional capaci-

- ties in Special Skilled Work Projects shall:
- (a) Be licensed to practice their respective professions in New York State. First consideration shall be given to residents, for not less than six months, of the welfare district for which the special project is proposed. No persons, residents of the State of New York for less than six months, shall be eligible.
- (b) Be employed in their professional capacity, in a State or local work relief project approved by the T.E.R.A., during November, 1933; Or
- (c) Same as 1. (c) above.
- (d) Same as I. (d) above.(e) Same as I. (e) above.
- IV. RATES OF PAY AND HOURS OF WORK.

1. Nurses.

- (a) For nurses employed on T.E.R.A. work relief projects during November, 1933, sixty (60) cents per hour for forty hours per week. These nurses have been trained for this work and seliedules adapted to program of supervising agency. This basic program and staff shall be continued as a prerequisite to approval of increased or supplemental projects.
- (b) For nurses employed after December 1, 1933, to supplement existing work relief projects or for special nursing projects, sixty (60) cents per lour for a maximum of forty hours per week.
- (c) For specially qualified nurses employed after December 1, 1933, in a supervisory capacity in approved large scale skilled work nursing projects, seventy-five (75)

- cents per liour for a maximum of forty liours per week.
- Physicians approved and employed on a parttime basis in a skilled work project, after December 1, 1933, \$15 to \$35 per week depending on the hours of service.
- Dentists approved and employed on a part-time basis in a skilled work project after December 1, 1933, \$15 to \$35 per week depending on the liours of service.
- V. Approval. In order to coordinate all health activities in the State and local districts, skilled work projects for nurses and other professional personnel engaged in medical relief, shall meet the requirements of regulation I of the general "Rules and Regulations Governing Skilled Work Projects," and in addition shall be subject to the following procedure:
 - 1. Shall be approved in writing by the District State Health Officer. Such approval shall certify to: (a)—The need for additional bedside nursing or other professional service to augment or render more adequate local community services; (b) Adequate nursing or other professional supervision provided locally through existing visiting nursing associations; other accredited bedside nursing organizations; or through the Health Department; (c) Assurance that services provided through these projects would not supplant, but would augment existing services for the unemployed.
 - 2. Shall be forwarded by the local civil works administration to the Projects Division, State Department of Health, Albany, for approval and
 - 3. Shall be forwarded by the State Department of Health to the Projects Division, Civil Works Administration of the State of New York, 124 East 28th Street, New York City.

GENESEE COUNTY

The Economics Committee of the Genesee County Medical Society conferred with the County Welfare officer, and on July 1, 1933, reached an agreement regarding the medical care of the indigent. This agreement has been in operation since that date, and is being observed by the welfare officers of the county, and local districts, and by the physicians. While the agreement may not be all that is desired, yet the doctors are pleased to be recognized and to receive some pay for services which they formerly rendered free.

The agreement is as follows:

- 1. The family physician of the patient shall be employed as in private practice.
- The employment of a doctor shall be authorized by the Commissioner of Welfare, or one of his fifteen local deputies.
- 3. When a doctor is called to attend a patient under the Welfare Law, he shall at once notify

- the Commissioner or his deputy, and get a written authorization for his attendance. This authorization must be renewed every two weeks for continued attendance.
- 4. In an emergency case the physician shall give proper treatment at once; and within fortyeight hours he shall obtain the proper authorization for his treatment.
- 5. Additional authorization shall be obtained for unusual procedures, such as x-rays, laboratory analyses, consultations, and surgical operations.

A short fee list was adopted, including an office call \$1.00; house call \$2.00; and obstetric case \$25.00. The agreement closes with the following paragraph:—

In cases of dispute, the Economics Committee of the Genesee County Medical Society will act as a board of arbitration for the adjustment of the bills that are in dispute.

P. J. DINATALE, Secretary.



OUR NEIGHBORS



HEALTH INSURANCE IN MICHIGAN

The report of the survey of medical services in Michigan, made by a special committee of the Michigan State Medical Society, was reviewed in this Journal of September 1, 1933, page 1061. That report favored the general principle of health insurance, but the House of Delegates deferred approval of the report until further study. However, the House continued the committee which made a further study of health insurance and reported to another meeting of the House of Delegates, as follows:

"The committee defines health insurance as a device having for its purpose the equalization of the economic burdens of illness. To this end individuals make regular and definite contributions to a fund, and for these contributions receive stated medical services according to their needs. Thus medical care becomes a budgetable item in the costs of living. Viewed in this light it is seen that health insurance is not a device to reduce the costs of illness. In fact, the reverse would be true. The burden, however, would fall evenly upon many individuals rather than, as at present, upon a few.

"As pointed out in the report, certain grave defects are observable in health insurance systems in Europe. These observations resulted in the adoption of the previously mentioned policies by the House of Delegates. The hope of the profession in the United States lies in its ability to benefit from the experience and errors of the profession in other countries. Therefore, the Committee has devoted itself to the study of health insurance and now presents to the delegates the following series of steps which it regards as a logical sequence of action toward a plan or plans:

"1. The definition of the insured group of the population, according to income. The Committee feels that it now has sufficient data upon which to make a decision concerning the upper limit of income of the insured group. Such information includes income and cost of living data, as well as a knowledge of the incidence of sickness and the costs of medical care.

"2. The definition of 'family.' On the assumption that no plan of health insurance which excludes the family of the employed individual would be acceptable to either the profession or the public, the Committee proposes to define this social unit of the population. Such a definition is fundamental in that it will determine the number of people in the insured group.

"3. The determination of what medical services are to be provided. The Committee will attempt

to define as precisely as possible the service benefits to which the insured group shall be entitled.

"4. The determination of the probable need for services over a given period of time. Based upon items 2 and 3 the Committee will be able to work out its predictions of the need for medical services by the insured group. It is at this point that the Committee feels that it must exercise caution in making conservative estimates. Upon the conservatism of these estimates will depend the economic success of the program.

"5. The preparation of fee schedules. This step naturally follows the definition of the insured group, the designation of medical service, and the predictions of medical needs. The Committee will seek the aid of the members of the profession and the allied professions in the preparation of fee schedules for general practitioners, specialists, hospitals, laboratories, and any other services included under item three.

"6. The determination of the costs of medical care per family according to the fee schedules

adopted for the specified services.

"7. The organization and administration of the system. The policies already adopted by the House of Delegates must be given concrete form in this part of the plan. 'Free choice of physician,' 'professional control of services,' and the 'exclusion of commercial organizations' will be made a part of the plan of organization and administration. At the same time the Committee will secure advice concerning the legal status of health insurance so that the position of the profession may become clearly defined. Finally, the Committee will prepare estimates of the costs of administration.

"8. Estimates of total costs including the costs of services, the costs of administration, and any

reserves for emergencies.

"9. The presentation of the detailed data and plans to the House of Delegates. While the Committee hopes that it may proceed to this point without a special meeting of the House of Delegates, in all probability certain questions will require action by this body. To the end that any meeting shall be that of an informed body, the Committee will prepare progress reports during the course of its deliberations, for the individual delegates.

"10. The formal presentation of the plan or plans to induction and to the consumers of medical sery; any plan adopted must function through the consumers of medical sery; and the consumers of medical sery; and the consumers of medical sery; and the consumers of medical server.



INDEX—VOL. 33, 1933



SCIENTIFIC ARTICLES

	PAGE		PAGE
Acne vulgaris: review of 200 cases with reference to classification and treatment—MeFarland	747 857 205 991 1105 385 527 382	Diabetes in childhood, prognosis—White Death in high obstruction, cause of—Swect The Demos, the Oecos, and Medicine—Galdston. Dental carries, nutritional control—McBeath Dental services for diabetics—Kent Deposition of liver fat in normal and diabetic animals, observations—Best Diabetics, dental service for—Kent Diabetic diets—Terry Diabetes mellitus, mortality in 985 cases. Diseases of bones and joints in children—Steffen — , diagnosis—Child Howard	1 1194 915 1086 1083 1307 1083 202 802 1031 1027
Antipoliomyelitis serum in preparalytic cases of poliomyelitis—Park	91	Diseases of bones and joints, procedures in physical therapy	
Antitoxin in treatment of searlet fever-Kolin and		Disease of the colon, x-ray as an aid in early recog-	
Toratt	651 195	nition—Illick Diseases of the skin, impressions in the treatment of—Wise	570 1321
complications of, immediate and re-	677	Disorders of muscle tone and their localizing signifi- eance—Freeman	1133
mote—Sullivan	679	Diverticulosis of ailmentary and urinary tracts-	907
diagnosis of—Lothrop, gas bacillus infection—Traver	675 946	Becr Dropsy, treatment of common forms—Foster	1373
Arrested shoulders in vertex presentation-Horn-	673	Duodenal obstruction, chronic-Golden Electrosurgical removal of tonsils, conductive anes-	819
stein	700	thesia for-Maillard	527
Arsphenamines, evaluation of for general use with special reference to sulpharsphenamine—Osborne,		Empyema as it appears to the internist—Rooney Empyema, acute, choice of treatment—Eggers	143 14 5
Rickloff and Butler	753	Empyema thoracis, further experiences in the treat- ment of, by packing—Connors	149
-Fray and Green	694	Encephalopathy, lead-Winkelman and Eckel	427
Arthritis, chronic, physical and constitutional meas- ures—Kovacs and Kovacs		Encephalitis, influence of trauma in acute and chronic—Rabiner	7 96
Artificial light in tuberculosis—Martin	85	Endocrinological problems in general practice of medicine—Goldzicher	985
Atresia, congenital, of the esophagus—Perrault and Burman	1093	Eosinophilia in bacterial reaction sites—Touart, Thomas, and Russell	11
Atresia of the vagina—Dickinson	455	Esophagus, congenital atresia of—Perrault and Burman	1093
foci in rheumatic conditions—Wolf	757	Exophthalmos, relation of to nasal sinus disease— Hawkins Exophthalmos, its ocular symptoms—Joy	6 5 68
Bronchoscopy, importance of in obscure pumonary	1139	tions—Reese its pathology and ocular manifesta-	73
Bronx County Medical Society, a year's activities-		Exophthalmos,	78
Klein Cancei	1330 975	Eye in diagnosi 1097, 1137,	1209
Carcin Carcin .	1332	Fibroids, of the Uterus, recognition and treatment—	919
ent Cardio	1249	Financing Sickness—Elliott	504 1100
intestinal tract in the new born-Aikman	865	poisoning, two series of cases-Cotter	698
Cardiovascular disease, study of association with faintness and syncope—Bishop and Bishop Child guidance in prevention of Schizophrenia—	1258	Fractures, first aid in treatment of—Hudson Gas bacillus infection complicating appendicitis— Traver	1029 946
Levin	805 132	Gastrostomy, routine management of patient—Watson	
Committee on the Cost of Medical Care, minority		Glaucoma, chronic simple, medical treatment, Zent-	
reports-Van Etten	22	mayer	1428
State—Booth Convalescent serum in treatment of measles, chicken	499	, chronic, operative treatmentKnapp , simplex, diagnosis	1431 1423
pox, mumps, and whooping cough, including pro- phylactic value of parental blood—Lewis and			140
Barenberg	97	Hay Fever-group study-Berkoff	743

	PAGE		PAGE
Health examination. Life service and family doc-		Migraine, Symptom of focal brain edema-Kennedy	
tor—Crampton	1216	Nasal sinuses, accessory in scarlet fever-Childs	141
Hearing impairment in school children-Rossell	1387	Neuritis, retrobulbar—Snell	370
Heart in pneumonia—Sigler	941	, cular findings—Bedell, rhinological findings—Hoople	361
Hemorrhagic disturbances in infancy and child-	121	Name 1 in 1 and 1 in 1 in 1 in 1 in 1 in 1 in 1 in 1	365
hood: mechanism and management—Kugelmass.	434	Neurological aspects of suprarenal insufficiency—	642
Hepatic cirrhosis, treatment with insulin-McCabe	924	Cornwall	88
and Hart	<i>></i> 	Noise deafness in industry and environment—Scal.	
Barnes	1390	Oral conditions as aids in diagnosis of systemic dis-	
Hyperthermia, general, with heat localization by		eases—Cahn	1090
radiothermy in treatment of pelvic inflammatory		Orthopedic conditions, pediatric diagnosis-Whit-	
disease—Bierman and Horowitz	218	man	930
Hyperthyroidism, acute—Lahey	857	Otitis media, chronic purulent; contralateral caver-	***
Hypothrombinemia, chronic in childhood, dietary	1207	nous sinus thrombosis—Weizenhoffer	1219
control—Kugelmass	1207	Painful shoulder, diagnosis and treatment—Wallace	1309
Hyperthyroidism, observations on effect of iodine administration—Goodwin	1274	Pathology of Ieterus—Klemperer	1307
Hypoglycemia, insulin in—Gibbs	638	man	930
Hydrogen-ion concentration, elementary principles		Pelvic inflammatory disease, treatment of by general	• • • •
—Milot	937	hyperthermia with heal localization by radio-	
Hypo- and hyper-dynamic hearts-Holmes	1383	thermy—Bierman and Horowitz	218
Infarction of medulla, unilateral, clinical picture		Physical therapy in dermatology—Bechet	1049
Hunt and Grant	83	in gynecological office praetice—	C 27
Inhalation anesthesia—Evans	382	Tannenbaum	647
Insulin, treatment of hepatie cirrhosis with—McCabe	9 2 4	Physiology of female reproductive system, summary of clinical observations—Sears	690
and Hart	638	Pneumonia, heart in—Sigler	941
Intractible pain, surgical relief—Grant		treatment of by physiological support	
Iodine administration, observations on the effect of,		—Cornwall	18
in cases of hyperthyroidism—Goodwin		Penumonia, unresolved—Harris	738
Intestinal obstruction, blood changes in-Atchley	1191	Poliomyelitis, preparalytic; therapeutic use of anti-	
——————————————————————————————————————	1197	poliomyelitis serum—Park	91
Infestation of vagina by trichomonas vaginalis-	+000	Polycythemia vera, ten eases treated with phenyl-	1000
Berkowitz	1328	hydrazine-McAlpin and Edsall	1039
Jaundice from common duet stone and pancreatitis,		Post-graduate medicine and the general practitioner	1145
diagnosis in recurring attacks, with reference to bile sands—Carter	944	—Anderson	154
Labor, problems of—Bunzel		Prophylactic use of pessary in the puerperium—	
Laboratory aids in diagnosis of undulant fever-		Siegel	152
N. Y. State Association of Public Health Labora-		Prophylaxis and treatment of ringworm of hands	
tories	1336	and feet-personal experiences-Osborne, Put-	
Leueorrheas, common, treatment of—King	137	nam, and Rickloff	1270
Leukaemic myelosis, chronic, eomplicating acute	195	rsychoanalytic factors in family discord—Openi-	815
ruptured appendicitis—Rose Lichenoid Sareoid—report of case, review of litera-		dorf	
ture—Morse	686	Pulmonary neoplasms, diagnosis of—Moses	199
Light therapy—present day problems—Krusen	1154	Pustulosis vacciniformis acuta, followed by anuria	
Lipoid Histiocytosis—case report—Tow and Wechs-		and tetanic spasticity—Feit	645
ler	203	Pyorrhea alveolaris, its relation to oral and general	4000
Liver function, significance of from surgeon's stand-	1217	health—Merritt	1088
point—Heyd	11/12	Pyuria in children, significance and treatment—Wilson	447
Maxillary Sinusitis—diagnosis—Jones	517	Rabbit ovulation test as diagnostic procedure; fur-	-1-17
		ther results obtained—Wilson and Corner	629
, pathology—Eggston, symptomology—Fairbairn	515	Radiological armamentarium in treatment of eso-	
, treatment—Sulzman	519	phageal laryngeal cancer—Mattick	863
Measies in four central New York counties for 1932		Radiosensitivity and tumor grading, practical appli-	
	1381	cation—Quick	
Measles, value of immune adult blood in treatment —Kaiser	F21	Rat-bite fever in children—vander Bogert	1379
Medical activities, control of by medical profession	521	Renal manifestations of hydatid disease—Borrell and Barnes	1390
-Flaherty	497	Renal pathology, non-operative treatment—Bugbee	
Medical care of indigents, Ontario County Plan-		Research in field of therapeutics, academic and in-	
Knickerbocker	934	dustrial—Dale	723
Medical service for the Nation—Cary	623	Resuscitation—Flagg	395
Medical Society of the State of New York responsi-		Rheumatic conditions, aspirin test to determine the	100*
bilities and obligations—Heyd	493	advisability of removal of foci—Wolf	1097
Medical Society of the County of Kings, First dec-	701	Rheumatic fever, treatment—Herrick	131 741
ade of—Jennings	791 557	Rhinophyma, simple procedure for cure—Eller	/41
Master, the, in the House of Medicine—Schwitalla		Ringworm of liands and feet, x-rays of value in treatment—Kelly	813
Medulla, unilateral infarction—Hunt and Grant	83	Ringworm of toes in students and dispensary pa-	510
Meningeomas, x-ray evidence of—Schwartz		tients—Muskatblit	632
Meningitic serum treatment—Neal	024	Scarlet fever accessory masal sinuses in—Childs	141

1	PAGE		PAGE
Scarlet fever control—Laidlaw	684 881	Trauma in acute and chronic encephalitis—Rabiner Trichiniasis with recovery—Kenler and Silverman. Trichomonas vaginalis, infestation of vagina by—	796 7 5 2
Kohn and Josey	651 1141	Tuberculin tests in children: comparative studies	1328
Serum treatment of Sinus thrombosis, co iog chronic purules	94 1219	with different makes of tuberculin—Reisman Tuberculosis, artificial light in—Martin Tuberculosis in school children, significance and de-	734 85
Speech disorders as a medical problem—Blanton Squamous cell epitheliomata of the skin on the face	215	tection—Ryan Tularcmia; case in which no local lesion developed	729
—Tranb	873	at site of injury—Maillard	751 1095
Co Tni	391	Undulant fever, laboratory aids in diagnosis—New York State Association of Public Health Labora- tories	1336
borne, Rickloff, and Butler	1000	element applicator in dermatology—MacKee	1266
Cornwall	642	Vaccination, BCG, elinical study of—Kcreszturi, Park, Levine, Vogel, Sackett	375 455
—discussion—Wadsworth Syphilis of the lung—Denman Syphilotherapy, present day, personal impressions—		Vertex presentation, arrested shoulders in-Horn- stein	639
Stokes	1324	mass, Berggren, and Cummings	1365 998
nosis—Calm Tonsillectomy in presence of thyroid disease—Bull-winkel	627	Why a child refuses to cat—Arnold	20
Toxic action of metals in alopecia arcata—Mycrs, Throne, Kingshury		eases of the colon—Stewart and Illick	570 824
AUTHORS OF	SCIE	NTIFIC ARTICLES	
	PAGE		PAGE
Aikman, John, Rochester, N. Y Anderson, Alan R., New York, N. Y Anderson, George E., Brooklyn, N. Y Argue, Thomas H., Corning, N. Y Arnold, Douglas P., Buffalo, N. Y Atchley, Dana W., New York, N. Y Baketel, H. Sheridan, Iersey City, N. I.	865	Cornwall, Leon Hastings, New York, N. Y	642 698
Anderson, George E., Brooklyn, N. Y	1036	Cotter, Lawrence Henry, New York, N. Y Co Tui, Frank Wang, New York, N. Y	301
Argue, Thomas H., Corning, N. Y	1385	Crampton, C. Ward, New York, N. Y. Critelilow, George R., Buffalo, N. Y. Cummings, Mildred, M.A., New York, N. Y. Dale, Sir Henry H., London, Eng.	1216
Atchley, Dana W., New York, N. Y	1191	Cummings, Mildred, M.A., New York, N. Y	1365
Atelley, Dana W., New York, N. Y., Baketel, H. Sheridan, Jersey City, N. J., Barenberg, L. H., New York, N. Y., Barnes, John M., Buffalo, N. Y., Bechet, Paul E., New York, N. Y., Bedell, Arthur J., Albany, N. Y., Beer, Edwin, New York, N. Y., Berens, Conrad, New York, N. Y., Berggren, Ruth E. L., M.A., New York, N. Y., Berkoff Harry S., New York, N. Y., Parkoff Ha	154	Dale, Sir Henry H., London, Eng	723
Barenberg, L. H., New York, N. Y	1200	Dennian, Harold Combitoli, Brooklyn, N. 1	1400
Bechet Paul E New York N V	1010	Dickinson, Arthur M., Albany, N. Y	455 427
Bedell, Arthur J., Albany, N. Y.	361	Edsall, Katharine S. (B.S.), New York, N. Y	1039
Beer, Edwin, New York, N. Y	907	Eggers, Carl, New York, N. Y	145
Berggran Ruth G I M A New York N. Y 1097, 1137,	, 1209 1365	Eekel, John L., Buffalo, N. Y. Edsall, Katharine S. (B.S.), New York, N. Y. Eggers, Carl, New York, N. Y. Eggston, Andrew A., New York, N. Y. Eller, Joseph Jordan, New York, N. Y. Eller, Jescharie F. Broeklen, N. Y.	508 741
Berkoff Harry S., New York, N. Y	743	Eller, Joseph Jordan, New York, N. Y. Elliott, Frederie E., Brooklyn, N. Y. Evans, John H., Buffalo, N. Y. Fairbairn, John F., Buffalo, N. Y. Farmer, Thomas P., Syraeuse, N. Y. Feit, Hermann, New York, N. Y. Flang, Paluel J., New York, N. Y. Fladlerty, Frederick H., Syracuse, N. Y. Foster, Nellis P., New York, N. Y. Frenk, Robert T., New York, N. Y. Freeman, Walter, Washington, D. C. Fray, Walter W., Rochester, N. Y. Friedman, E. D., New York, N. Y. Galdston, Iago, New York, N. Y. Galdston, Iago, New York, N. Y. Gibbs, Charles B. F., Rochester, N. Y.	504
York, N. Y	. 1328	Evans, John H., Buffalo, N. Y	382
FK. IV. Y	. 651	Farmer Thomas P. Syraeuse N. V.	515 1332
ork, N. Y	. 1258	Feit, Hermann, New York, N. Y	645
., New York, N Y	. 1258	Flagg, Paluel J., New York, N. Y	395
N. Y. N. Y. N. Y. N. Y. Sorrell, James H., Buffalo, N. Y. Brahdy, Leopold, New York, N. Y. Bugbee, Henry G., New York, N. Y. Bullowa, Jesse G. M., New York, N. Y. Bullwiokel, H. Griffin, New York, N. Y. Bullwiokel, H. Buffact, N. Y. Bully Server H. N. Y. Bullwiokel, H. Griffin, New York, N. Y.	. 215 400	Foster Nellis P New York N V	497 1373
Borrell, James H., Buffalo, N. Y	1390	Frank, Robert T., New York, N. Y	919
Brahdy, Leopold. New York, N. Y	. 873	Freeman, Walter, Washington, D. C	1133
Bullous Jose C. M. New York, N. Y	. 1203	Friedman F D New York N V	694 132
Bullwiokel, H. Griffin, New York, N. Y	627	Galdston, Jago, New York, N. Y.	915
Bunzel, E. Everett, New York, N. Y	450	Gibbs, Charles B. F., Rochester, N. Y	638
Bunzel, E. Everett, New York, N. Y. Burman, H. J., New York, N. Y. Butler, Milton G., Buffalo, N. Y.	. 1093	Goldzieher M.A. Brooklyn, N. V.	819
Carn (ester R 1111) New York N V	1000	Goldman, Alexander, New York, N. Y.	965 1095
Carter, R. Franklin, New York, N. Y. Cary, Edward H., Dallas, Texas. Child, Frank S., Port Jefferson, N. Y. Childs, Donald Smythe, Syracuse, N. Y. Clarke, T. Willer, J. W. S. W. W.	. 944	Grant, Francis C., Philadelphia, Pa	1213
Cary, Edward H., Dallas, Texas	672	Grant Gordon H. New York N. V.	83
Childs Donald Smytha Syranges N. Y	. 623	Coom Tornel II, 1909 101K, 19, 1, 1,	
O Donain Smythe, Syrachise, N. Y.	. 1027	Green, Joseph H., Rochester, N. Y	694
		Green, Joseph H., Rochester, N. Y Haggard, Howard W., New Haven, Conn Hajek, Joseph, New York, N. Y	694 557 802
		Gainsson, 1ago, New York, N. Y. Golden, Ross. New York, N. Y. Golden, Ross. New York, N. Y. Goldzieher, M.A., Brooklyn, N. Y. Goldman, Alexander, New York, N. Y. Grant, Francis C., Philadelphia, Pa. Grant, Gordon H., Ncw York, N. Y. Green, Joseph H., Rochester, N. Y. Haggard, Howard W., New Haven, Conn. Ilajek, Joseph, New York, N. Y. Hartis, Harold J., Westport, N. Y. 733,	694 557 802 1000
Concors, John F., New York, N. Y Corocr, George W., Rochester, N. Y Cornwall, Edward E., Brooklyn, N. Y.		Green, Joseph H., Rochester, N. Y. Haggard, Howard W., New Haven, Conn. Ilajek, Joseph, Nèw York, N. Y. Harris, Harold J., Westport, N. Y. Hart, James Finlay, New York, N. Y. Hawkins, Raymond W., Rochester, N. Y.	694 557 802 1000 924

	Page		PAGE
Herrick, W. W., New York, N. Y	131	Rabiner, Abraham M., New York, N. Y	796
Heyd, Chas. Gordon, New York, N. Y493,	131/	Recse, Algernon B., New York, N. Y73,	1428
Holmes, Allen W., Watkins Glen, N. Y	365	Reisman, Henry A., Jamaiea, N. Y	734
Hornstein, Mark, New York, N. Y639,		Riekloff, Raymond J., Buffalo, N. Y	752
Horowitz, Edward A., New York, N. Y	218	Rogers, John W., New York, N. Y	1249
Howard, Tasker, Brooklyn, N. Y	1025	Rooney, John J., Roehester, N. Y	143
Hudson, Otho C., Hempstead, N. Y	1029	Rose, Ben-Henry, New York, N. Y	195
Hunt, Edward Livingston, New York, N. Y	83	Rossell, R. Beatrice, Buffalo, N. Y	1387
Illick, H. Earl, New York, N. Y	570 791	Rulison, R. H., New York, N. Y	
Jennings, Frank D., Brooklyn, N. Y Jones, Marvin F., New York, N. Y	517	Ryan, William J., Pomona, N. Y	729 375
Josey, A. Izard, Rochester, N. Y	651	Sands, Irving J., Brooklyn, N. Y	3/3 88
Joy, Harold H., Syraeuse, N. Y	68	Scal, J. Coleman, New York, N. Y	1251
Kaiser, Albert D., Roehester, N. Y	521	Schafer, Rudolph J., Corning, N. Y	1385
Kelly, Richard J., New York, N. Y	813	Schwartz, Charles Wadsworth, New York, N. Y	824
Kenler, Maurice David, Tompkinsville, N. Y	752	Schwitalla, Rev. Alphonse M., S.J., Ph.D., St.	
Kennedy, Foster, New York, N. Y	1254	Louis, Mo.	562
Kent, Harold A., D.M.D., Boston, Mass	375	Sears, Frederick W., Syraeuse, N. Y	1381
Kereszturi, Camille, New York, N. Y King, James E., Buffalo, N. Y	137	Sears, Nathan P., Syracusc, N. Y	690
Kingsbury, Jerome, New York, N. Y	991	Sigler, Louis H., Brooklyn, N. Y	941
Klein, William, New York, N. Y		Silverman, Jacob Joseph, Tomkinsville, N. Y	752
Klemperer, Paul, New York, N. Y	1309	Sncll, Albert C., Roehester, N. Y	370
Knapp, Arnold, New York, N. Y		Spain, W. C., New York, N. Y	1100
Kniekerboeker, Homer J., Geneva, N. Y	934	Steffen, Walter C. A., Flushing, N. Y	1031
Kolin, Lawrence A., Rochester, N. Y	651	Stern, Abner, New York, N. Y	1095
Kosmak, George W., New York, N. Y Kovaes, Joseph, New York, N. Y		Stewart, William H., New York, N. Y Stokes, John H., Philadelphia, Pa	570
Kovaes, Richard, New York, N. Y		Stump, John P., New York, N. Y	998
Krusen, Frank Hammond, Philadelphia, Pa	1154	Sullivan, M. A., Laekawanna, N. Y.	679
Kugelmass, I. Newton, New York, N. Y. 434, 1207,	1363	Sulzman, Frank M., Troy, N. Y	519
Lahey, Frank H., Boston, Mass	857	Sweet, J. E., New York, N. Y	1194
Laidlaw, Frank W., Middletown, N. Y	684	Tannenbaum, Virginia, Buffalo, N. Y	
Levin, H. L., Buffalo, N. Y	805 375	Terry, Arthur H., Jr., New York, N. Y	202
Levine, Milton, New York, N. YLewis, J. M., New York, N. Y	97	Thomas, William S., New York, N. Y	1105
Lothrop, Earl P., Buffalo, N. Y		Throne, Binford, New York, N. Y	991
McAlpin, Kenneth R., New York, N. Y	1039	Tolmach, Jesse A., New York, N. Y	875
McCartney, James L., Elmira, N. Y	1045	Touart, Maximin D., New York, N. Y	11
MaeKee, George M., New York, N. Y	1266	Tow, A., New York, N. Y	203
Maillard, Edgar R., New York, N. Y527,		Traub, Eugene F., New York, N. Y.	875
Marlow, S. B., Syraeuse, N. Y	1423 937	Traver, Clarence A., Albany, N. Y	946
Martin, George G., Buffalo, N. Y		vander Bogert, Frank, Scheneetady, N. Y	1249
Mattick, Walter L., Buffalo, N. Y	863	Van Etten, Nathan B., New York, N. Y	22
McBeath, Ewing C., New York, N. Y		Vogel, Peter, New York, N. Y	375
McCabe, John, New York, N. Y	924	Wadsworth, Augustus B., Albany, N. Y	100
	747	Wallace, Charlton, New York, N. Y	7
Mcrritt, Arthur H. (D.D.S.), New York, N. Y	1120	Watson, William L., New York, N. Y	
Miller, Joseph W., New York, N. Y	686	Weeks, Webb W., New York, N. Y	203 7 8
Morton, John J., Rochester, N. Y	1197		1034
	199	Weizenhoffer, Adolph, Scheneetady, N. Y	1219
Moses, Henry Monroe, Brooklyn, N. Y	632	White, Priscilla, Boston, Mass	1
Myers, C. N. (Ph.D., Sc.D.), New York, N. Y	991	Whitman, Armitage, New York, N. Y	930
Neal, Josephine B., New York, N. Y	94	Wilder James B. Sameras N. Y	385
Nodine, E Rogers, Freeport, N. Y	815	Wilson, James R., Syraeuse, N. Y	447 629
Osborne, Earl D., Buffalo, N. Y	1270	Winkelman, N. W., Philadelphia, Pa	427
Park, William H., New York, N. Y91,	375	Wise, Fred, New York, N. Y	1321
Parmenter, Frederick J., Buffalo, N. Y	140	Wolf, Heinrich F., New York, N. Y	1097
Pearse, Herman E., Jr., Rochester, N. Y	385	Wright, Thew, Buffalo, N. Y	673
Perrault, L. T., New York, N. Y.	1093		1433
Quick, Douglas, New York, N. Y975,	13/0	Zuckerman, Joshua, New York, N. Y1097, 1137,	1209
····			

EDITORIALS

Pac	GE		PAGE
Advertising, truthful	38	Doctor a Health officer	. 885
American Medical Association 8	29	Doctors' advertisements	. 1393
Annual Meeting	553	Doctor's vacation	884
Annual reports	04	Educating fiscal boards	948
Doctor Frederick H. Flaherty 52	29	Health and the economic depression	1395

,	PAGE		Page
	225 1220 1337 101 1445 1221	Sputum cups	654 529 761 572 654
Journal, the Leadership by county societies. Looking Backward—This Journal 25 Years Ago:	1394	service, free services, investigation of Society activities surveys National Recovery Administration	160 1110
Enforcement of medical practice law	762 305	Necessities and luxuries. Organized medicine Practice of medicinc, dominant problems in. President of the county society.	399 1158
Functional nervous diseases	161 573 25	Prospects of state medicine. Public relations of physicians. Swallowing safety pins. Temporary emergency relief administration	949 762
Influenza epidemic Medical libraries	458 225	Tests for drunkenness	102
		ROGRESS	Page
	Page 888	Chronic progressive chorea	
Abdominal symptoms in tetanus	574	Classification of heart disease	1223
Acute and chronic leucemia	1340	Clinical significance of diastasuria	1224
Acute cardiac failure	658	Clinical study of cardiac asthma	763
Acute coryza and autogenous vaccines	953	Congestive heart failure	1006
Adamantinoma of the tibia	105	Connective tissue extracts in cancer	1340
Aerophagia	1057	Control of cougling	401
Alkalinization in peptic ulcer	832	Cure of acute yellow atrophy	1056
Allergic diseases	105 888	Disinfection for contagious diseases Disinvagination in intussusception	163 574
Allergy in hydatids	1300	Descritery and sudden death	404
Anaphylaxis from insulin	765	Divergence of the hillary tract	532
Ancurysms of the innominate artery	1398		
Angina pectoris	1223	Endocrine associations	192/
diaphragmatica	831	Epilepsy in children Epilepsy of childhood	1279
Appendical oxyriasis and appendicitis	1225	Etiology of grip	833
Arterial obliteration	306	Etiology of grip Etiology of heart disease	657
Arterial thrombosis in visceral diseases	308	Evipan-sodium anestliesia	1100
Arteriosclerosis in the organs	1054	Experience with hyperthermia treatment	704 1114
Arthritis of the hip joint in childhood	952 763	Familial occurrence of ulcus ventriculi	1280
Aspergillus as a cause of blindness	1113	Fatty alimentation in cachexia	165
Astuma of childhood Bacteria on fruit	703	Forage of the eniphysis of the femur	1162
	26	Forcible nasal inspiration	574
	1005	Fracture of neck of femur	950
Bacteria on truit	1281	Gall-stone formation	29
Biochemistry in asthma		Gastrocardiae sequels of phrenicotomy	306
Blood examination in cancer	27	Glucose-insulin in Narcosis	533
Blood in lobar pneumonia Bundle-branch block	459	Gold in eye tuberculosis	461
Bundle-branch block	459	Gonococcic endoarteritis	401 887
Calcium as an analgesic Cancer, a generalized disease Cancer houses	1440	Heart failure in throidectomy	1446
Cancer houses	531	Heart in old age	226
Cancer like a varicose nodulc	106	Heat in experimental syphilis	229
Capillary observations in blood pressure	1003	Heredosynhilitic tabes	104
Carbonated baths	462	Herpetic virus in therapy of paresis	704
Carcinoma of the male breast Cardiovascular tonus	1341	Hibernation of the mosquito	1397
Cellulitis and angina pectoris	228	Hypodermic oxygen therapy	404
Cement dust and workers	533	Hypogastric plexus in pelvic disorders	27
Cerebral sarcoma	460	Hypophysis grafting in diabetes insipidus	832
Cerebrospinal fl Changes in the	1449	Infection respiratory mucosa Infectious pharyngeal catarrh	833
Chest symptoms of sinusitis	764 765	Inflammation	655 656
Chlorides in sheet	1161	Influence	227

P	AGE		Page
Influenza virus 1	111	Radioscopic study of heart bcats	309
Initial symptoms of acute rheumatism	576	Renal affections	1280
Insulin and glucose in heart disease	831	Resistance of healing wounds to infection	706
Intermittent jaundice in youth 10		Rheumatic heart disease	1446
Intestinal obstruction caused by food	577	Room-sized respirator	
Intertherapeutic crythemas 10	055	Rubber gloves	1282
Intravenous pressure	308	Sequels of bacillary dysentery	1055
Iodine in vasomotor rhinitis	403	Serum paralysis of upper plexuses	1398
	766	Scrum therapy of poliomyelitis	1399
Ketogenic diet in normal individuals	950	Shock in mercuric chloride poisoning	889
Larynx and glycosuria in children	165	Significance of the enterococci	1339
	706	Social and economic importance of ocular examina-	
	531	tions	1056
Lichen urticatus 1	162	Spasmodic torticollis	657
Magnesium sulphate in angiospasm	763	Specific pneumonia therapy	459
Malarial therapy in leucemia	225	Sphygmomanometer in cardiac irregularities	1003
Management of the newly born 1	113	Spontaneous hyperinsulinism	462
	834	Sport as a therapeutic measure	1279
	401	Superalimentation	950
Menstrual changes in intestinal motility		Surgery in rectal cancer	
	953	Swineherd's disease	402
	164	Syncopal attacks in intussusception	1396
		Syringomyclic syndromes	106
Modern methods in nephritis 13		Tannic acid for burns	705
		Tests of biliary tract	403
		Test for capillary resistance	703
	226	Tests for pregnancy	307
: _ · F · · · · · · · · · · · · · · · · · · ·		Theophyllin as a diuretic	1447
Neurasthenia: Toxic and traumatic		Thyroid in Bascdow's diseasc	460
Neurogenous diabetes	766	Tibial apophysitis	705
Neurological emergencies		Time for sleeping	888
Neurosyphilis	281	Tissue changes in virus discases	162
Nicotine and the coronary debit		Tobacco smoking	163
Nocturnal enuresis		Tonsilicctomy and polyarthritis	575
Nonvalvular heart disease		Traction with the Steinmann Pin	402
Occupational deformation		Treatment of acute poisoning	657
Occupational dermatitis	222	Treatment af adiposity	951
Operation in pneumococcus peritonitis	26	Treatment of frostbites	655
- F		Treatment of furunculosis	308
Otology of general practitioners			1339
Pain	832 222	Treatment of diseases of the heart	1341
		Treatment of infantile paralysis	27 886
		Treatment for leg ulcers Treatment of Pott's fracture	
Perforation of the stomach	226 163	Typhoid vaccinc in chorea	1202
Pericardial effusion	28	Unsalted dict and gastric secretion	1224
Peritonal infection	กกร	Urticaria and syncope "a Frigore"	1447
· · · · · · · · · · · · · · · · · · ·	534	Vaccine therapy in chronic arthritis	1004
Pncumothorax dry pleurisy	003 224	Vascular factor in multiple sclerosis	
Pock diseases	162	Vascular reactions to heat and cold	
Poisoning from potasisum permanganate	244		
	577	Vascular tonus after sympathectomy	
	999	Vasoconstriction by tobacco	
	952	White rat carrier of Weil's disease	1342
	<i></i>	X-ray in rickets and scurvy	

LEGAL

Descriptive Comments and Editorials

j	PAGE		PAGE
Annual report of the Counsel	310	Jurors; misconduct held contempt of Court	707
Autopsy—Hospital held not responsible for autopsy		Malpractice; foreign body890,	1164
performed by medical examiner	30	Malpractice; recent New York decision exonerating	
Criminal Law, statute providing for alternate jurors	1007	physician '	954
Federal Court ruling on chiropractic	1283	Medical grievance committee decides an important	
Hospitals; conditions attached to testamentary gift		case	578
_held valid	659	Medical testimony, legal rights of unborn child	1343
Hospitals; power to discipline physicians on its staff	835	Necessity for medical testimony in malpractice ac-	
Illegal practice of medicine by a licensed physio-		tions	107
therapist	230		
Insanity as a defense in criminal cases	166	Personal injury action, liability of golf player	
Insurance; surgeon's policy against illness and acci-		Pharmacists, liability for negligence in filling pre-	1050
dental injury	1115	scriptions	1058

Physician and patient, privileged communications Physicians, good-will of practice not subject to taxation at death Private hospitals, control over unruly patient	PAGE 1226 463 405	Property rights in gifts given in contemplation of marriage Vasko Case Validity of Contracts	. 535 . 767
CAS	E RE	EPORTS	
Claimed or Alleged N	eglige	nt Diagnosis or Treatment	
	PAGE		PAGE
Aldoninal operation Administration of diathermy treatment	1344 709 168 1345 536 406	Infant after delivery Injury to tooth during tonsillectomy Intoxication test, physical examination Laceration of palm Malpractice cause of action barred by Statute of Limitations Malpractice in diagnostic work Mastoiditis Pelvic condition Placenta retained after delivery Plastic operation upon the nose Plastic Surgery Right leg and shoulder Subglenoid dislocation of humerus Syphilis Tumor	. 1060 . 108 . 464 f . 837 . 1284 . 1008 . 1009 . 660 . 661 . 232 . 1402 . 837
D.A.	ILY:	PRESS	
Abstracts and Comments on I	Tewsp	aper Articles Bearing on Medicine	
	Page		PAGE
Anti-vivisectionist, a prominent Asphyxial deaths Bacteriophages Baldness Beer and intoxication Birth Rates, lowering Cancer, is it hereditary? Cartoon Coining new words Cold winters Cost of emergency cases in hospitals Cult of plumpness Deaf Iudians Diegestion of Mr. Robot Diphtheria immunizations, a million Disease, Dutch Elm Disease germs as bullets Dispensary service, free Doctor William H. Park Doctors in Germany, alien Economics Family doctor Franklin's inscription for the Pennsylvania Hospital General practice Health insurance, compulsory Health zoning Home telephone rates for chiropractors Individualism Individual tastes Insurance for hospital care Liability insurance, notice of	774 961 1173 609 897 176 1067 844 245 116 897 116 897 177 950 473 1077 473 1067	Justice Holmes as a child Medical committee on compensation abuses Medical economics in business . Medical examination of school children Medical patents . Medical patents . Medical patents . Medical racketeering . Meteorites, life in . Milk control in New York State . Milk regulations . Narcotics in Turkey . Narcotics, world control of . Political patronage . Popular fallacies . Questionnaires . Release from liability, written . Research regarding blushing . Rural physicians . Science in the news . Socialized dentistry . Specialists . Specal limits . Statistics . Subway noise . Surveys . Tax on flour . Teaching psychiatry . Terminology . Tests of life . Therapetutics of mischief . Ultra-violet color perception in bees . Universal language . Vitamine . Woman's auxiliary of Queens county	415 415 1174 773 447 610 1012 773 444 176 611 1173 445 474 474 473 45 1163 1013 1013 1013 1013 1013 1013 1013
	воо		
Roote Danie 4.	PAGE	Book Business	PAGE

46, 475, 545, 664, 775, 962, 1175, 1288

Book Reviews:
47, 118, 178, 246, 416, 476, 546, 665, 714, 776, 845, 899, 963, 1014, 1068, 1123, 1176, 1236, 1289, 1352, 1407,

INDEX OF THE ACTIVITIES OF MEDICAL SOCIETIES OF STATES AND COUNTIES, RECORDED IN THE "NEW YORK STATE JOURNAL OF MEDICINE" DURING THE YEAR 1933, PARTICULARLY IN THE DEPARTMENTS OF "NEWS NOTES" AND "OUR NEIGHBORS"

מ	AGE		_
			Page
Academy of Medicine, graduate fortnight711, 1		Staff workers of State Society, tribute to	589
Activities of medical societies (ed)	24	State aid to hospitals	600
	550	Supply and demand of doetors	586
	359	Treasurer's report	593
Aid of State to counties in Tennessee	670	Trustees' report	592
Alabama: liability insurance 1		Urology, section on	591
midwives	305	Welfare Department Law	599
American Medical Association, meeting606,	893	Woman's auxiliary583,	592
Conferences of secretaries and editors 1		Workmen's Compensation585, 588	, 597
ANNUAL MEETING, MEDICAL SOCIETY OF	•		
THE STATE OF NEW YORK, April	3-5.	ANNUAL MEETING, REPORTS OF COMM	111-
1933:	•	TEES:	
Announcements, prcliminary233, 316-332, 408,	466	Arrangements	268
Description	537	Eeonomics	283
THE OF MINISTER OF TRAINS		Executive	264
INDEX OF MINUTES OF HOUSE		Legislation	298
OF DELEGATES		Medical Economics	283
House of Delegates minutes of annual meeting		Medical Research	268
rouse of Delegates minutes of annual meeting	COL	Press Publicity	299
Administrative Officer		Public Health and Medical Education	276
Administrative Officer	587	Public Relations	272
Allocation of money to district branches583,	591	Scientific Work	275
Amendment to By-laws	591		. סמי
Arrangements, committee on	589	ANNUAL MEETING, REPORTS OF OFFICE	KO:
Card, Dr. John A., in memoriam588,	604	Council	263
Certification of specialists583, 585, 591,	592	Counsel, Legal	310
Certified milk, State control of586,	590	District Branches	300
Cod liver oil, free distribution of	601	President	259
Consolidation and appreciation of committees	588	Secretary	262
Constitution and By-laws	592	Treasurer	270
Costs of medical care, special committee on 582,	594	Trustees	26 9
Council, report of	602	A STATE OF THE STA	TATE
Counsel's report	593	ANNUAL MEETING, SPECIAL SUBJECTS	-פזת
County societies, relation to State Society	588	CUSSED IN ANNUAL REPORTS:	
Credentials	581	Brattleboro health insurance plan	29
Crippled children	597	Blood transfusion	281
Directory	593	Caneer	278
Dues, annual	592	Commercialized medicine	283
Dues and organization	587	Detroit health plan280,	288
Economics' committee	597	Financing sickness	293
Election of officers	605	Foreign medical schools	279
Fee-splitting	601	Graduate education	270
Graduate education committee	601	Hospitalization, economics of	283
Group insurance	588	Hospitals, State-aided	290
Group insurance	603	Indigent patients	291
Investment fund of state society	588	Industrial medicine	284
Law proposed on workmen's compensation	593 597	Insurance against malpraetiee261,	263
Lay organizations and their physician employees	587	Insurance for health service	295 267
Legislation, committee on	C04	Journal	
Malpraetice defense	602	Leetures to medical students	274 298
Medical services through the State, plan of	002	Legislation, committee	26!
585, 591.	600	Malpractice Defense, rules of	278
Nurse anesthetist	590	Maternal mortality	263
Organization of State Society, committee on	587	Membership statisties	29
Physical therapy and radiology section	591	National Health Plan, Inc., Providence, R. I	279
Plan of medical service	591	Periodie health examinations	279
President's report	586	Physical therapy	289
Principles of professional conduct586, 592,	603	Preventive medicine	29
Prize essays	586		289
Public Health and Medical Education, Committee	601	Public Health Council of State Dept. of Health.	
Public Health Council of State Department of	001	Sehool medical inspections273, State aided hospitals	290
Health	589		274
Publie Relations Committee	591	State salaried physicians in private practice Tuberculosis Reporting	
Raeial discrimination	592	Veteran's Administration Hospitals	292
Radiological section	602	Workmen's Compensation Law	285
Reference committees	581	Annual meeting in Florida	488
Retired members	591	Annual meeting in Florida	487
Revision of Constitution and By-laws591,	592	in Indiana	710
Scientific work, committee on	589	in Louisiana	840
Secretary's report	589 602	in Minnesota	
Secretary's report	002	m minicota	

-	-		PAGE
	PAGE		
in Philippine Islands	548	Costs of medical care in Ohio	351
in Wassins	971	in Wisconsin	188
in Wyoming Annual registration in Kansas	852	Council, meeting of, December 8, 1932	33
Annual registration in Kansas	62	Council meetings in Massachusette	1130
in Pennsylvania	204	County Health Department in Cuffelle Country	34
Annual reports, New York State Society (ed.)	304	County Health Department, in Suffolk County	34 234
Anti-vivisection	1/0	in Oneida County	
Appendicitis deaths in Massachusetts	. 1021	in Columbia County	112
Arkansas Medical Lien Law	904	COLUMN MEDICAL COCCUPIES OF MEN VO	VOV
Asphyxial death, Society on		COUNTY MEDICAL SOCIETIES OF NEW YO	ICIX,
Asphyxiai death, Society on	1200	ACTIVITIES DESCRIBED:	
Attending county society meetings in Tennessee	1303	Albany541,	1119
Auto accidents, liens in the several states	184	Brons	35
accidents in Missouri	182	Broome	1231
Barbers' certificates in Kentucky	56	Droome	1721
Basie science law in Colorado	617	Chenango	1231
Beer and intoxication	44	Columbia 112, Delaware 895, Dutchess-Putnam 236, 895,	1115
Blood donors	957	Delaware	1232
DIOOG GOHOTS		Dutchess-Putnam	1171
Book reviews in Indiana Journal	1220	Essex 541, Franklin	1346
Bronx County Medical Society, a year's activities.	1330	Keanklin	1346
Budget of the New York State Society	770	Frankin Genesse Greene Jefierson	1453
Bulletins of Public Relations committee	1010	Genesee	1110
Bulletin of Monroe County	242	Greene	1112
of Saratoga County	40	jenerson	234
Ruranu of physicians and dentists in Washington	189	Kings	35
Bulletin of Monroe County	1170	LIVINGSION	342
Cantolina, Committee on Frotesholar Conduct	186	Monroe 35 30	342
Insurance of medical care		Montgomery	541
Studies by county societies	1303	Macras 35	39
Sterilization, human	1410	Nam Vari	34
Cancer committee in Colorado	1300	Montgomery Nassau , 35, New York Niagara	222
Clinies in Illinois	1475	Magara	233 233
control in Kansas	1020	Oneida	233
education in Dutchess County	240	Onondaga	235
quack in Mississippi	002	Oneida Onondaga Ontario	1235
quack in mississiph	410	Orange	111
Certification of specialists in New Jersey Charity, medical, in West Virginia	410	Oswego	236
Charity, medical, in West Virginia	1354	Ouenus	35
Chairmen of county legislative committees	338	Queens Rensselaer Richmond	541
Child health in Nebraska	424	Distance of	
Chairmen of county legislative committees Child health in Nebraska Chiropraetors in Texas	491	Richmond	36
Christian physicians, League of, in Kentucky Seienec in West Virginia Civil Works Administration	48	Rockland	36
Seience in West Virginia	614	St. Lawrence Saratoga	235
Civil Works Administration	1452	Saratoga	541
Clinie abuse in Alissouri	1178	Scheneetady	541
Clinies in factories	235	Seneca	236
Cod liver oil free distribution of	235	Seneca Suffolk	34
Clinies in factories	1 300	Sullivan .42, 413, 1 Tioga .41, 1	1120
Committee nativities	1475	Tioga	2.32
Committee activities	14/3	Ulster	120
Journal	56	Warren	541
Legislation	617	Washington	239
Committee on Professional Conduct in California	1178	Washington Westchester	
Committees of the Medical Society of State of		westchester	43
New York, personnel. Committee on costs of medical care, comments Commonwealth fund, and family doctor	710	COUNTY MEDICAL SOCIETIES OF NEW YOR	RK.
Committee on costs of medical care, comments	346	MEETINGS REPORTED:	,
Commonwealth fund, and family doctor	180	Albany	
Compulsory health insurance	473	Page 4	341
Compulsory health insurance	1023	Bronx	405
Contract practice in Georgia	257	Broome	713
Contract practice in Georgia	1 305	Delaware	895
in Nebraska	757	Delaware	406
in Pennsylvania	1070		
i- W-N-	1070	Genesee	405
in Washington in West Virginia	1/8	Greene	712
Control in West Virginia	9/2	Herkimer	662
Control of medical activities, Planerty	497	Jefferson 1	406
Coordination, physicians and allied professions	234	Kings	771
Corporate medical practice in West Virginia	077	Livingston	251
Correlation of activities in Wisconsin	128	Monroe	JJ1
Costs of emergency cases in hospitals	R13		469
medical care, comments by Ontario County	894		772
medical care, comments by Ontario County report of State Commit-		Oneida	350
tee	520	Ontario 607, 1. Ontario 894, 1. Queens	235
Costs c	529 25	Queens	509
Costs r	353	Kensseiger470. (663
an inmost	346	Rensselaer	287
in Indiana	J40	Saratoga	841
in Indiana	350	Schoharie 712 12	287
in Iowa	351	Saratoga Schoharie 7.12, 16 Seneca	286
in Massachusetts	346	Suffolk	351
— in Nebraska	353	Tioga	712
	-		14

Page	PAGE
Washington	Fourth of July fatalities 897
County Society, executive secretary 1220	Free medical service (ed.)
executive secretaries in Pennsyl-	General practitioners' issue of Journal in South
vania	Carolina 966
County Society leadership in Wisconsin	General Health Council in Pennsylvania
Council, medical, of New England	contract practice
Course for medical secretaries in Rochester, Minn. 193	public health work
Crippled children in Illinois	Graduate courses in New York
in New York	Graduate Education in Florida
Cuba, medical insurance	
Delaware, Indigent, care of	in Michigan 554
———— Social Trends	
Dentistry, socialized	in Texas
Department of Health in Columbia County 112 Department of Health, cooperation with family	in Washington 1184
doctors in Pennsylvania	Graduate Fortnight, N. Y. Academy of Medi-
Director of activities in Kings County	cine
Disciplining physicians in Massachusetts 1245	Group Insurance in Georgia
Dispensary abuse in Pennsylvania	Haggard, H. W., address at annual meeting, "De-
vania	cline of Medicine as an Art" 557
Dispensary practice in Monroe County 839	Hard of Hearing, league for
Distribution of medical services in Wisconsin 124	Health Council in Pennsylvania
District Branches of New York: Schedule of meetings	Health Department in Indiana
First	Health insurance in Michigan 1454
Second	in Washington190, 900, 1292 in West Virginia
Third	
Fourth	Health officers meeting
Sixth	——— Aid in West Virginia
Seventh	——— care, insurance of
Eighth	
District Branch meetings in Iowa	in West Virginia 900
Doctors and Health Department of Tennessee 786	Hospitalization in Orange County 111
Dues in Minnesota 668	Hospital of Greene County
— in Texas	House of Delegates of New York (See annual meeting) Index of Minutes
Economics in Nebraska	House of Delegates in Florida
———— in Pennsylvania 1070	————— in Indiana 716
in South Carolina	Ideals of Kansas State Society
——— in Wisconsin	Illinois: Annual meeting
Economics, medical, a century ago	——— Costs of Medical Care
Editor of Indiana Journal 525	—— Education committee 846
Educational committee in Illinois	——— Woman's auxiliary
Education, preliminary medical in Massachusetts. 964 ————————————————————————————————————	Index of activities of Medical Societics, quarterly,
Emergency Relief in Delaware	471, 841, 1172
in Florida	, yearly
in New Jersey	Indiana: Book reviews in Journal
Ethics in Massachusetts	Department of Health organization 716
Examination of compensation cases—Brahdy 873 Examination for Licensure	
Executive Secretaries in Pennsylvania	——— Editor of Journal
Secretary of county societies 1220	Lectures to medical students 491
Exhibit in Indiana Fair	——————————————————————————————————————
Exhibit, motion picture, in Pennsylvania annual	Indigent in New York
meeting	——————————————————————————————————————
Fees, Workmen's Compensation in Utah 123	in Ontario County
Financing sickness—Elliott 504	——— in Orange County41, 111
Fireworks in Syracuse	in Oswego County
Florida: Costs of medical care	Indigent care of in California
Emergency relief	Indigent, care of in California 970 ——— in Delaware 489
Ex-presidents	—— in Indiana 789
——— Graduate education 722	———— in Michigan
—— House of Delegates	——— in Minnesota
—— Medical relief	— in Nebraska
Flour, tax on	III Onto

	Page		PAGE
		Philippine Telands 355.	548
in New Jersey	1124	Philippine Islands	1238
in Pennsylvania	1362	Riode Island 1031, 1837, South Carolina 614, 721, 966, 1080, Tennessee 614, 670, 786, 1305, Texas 59, 129, 248, 357, 359, 478, 491, Utal.	1182
in Tennessee in Virginia	060	Tennessee	1362
in Virginia	473	Toyas 59 129 248 357 359 478 491.	783
	189	Utalı	122
Industrial contract practice in Washington		Utali 481, 969, Virginia 481, 969, Washington 189, 778, 900, 1184, West Virginia 48, 480, 482, 616, 848, 851, 900, 972, 1080, 1184, 972, 1080, 1184, Wisconsin 120, 124, 128, 188, 192, 548, Wyoming 57, 849, 850, Kansas annual registration	1412
Industrial health talks	1076	Windington 120 778 000 1184	1292
Industrial medicine in Pennsylvania	1100	17 asimigroii 49 400 402 616 949 851 900	
Insane in Nebraska	1100	17 EST VIIgina40, 400, 402, 010, 040, 031, 500,	1354
Insurance, health, in Michigan	1454	120 121 129 199 102 549	1302
Insurance, Health Company in Minnesota	1238	(VISCONSIN120, 124, 126, 166, 192, 546,	071
health, compulsory	473	Wyoming	852
in Washington900,	1292		1020
Insurance of hospital care	1338	cancer control	354
for Hospitalization in Minnesota234,	1238	Fulltime secretary	191
in New Jersey	418	Ideals of State Society	151
in Rhode Island	1187		550 56
in West Virginia480,	900		48
against malpraetice, rules of in New		League	
Vork 109, 584.	1228	Graduate education	718
Insurance, malpractice (ed.)	1221	Kings County, N. Y., activities	791
malpraetice in Colorado	1022	Laboratories, Public Health, in New York,	37
medical, in Cuba	1001	Laboratory service, use by physicians	38
Insurance for medical care in the year 1840	243	Law, Basic Science, in Colorado	617
for medical care in California	186	enforcement in New Jersey	421
- in England	110	Public Health in Wisconsin	192
in Englandin Nebraska	54	Lay workers in Medical Fields of Pennsylvania	1072
in Washington	190	Leadership of County Societies	1302
Intoxication tests	102	Lectures to medical students by State Society, 1010, 1064, 1231,	
Iowa, contract practice	1305	1010, 1064, 1231,	1346
Costs of medical care	351	Legislation in New York, 171, 236, 338, 410, 467, 542,	606
- District Branch Meeting			617
Speaker's Bureau	1421	in Indiana	780
— Speaker's Bureau Jewett, Dr. John H	1406	in Oklahoma	1128
Journal of South Carolina, issue for general prae-		in South Carolina	614
titioner	966	in Wyoming	849
Journal of Colorado	56	Legislative chairmen of counties	33 8
Journal of Colorado	550	Legislature, committees of	173
of Maine	1358	Letter to the Governor	169
of Massachusetts	1236	Liability insurance in Alabama	1180
of Minnesota	1246	Library service in Texas	357
	422	Liceusure Examinations in Pennsylvania	964
of Nebraska		Lien, medical, in Arkansas	904
of Oklahoma	58	Louisiana, annual meeting	846
of Pennsylvania		Maine Journal	1358
of Philippine Islands	355	Osteopaths in hospitals	853
Journals of other states quoted:		Malpractice defense, rules in New York. 169, 584,	1228
Alabaina	1305	Insurance in Colorado	1022
Arkansas	904	in Oklahoma	854
Arkansas American Medical Association Journal California 186, 193, 970, 1178, 1303, Colorado 56, 552, 555, 619, 1022, 1300, Delaware Jistrict of Columbia	180	Massachusetts: Costs of Medical Care	346
Camorma	1410	Council meetings	1130
Colorado	14/5		
Delaware	1018		
District of Columbia. 193, 360, 488, 722	50	edication, premimary medical	904
Georgia193, 300, 468, 722,	1419 1470	- cancs	1124
Illinois		Graduate education	1130
Indiana	1475	Journal (N. E. Jour. of Med.),	
Toma 127 751 130r	1472	1188,	1246
Iowa 127, 351, 1305, Kansas 63, 191, 354, 852, Kentucky .48, 56, 550, Louisiana .48, 56, 550,	1020	Venereal clinics	785
Kentucky 40 55 550	710	Maternal care in Pittsburgh	1360
Louiciana	710	Mortality in Philadelphia	788
Maine853,	1250	Medical care, quality of (ed.) education in Massachusetts	25
Massachusetts 346, 785, 964, 1021, 1124, 1130,	1358	education in Massachusetts	964
1100	1245	secretaries, course for Society of State of New York, responsi-	193
Michigan 100 249 554 666	720	Society of State of New York, responsi-	
Minnesota 193 251 478 553 668 1230	720	mines and congations,—treya	493
Michigau	1.451	arental simens, thoosing	234
Mississippi	1434	Lien flaw in Arkansas	904
Missouri . 182 1170 1410	1.174	Relief in Piorilla	1419
Nebraska 54 256 257 353 421 422 424 1022	1107	Narabi Parasi Isla	854
		Merck's Research Laboratory, dedication of,	
Onto	1737	723 771	773
Oklahoma 52 gca	1128	Medical Service of the Nation-Cary	623
Okłahonia	1160	Michigan, graduate education	554
1124, 1354, 1360,	1476	ricatin distrance	454
1 mm, 1100,	4770	Indigent190,	120

	Page		PAGE
Secretaries' conference	666	Popular medical education in Queens County	35
Survey of health agencies248,	1061	Press comments on costs of medical care	
Midwives in Alabama	1303 59	—— relations in Nassau County	35
Miller, Dr. Emma T. of Texas	478	Psychiatric needs in West Virginia	482 37
Course for medical secretaries	193	Public health law in Wisconsin	192
Insurance of health company		Public health work in Georgia	
Insurance for hospitalization	259	——— Cooperation in Missouri	1474
Journal	1246	Publicity, medical, in Iowa	1421
———— Public Health Education	1294	in Minnesota	94
Secretarics conference	668	in South Carolina	1182
Tuberculosis sanatorium	553	Public Relations, committee meeting of Dec. 9, 1932	34
Mississippi: Cancer quack	902 1016	of Jan. 16, 1933 of Jan. 17, 1933 of March 17 of May 29	233 235
———— Obstetric champion	973	of March 17	541
Sales tax and doctors		of May 29	838
Missouri: Automobile accidents		of Tuna 26	()57
clinic abuse	1178	of Tuly 20	1በ1በ
graduate courses	1418	of Sept. 25 of Oct 24	1230
		of Oct 24	
Monroc County activities	344	Public Relations in Grand Rapids, Mich	666
Motion picture exhibit in Pennsylvania	610	in Monroe County	343 36
Narcotics, world control of	35	Public Welfare Law, analysis of	112
	39	Quarantined persons, relief of	1347
National Recovery Administration1110,		Queens County, activitics	35
Nebraska: Child health	424	Racketeering in compensation cases	1014
———— Costs of medical care	353	Reference committees, House of Delegates409,	581
Economics	421	Committee in South Carolina	1080
Indigent, care of	256	Registration, annual, in Kansas	852 62
Insane	1186 54	annual, in Pennsylvania in Texas	
Journal	422	Relicf, public welfare, T.E.R.A.	839
Social medicine	257	Relief and Prevention in Tennessee	1362
N'ecessities and Luxuries in medical care (ed.)	701	Research Laboratory, Merck's,723, 771,	773
New England Medical Council	1238	Rhode Island, certification of specialists	1081
Journal of Medicine	1188	Insurance of medical care	1187
New Jersey: Certification of specialists	418	Sales tax and doctors in Mississippi	1289
emergency relicf	418	Sanitary Officers' Association, meeting	1065
Indigent and emergency relief	1183	Saratoga Springs Development	
Indigent and emergency relief Law of medical practice, enforcing.	421	examination in Florida	360
News of county societies in Mississippi	1016	Schwitalla, address at annual meeting, "The Master	
New York Academy of Medicinc, graduate fort-		in the House of Medicine"	562
night	711	Secretaries' conference in New York State	
New York County, activities	34 710	in Coloradoin Michigan	552 666
Nurses, public health, of counties	839	in Minnesota	608
Obstetrics in Mississippi	973	Secretaries' executive, for county societies in Penn-	000
Official recognition of State Medical Society	169	sylvania	60
Ohio: costs of medical care	351	Secretary, full-time for Kansas	63
economics		course for medical	193
—— medical relief	854	Sickness insurance in Nebraska	54 257
Oklahoma: Journal	58 1120	Social medicine in Nebraska trends in Delaware	257 356
Malpractice suits	854	South Carolina: cconomics of the doctor	721
Orange County, care of indigent	111	Journal, number for general prac-	
Osteopaths in Maine hospitals	853	titioner	966
Pennsylvania: annual registration	62	South Carolina Legislation	614
Dispensary patients	968		1182
economics, medical	1070		1080
examination for licensure executive secretaries	964 60	Specialists	473
	358	certification in Rhode Island	
- indigent	1124	in New Jerscy	418
———— maternal care in Pittsburgh	1360	State Secretaries' and Editors' Conference, A.M.A.	1167
————— maternal mortality in Philadelphia	788	aid to county health departments in Tennessee	670
motion picture exhibit	1354	Sterilization, human, in California	1410
Philippine Islands: annual meeting	548	Studies by county societies in California	1303
Journal	355	Students, medical, lectures to in Indiana	491 234
Physical examination of school children in Bronx	25	medical, choosing	1066
County	35 35	Subway noise	243
Physical examination in Kings County Political platforms and medicine in West Virginia	35 48	of health agencies in Michigan	248
Popular medical education in Oneida County	233	Surveys, medical (ed.)	160

		PAGE		Theore
Survey of medical services in Michigan		1061	Westchester (quatry public relations	Pace 36
for St Lawrence County		235	West County public relations West Virginia charity, medical	1351
Temporary Emergency Relief Administration			Christian Science	614
(T E.R A) 412,	573,	958	Corporate practice	972
Tennessee Attending county society meetings		1305		1184
Relief and preventive medicine		1362	Hospital aid	1030
State and to counties		670	insurance 480	900
State Department of Health	614	786	Political platforms 48	8 5 1
Texas Advertising in Journal		359 248	Property rights to medical practice	451
		491	Psychiatric needs Unlicensed practitioners	482 848
dues and membership		478	Wisconsin Correlation of activities Bureau	128
graduate education		129	costs of medical care	188
library service		357	distribution of medical services	124
Dr Lmma T Miller		59	economies	548
vital statistics		783	leadership of county society	1302
Tick viceine in Wyoming		850	Public Health Law	192
Tri State Conference		110	Workmen's examining clime	120
Tuberculosis sanatorium in Minnesota		553 40	Woman's auxiliary in Illinois	486
Tuberculin test in Saratogi County Unlicensed practitioners in West Virginia		848	Women's clubs in Illinois	609 59
Utali Workmen's compensation		122	Working s compensation in Pennsylvania	1077
Venereal disease chines	838	957		122
disease control		236	arbitration demonstration	467
elinics in Massachusetts		785	committee	415
Veterans administration hospitals		43	in Utah	122
Virginia graduate courses	481	1412	record cost of a case in	
- indigents		969	California	193
Vital statistics in Texas Washington contract practice		783 778	Workmen's examination clinic in Wisconsin	120
graduate education		1184	Wyoming annual meeting	971
health insurance	190	900		57
Insurance of health		1292	economics	
Welfare commissioner, rules		412	legislation	849
commissioner, in Suffolk County		34	Tick vaccine	850
Department Essex Conn 3		1346	Zoning of health districts	177



pediatric hospitals where cod liver oil is administered as a food in a matter of fact manner, with the result that refusals are rarely encountered.

Most babies can be taught to take the pure oil if, as Eliot points out, the mother looks on it with favor and no unpleasant associations are attached in it. If the mother herself takes some of the oil, the child is further encouraged.

The dose of cod liver oil may be followed by orange juice, but if administered at an early age, usually no vehicle is required. The oil should not be mixed with the milk or the cereal feeding unless allowance is made for the oil which clings to the bottle or

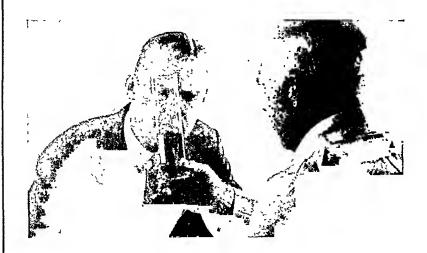
If given cold, cod liver oil has little taste, for the cold tends to paralyze momentarily the gustatory nerves As any "taste" is largely a metallic one from the silver or silver-plated spoon (particularly if the plating is worn), a glass spoon has an advantage.

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Some authorities recommend that edd liver oil be given in the morning and at bed time so as to assure an appetite for the oil, while others prefer to give it after meals in order not to retard gastric secretion. If the mother will place the very young baby on her lap and hold the child's mouth open by gently pressing the checks together between her thumb and fingers while she administers the oil, all of it will be taken. The infant soon becomes accustomed to taking the oil without having its mouth held open. Mead's Newfoundland Cod Liver Oil, of minimum acidity and prepared from fresh healthy livers, is well tolerated by infants and children and is palatable without flavoring. (To be continued)

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• RAHWAY, N. J. •

(Continued from page 1454)

and the consumers of medical service, the Committee requests the approval of the House of Delegates for informal discussions with all groups concerned. For example, discussions with selected industrial leaders upon questions of payroll deductions, the attitude of industry toward contributions for extremely low income groups, the question of compulsion within an industry, and like problems, will have an important bearing upon the Committee's recommendations to the House of Delegates.

"11. The submission of the final plan to the House of Delegates." The President, Dr. J. M.

Robb, in his annual report said:

"This huge problem, with its smaller question of health insurance and its best solution, still confounds us. I am far from being convinced that all modern social tendencies are for the ultimate best. Does the 'sawdust trail' of health insurance lead to complete redemption from our medical ills? Is not the necessity for social insurance in direct proportion to the loss of moral responsibility on

the part of our people? Will health insurance increase our taxation; and if it does, will the public accept it?

"The report as presented by the special committee is the result of two years of prodigious, painstaking, persistent effort, and justly deserves a serious study and unselfish judgment by you.

"The logical solution of the problems of medical economics depends upon the solution of general economics. If the state is to control industry, it will and probably should control medicine. You will note, however, that in the formation of the National Recovery Act the principle, upon which it was based, was not insurance, but the re-establishment of the responsibility and independence of the individual.

"Whatever scheme or system be presented, it is not an end in itself, but a means to an end. It behooves us, therefore, to continue our local study and carefully analyze the set-up of social structures,—in other nations, selecting for our guidance that which is good, and discarding, that which contributes to the degradation of those nations."

PUBLIC HEALTH WORK IN GEORGIA

An editorial in the October number of the Journal of the Medical Association of Georgia has the following account of the reduction in

the resources of the Department of Health of the State:

(Continued on page 1472-adv. xiv)

HOW the findings of



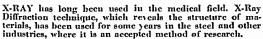
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(Continued from page 1470-adv. xii)

"Dr. T. F. Abercrombie, State Commissioner of Health, today announced a curtailment of all activities of the State Department of Public Health on account of a drastic cut made in the state health budget for the last quarter of this year ending December 31.

"Sixteen employees of this department have been advised that it will be necessary to discontinue their services for the months of November and December. The releasing of these employees will cause the department to be greatly handicapped in carrying on many of the essential activities necessary for the protection of the health of the citizens of this state. The releasing of these employees will also cause the greater part of the field work which has been established in recent years to be abandoned. Every division of the Health Department has been required to release some members of their personnel.

"As the demands upon the Division of Laboratories during recent years have been so great that the personnel was not able to keep up with the amount of work demanded of them, the loss of some of the personnel in this division will necessitate the department's making a complete change in the policies that they have adhered to in the past. With the exception of the handling of the specimens for the diagnosis of the common communicable diseases, which include typhoid, diphtheria, malaria and intestinal parasites, it will probably be necessary to charge a small fee for all laboratory examinations.

"The Division of Vital Statistics has been compelled to release practically one-half of its personnel and this work which deals with the filing and recording of the birth and death records of the state will be seriously handicapped.

"The Division of Sanitary Engineering will be forced to release all field engineers and if some plan is not worked out to continue the service of sanitary engineering in the malarial sections especially, this work will suffer a severe handicap. With more than forty cities already requesting financial assistance from the United States Government for municipal improvements, a curtailment of the engineering division will cause a delay in the approval of the plans for the improvement of the water and sewerage systems.

"The Division of Child Hygiene will release all of its field nurses who have been devoting their entire time to improving health conditions for the mothers and babies in the state."

The editorial closes with a ray of hope that the appropriations will be restored after January first.

MEDICAL EXHIBIT IN INDIANA FAIR

The October issue of the Journal of the Indiana State Medical Association carries a description of a Good Health Exhibit conducted

(Continued on page 1473-adv. xv)

(Continued from page 1472-adv. xiv)

by the Indiana State Medical Association in Indianapolis, September 2-8, 1933. The article says:

"Six of the leading health agencies of the state co-operated with the State Association to make the scientific and educational exhibits housed in the 'Good Health Building' on the Fair Ground one of the outstanding features of this year's fair. The purpose of the displays was to show the public the methods and ideals of scientific medicine and its related branches. It is estimated that 25,000 persons visited the exhibit during the week.

"Under the direction of the Indiana State Dental Society, 'Jimmy Chew', the famous dental pupper show, imported especially for the occasion from the Century of Progress Exposition in Chicago, drew some nine thousand spectators as a total of its three daily performances throughout the week.

"The Indiana Hospital Association, the Indiana Tuberculosis Association and the Indiana Pharmaceutical Association all had interesting and elaborate displays, and the Indiana State Nurses' Association was in charge of the children's playgrounds adjacent to the State Board of Health and the Good Health Buildings.

"High blood pressure was the primary point of emphasis of the combined exhibits of the American Medical Association and the Indiana State Medical Association. Through the courtesy of the Teylor Instrument Company, of Rochester, New York, a new type Tycos self-recording sphygmomanometer was obtained and over 2,500 blood pressures were taken. Three times as many tests could have heen run with additional equipment, as interest was very great in the procedure and there always was a crowd around the machine. Each visitor tested was allowed to keep his chart, and in the event that the blood pressure was abnormally high it was suggested that he call upon his family physician and show the chart to him. Tact was exercised not to alarm any person, but in these instances the family physician was notified of the person's name and the pressure obtained.

An excellent array of pathological specimens obtained from the medical school was exhibited. These specimens showed the changes which occur as a result of neglected high blood pressure.

"The remainder of the space in the exhibit was devoted to displays concerning patent medicines and quackery and the dangers of self-diagnosis. Some forty posters were shown bearing the names and descriptions of many popular nostrums. Twenty different pamphlets dealing with various types of quackery were available and were eagerly read by the visitors who filled the booth most of the time.

(Continued on page 1474-adv. xvi)



MALNUTRITION

-especially in children who dislike milk

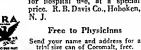
WillLE malnutrition in children may be due to premalure birth, to some constitutional debility or the development of some serious disease, the great majority of cases are due to improper or faulty diet.

Insufficient milk is by far the most serious failing in children's diets. This is due, no doubt, to the fact that so many youngsters dislike milk and refuse to drink it. More and more physicians are meeting this problem by prescribing Cocomalt—which is as alluring as chocolate soda to children.

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(Continued from page 1473—adv. xv)

"A space was devoted to the health magazine, *Hygeia*, and visitors were informed as to its interesting and educational articles which discuss health problems.

"Two medical students, Oren Kay and Hugh Martin, operated the blood pressure machine and kept accurate records of every case.

"Some interesting statistics were obtained. The average State Fair visitor during the last days was 41.2 years of age, weighed 153.9 pounds, and had an average blood pressure of 145.9 systolic and 91.2 diastolic. These figures represent a composite picture of the 2,500 blood pressures taken. The highest systolic blood pressure was 320, lowest systolic blood pressure was 90. The highest diastolic blood pressure was 175, the lowest diastolic pressure was 50. Blood pressures taken during the four days are somewhat above the average, probably because of the exercise and excitement incident to attending the State Fair."

PUBLIC HEALTH COOPERATION IN MISSOURI

The October issue of the Journal of the Missouri State Medical Association prints the following invitation from Dr. E. T. McGaugh, State Health Commissioner, that the State Medical Association cooperate with the Department of Health:

"I am informed that you have kindly offered space in The Journal for health news and health comments from the State Health Department. This is most generous and I am sure will be helpful to both the Department of Health and to physicians.

"It is the desire of the department that every consideration be extended to the physicians of the state. Misunderstandings that have arisen in the past can be prevented in the future if the health program is planned jointly. To cement a closer working arrangement it is recommended that a public health committee composed of medical leaders be appointed by the State Medical Association to aid the Department of Health in analyzing problems which are medical in nature. Definite plans should be perfected suitable to both the physicians and the health organizations before beginning any innovations in health administration or in health procedure."

REPORTS OF COMMITTEE ACTIVITIES IN COLORADO

The solution of the problem of informing the members of State Medical Societies regarding the

(Continued on page 1475-adv. xvii)

(Continued from page 1474-adv 221)

work of the State Committees is as difficult in Colorado as elsewhere, judging by the following editorial in the November issue of Colorado Medicine:

"This year it will be a policy of the "Secretarial Notes" section of Colorado Medicine to publish more details of State Society committee work than has been done before, under a recommendation of the House of Delegates. Members are therefore uiged to watch these pages each month to learn what their committees are doing to advance the interests of the individual practitioner.

"Within the last twelve mouths it has become apparent to the officers that many members realize but little of what goes on under the direction of the Society's many officers and committees. The expense of periodic bulletius to members outlining State Society activities would be prohibitive in these times, yet some way needs to be found to let all physicians know more about the tireless work put in by committeemen toward bettering conditions of practice, improving the economic position of doctors, protecting members from mfringement of their rights and privileges. Much committee work is of necessity 'behind closed doors' and cannot be published in a journal that must reach non-members, but much more can be published than has been in the past

"In the thirty days preceding this writing, meetings and conferences have been held by the committees on Scientific Work, Public Policy, Publication (two meetings), Medical Defense (two meetings), Medical Economics, Advisory to the School of Medicine, and Cancer Education (two meetings). Other meetings are under call. Reports from the chairmen of two of these committees are presented this month. Both are highly important. Read them, and watch for more next

month."

CANCER DIAGNOSTIC CLINICS IN ILLINOIS

The editorial section of the November issue of the Illinois Medical Journal has the following suggestion regarding cancer diagnostic clinics to be conducted by county medical societies:

"The organization of the crusade against cancer must be based mainly on a wide publicity campaign and on the constant training of the physician. Histopathologic research is necessary for the purposes of early diagnosis and can be managed by the pathologist of any well organized hospital. An annual toll of 200,000 persons is to be regarded as the basic figure in this country and therefore every county medical society in our state should have a tumor clinic at one or more hospitals as part of their work for cancer control. Such a group staffed by some of their own con-

(Continued on page 1476-adv. xviii)

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(Continued from page 1475-adv. xvii)

freres especially interested in cancer clinics and tissue diagnosis will be fascinating and helpful to all, and lead to the early use of surgical intervention or the application of physical agents.

"These clinics being a part of the society's activities can be operated uniformly in an advisory capacity only, if desired, without financial gain to the sponsoring institution and without expense to the patient or the referring physician. They may meet once or twice a month, depending on the size of the hospital and the material available. Such tumor clinics will increase the knowledge and the capacity of a large group of physicians and also of many institutions and thus carry on research with greater facility and at a minimal expense. If you haven't a cancer clinic in your county medical society, why not? At this time, when we are not so busy, these clinics will not only be taken care of easily, but can be in the nature of a past graduate course along cancer lines."

THE PENNSYLVANIA JOURNAL

It is interesting to note the ideals and policies which are formulated by the official journals of the medical societies of the several states. Although the journals cover the same field, each one has its own individuality of content and make-up. The October issue of the *Pennsylvania Medical Journal* has the following editorial comment on the beginning of the thirty-seventh year of its publication:

"The Pennsylvania Medical Journal was founded in 1886 by Dr. X. O. Werder as the Pittsburgh Medical Review, and conducted by an editorial board. In 1892, the late Dr. Adolph Koenig, of Pittsburgh, assumed the editorship, and in 1897 the name was changed to the Pennsylvania Medical Journal, and it became the first state medical journal in America.

"This is the house organ of your State Society, covering the activities of the parent organization and its component county societies. It also affords much valuable information of allied interest."

Regarding reports of meetings of county medical societies an editorial says:

"We wish to extend grateful appreciation to the official reporters of the component county medical societies of our State Society, who forwarded to the Journal office during the fiscal year reports of the meetings of their county societies. There has been an increase in the number of reports received in comparison with the previous year, notwithstanding a few have become inactive, and some have never begun. We are also indebted to those

(Continued on page 1477-adv. xix)

(Continued from page 1476-adv. xviii)

who have sent reports of other medical meetings. It should be of interest to the reporters to know that during the fiscal year just closed 178 county society reports were published. If the report of a county society does not appear in the Journal it is because the report has not been received in the Journal office.

"Frequently a meager death notice is given of a deceased physician in the Journal. This is because the Journal office has no data in regard thereto.

"Please bear in mind we do not publish resolutions adopted in memory of deceased physicians. During the past fiscal year our State Society sustained a loss of 130 members, an average of 10 plus a month. It readily can be appreciated the amount of space that would be utilized for this purpose."

The Pannsylvania Journal also publishes news of a personal nature:

"Other matters of interest for news items that the reporter could bear in mind are: births, engagements, marriages, death of members of a doctor's immediate family (wife, children), and other local medical activities."



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